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PLANNING AND BUILDING STANDARDS COMMITTEE MONDAY, 3 SEPTEMBER 2018

A MEETING of the PLANNING AND BUILDING STANDARDS COMMITTEE will be held in the COUNCIL CHAMBER, SCOTTISH BORDERS COUNCIL, COUNCIL HEADQUARTERS, NEWTOWN ST BOSWELLS TD6 0SA on MONDAY, 3 SEPTEMBER 2018 at 10.00 am

J. J. WILKINSON,
Clerk to the Council,

27 August 2018

	BUSINESS	
1.	**Apologies for Absence.**	
2.	**Order of Business.**	
3.	**Declarations of Interest.**	
4.	**Minutes.** Minutes of Meetings to be approved and signed by the Chairman. (Copies attached.)	
	(a) **Minute - 25 June 2018**	(Pages 3 - 6)
	(b) **Minute - 16 July 2018**	(Pages 7 - 8)
5.	**Applications.** Consider the following application for planning permission:-	
	(a) **Land West of Whitslade (Barrel Law), Selkirk - 17/01255/FUL** Construction of wind farm comprising 7 No turbines up to 132m high to tip, access tracks, control building and associated infrastructure. (Copy attached.)	(Pages 9 - 78)
	(b) **St Aidans Church and Church Hall, Gala Park, Galashiels - 18/00309/LBC** Demolition of Church and Church Hall.	(Pages 79 - 92)
	(c) **Land West of Lamberton Lodge, Lamberton - 18/00642/AMC** Erection of dwellinghouse (approval of matters specified in conditions 15/00743/PPP)	(Pages 93 - 106)
6.	**Local Biodiversity Action Plan** (Pages 107 - 310)	

	Consider report by Service Director Regulatory Services. (Copy attached.)
7.	**Selkirk CARS (Conservation Area Regeneration Scheme)** Presentation by Team Leader (Built Heritage & Design)
8.	**Appeals and Reviews.** (Pages 311 - 318) Consider report by Service Director Regulatory Services. (Copy attached.)
9.	**Any Other Items Previously Circulated.**
10.	**Any Other Items which the Chairman Decides are Urgent.**

NOTE
Members are reminded that, if they have a pecuniary or non-pecuniary interest in any item of business coming before the meeting, that interest should be declared prior to commencement of discussion on that item. Such declaration will be recorded in the Minute of the meeting.

Members are reminded that any decisions taken by the Planning and Building Standards Committee are quasi judicial in nature. Legislation , case law and the Councillors Code of Conduct require that Members :

- **Need to ensure a fair proper hearing**
- **Must avoid any impression of bias in relation to the statutory decision making process**
- **Must take no account of irrelevant matters**
- **Must not prejudge an application,**
- **Must not formulate a final view on an application until all available information is to hand and has been duly considered at the relevant meeting**
- **Must avoid any occasion for suspicion and any appearance of improper conduct**
- **Must not come with a pre prepared statement which already has a conclusion**

Membership of Committee:- Councillors T. Miers (Chairman), S. Aitchison, A. Anderson, J. A. Fullarton, S. Hamilton, H. Laing, S. Mountford, C. Ramage and E. Small

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Please direct any enquiries to Fiona Henderson 01835 826502
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SCOTTISH BORDERS COUNCIL
PLANNING AND BUILDING STANDARDS COMMITTEE

MINUTE of Meeting of the PLANNING AND BUILDING STANDARDS COMMITTEE held in Council Headquarters, Newtown St Boswells TD6 0SA on Monday, 25 June 2018 at 10.00 a.m.

Present:-	Councillors T. Miers (Chairman), A. Anderson, J. A. Fullarton, H. Laing, S. Mountford, E. Small.
Apologies:-	Councillors S. Aitchison, S. Hamilton, C. Ramage,
In Attendance:-	Depute Chief Planning Officer, Lead Planning Officer (Environment and Infrastructure), Solicitor (Emma Moir), Democratic Services Team Leader.

1. **MINUTE**
There had been circulated copies of the Minute of the Meeting held on 4 June 2018.

DECISION
APPROVED for signature by the Chairman.

2. **APPLICATION**
There had been circulated copies of a report by the Service Director Regulatory Services on an application for planning permission requiring consideration by the Committee.

DECISION
DEALT with the application as detailed in Appendix I to this Minute.

3. **APPEALS AND REVIEWS**
There had been circulated copies of a briefing note by the Chief Planning Officer on Appeals to the Scottish Ministers and Local Reviews.

DECISION
NOTED that:-

(a) Scottish Ministers had upheld appeals in respect of:-

(i) Residential development comprising 38 dwelling units with associated access, landscaping and open space at Poultry Farm, Marchmont Road, Greenlaw – 16/01360/PPP; and

(ii) Demolition of existing building and erection of four dwellinghouses at Industrial Buildings and Yard, Elders Drive, Newtown St Boswells – 17/01342/PPP

(b) there remained four appeals outstanding in respect of:-

- **Land South West of Easter Happrew Farmhouse, Peebles**
- **Hutton Hall Barns, Hutton**
- **Land North West of Gilston Farm, Heriot**
- **Land South West of Lurgiescleuch (Pines Burn), Hawick**

(c) there remained 4 reviews previously reported on which decision were still awaited :-

- **Agricultural Buildings, South East of Merlewood, Hutton Castle Barns, Hutton**
- **Southbank and Paddock South East of Southbank, Bowden, Melrose**
- **Land South West of 1 Hill Terrace, Stow**
- **Land North West of Doonbye, Smith's Road, Darnick**

(d) there remained Section 36 Public Local Inquiries Outstanding in respect of :-

- **Fallago Rig I, Longformacus**
- **Fallago Rig 2, Longformacus**
- **Birneyknowe Wind Farm, Land North, South, East and West of Birnieknowe Cottage, Hawick**

The meeting concluded at 10.25 a.m.

APPENDIX I

APPLICATIONS FOR PLANNING PERMISSION

Reference	Nature of Development	Location
18/00173/FUL	Erection of 7 No boarding kennels with attached runs	West Greenfields 6 Greenburn Reston Eyemouth

Decision: Approved subject to the following conditions and informatives:

Conditions

1. The development hereby permitted shall not be carried out otherwise than in complete accordance with the plans and specifications approved by the Planning Authority.
   Reason: To ensure that the development is carried out in accordance with the approved details.

2. No development shall take place except in strict accordance with a scheme of soft landscaping works, which shall first have been submitted to and approved in writing by the Planning Authority, and shall include (as appropriate):
   i. indication of existing trees, shrubs and hedges to be removed, those to be retained and, in the case of damage, proposals for their restoration
   ii. location of new trees, shrubs, hedges and grassed areas
   iii. schedule of plants to comprise species, plant sizes and proposed numbers/density
   iv. programme for completion and subsequent maintenance.
   Reason: To enable the proper form and layout of the development and the effective assimilation of the development into its wider surroundings, and in the interests of protecting the setting of the Listed Building.

3. No development shall commence until an amended noise mitigation plan is submitted to, and agreed in writing by the Planning Authority. Thereafter the development shall be completed and operated wholly in accordance with the approved details, unless otherwise agreed in writing by the Planning Authority.
   Reason: In order to protect neighbouring amenity

4. No development shall commence until a waste management plan is first submitted to, and approved in writing by the Planning Authority. The agreed means of storing foul waste, spent medicines and wash water on the site shall be installed before the development hereby approved is operational. Thereafter the storage and management of wastes including foul waste, spent medicines and wash water shall be carried out wholly in accordance with the approved details.
   Reason: To ensure that satisfactory arrangements are made for the disposal of surface and foul water/waste.

Informatives

1. SEPA advise that all dog waste; spent medicines and wash down water (particularly if it contains disinfectants) must be collected and disposed of offsite. Wash water must not be discharged to the water environment even through an effluent treatment system. With regard to the use of SUDS on site, developers are directed to the SUDS Manual (C753) and the importance of preventing runoff from the site for the majority of small rainfall events (interception) is promoted. Applicants should be using the Simple Index Approach (SIA) Tool to determine if the types of SUDS proposed are adequate.

2. Authorisation is required under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) to carry out engineering works in or in the vicinity of inland surface waters (other than groundwater) or wetlands. Inland water means all standing or flowing water on the surface of the land (e.g. rivers, lochs, canals, reservoirs). Details of regulatory requirements and good practice advice for the applicant can be found on the Regulations section of the SEPA website. If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the regulatory team in your local SEPA office at:
Burnbrae, Mossilee Road, Galashiels, TD1 1NF. Tel: 01896 754797

3. Under the Animal Boarding Establishments Act 1963, anyone wishing to board animals commercially must obtain a licence from their local council. The Act requires councils to ensure the business observes certain conditions regarding the suitability of the accommodation provided and the welfare of the animals boarded. It is the expectation of Scottish Borders Council that new dog boarding establishments will comply with the standards set within the CIEH publication Model Licence Conditions and Guidance for Dog Boarding Establishments. A free copy may be downloaded from http://www.cieh.org/policy/dog_guidance.html?terms=dog+boarding

   Hardcopies of the publication may be purchased from CIEH Tel. 020 7827 5821. The applicant is advised to ensure that the proposed kennels will comply with the above conditions. Further information about the required standards is available from SBC's Regulatory Services, Environmental Health Team. It shall be the responsibility of the applicant to ensure any changes to an existing licence are addressed in full to cover any required changes to licencing arrangements resulting from the implementation of the development hereby approved.

SCOTTISH BORDERS COUNCIL
PLANNING AND BUILDING STANDARDS COMMITTEE

MINUTE of the Special Meeting of the PLANNING AND BUILDING STANDARDS COMMITTEE held in Council Headquarters, Newtown St Boswells TD6 0SA on Monday, 16 July 2018 at 2.00 p.m.

Present:-	Councillors T. Miers (Chairman), A. Anderson, J. A. Fullarton, H. Laing, S. Mountford, C. Ramage, E. Small.
Apologies:-	Councillors S. Aitchison, S. Hamilton.
In Attendance:-	Chief Planning Officer, Principal Officer – Plans and Research, Solicitor (Emma Moir), Democratic Services Team Leader, Democratic services Officer (Fiona Henderson).

1. **TOWN CENTRE CORE ACTIVITY AREA PILOT STUDY**

1.1 There had been circulated copies of a report by the Service Director Regulatory Services which sought approval of a pilot study, as detailed in Appendix 1 to the report, in respect of amendments to current planning practice for processing planning applications for proposals within core activity areas within town centres in the Scottish Borders. The Principal Officer explained that the primary purpose of the study was to examine ways to revitalise and reinvigorate the town centres of Hawick and Galashiels by considering options to add more flexibility to policy ED4 (Core Activities in Town Centres) within the adopted Local Development Plan (LDP) 2016 which was aimed at protecting core activity areas within these towns. It suggested a number of options to be considered, identifying potential advantages and disadvantages for each. In essence the study recommended the removal of the core activity area in Hawick and the retention of the core activity area in Galashiels but proposed a wider and more flexible range of uses which could be supported.

1.2 The study also laid down some further criteria guidance relating to policy ED4 to be considered for planning application proposals within other core activity areas within Scottish Borders towns i.e. Galashiels, Peebles, Kelso, Melrose, Jedburgh, Selkirk, Eyemouth and Duns. As this pilot scheme proposed to remove the core activity area from Hawick this would not be relevant to Hawick. The guidance stated, with reference to considering the longevity of vacancy of premises, that if premises had been vacant for 6 months and evidence was submitted which confirmed it had been adequately advertised for a substantial period of that time, then that would carry much weight in the decision making process. Policy ED4 also made reference to the need to give consideration of any “significant positive contribution” in relation to proposals within the core activity. The study expanded upon examples of what were considered to be factors determining “significant positive contribution” and sought the consideration of removing the requirement for Developer Contributions within Galashiels Town Centre. Members welcomed the report and were supportive of the proposals which responded to the changes in town centre retail activity. In terms of Appendix 3 of the report, during discussion it was suggested that in the “yes/no” column heading that “no” be amended to illustrate a more flexible policy approach to allow developers the opportunity to make the case for change It was noted that the annual Footfall Study was carried out during September/October so members agreed that the follow up report should not be presented to Committee until this information was available.

DECISION

AGREED:-

(a) that, subject to minor changes to text to be delegated to officers, the Pilot study to be implemented with immediate effect for a period of one year.

(b) to receive a report back following the end of the trial period which detailed any relevant issues and outcomes.

The meeting concluded at 2.50 p.m.

SCOTTISH BORDERS COUNCIL

PLANNING AND BUILDING STANDARDS COMMITTEE

3 SEPTEMBER 2018

APPLICATION FOR PLANNING PERMISSION

ITEM:	**REFERENCE NUMBER**: 17/01255/FUL
OFFICER:	Craig Miller
WARD:	Selkirkshire
PROPOSAL:	Construction of wind farm comprising 7 No turbines up to 132m high to tip, access tracks, control building and associated infrastructure
SITE:	Land west of Whitslade (Barrel Law), Selkirk
APPLICANT:	Barrel Law Windfarm Ltd
AGENT:	ABO Wind UK Ltd

SITE DESCRIPTION

The site is contained within farmland at Todrig and Whitslade Farms, 7km south-west of Ashkirk and 3.5km north-west of Roberton. The site is approximately 305 hectares in size located between Barrel Law (384m AOD) and Alemoor Craig (378m). Turbine bases vary from 315 – 360m. The land is generally rough sheep grazing with Hyndhope and Alemoor Forests to the west. Several small watercourses pass through the site including the Todrig, Hog and Bleakhill Burns as well as the Ale Water. Langhope Rig Wind Farm is located approximately 1.8km north of the nearest turbine.

There are no residential properties within the site and the nearest settlement within 5km is Roberton to the south. Hawick is 8km south-east. There are scattered farms and residential properties closer to the site, principally to the south and east, three in particular within 2km – Easter Alemoor, Whitslade and Hawksnest. A total of 97 properties lie within the 5km radius of the development.

The nearest public roads to the site are the B711 2.3km away to the south and the unclassified Ashkirk to Roberton road a similar distance to the east. The B7009 is 5.4km to the north-west and the closest major road is the A7 6.7km to the east. Alemoor Reservoir lies 2.7km south-west of the nearest turbine.

There are no claimed Rights of Way or Core Paths within the site apart from 1.2km of the route from Alemoor Reservoir to Ettrickbridge.. Long distance footpath routes lie within the 10km study area, the nearest being the Roman and Reivers Route 3.7km to the south-east. A series of Core Paths and Rights of Way also surround the site, the nearest being 0.6km south-east of the nearest turbine.

There are no statutory designated landscapes within 5km of the site. Of the two National Scenic Areas within the study area, the nearest 17.5km to the east is the Eildon Hills NSA. Of the Special Landscape Areas and Regional Scenic Areas in the vicinity, the Teviot Valley and Tweed, Ettrick and Yarrow Confluence SLAs are 11.5km away, The Tweedsmuir Uplands SLA is 12km away and the nearest RSA in Dumfries and Galloway is the Langholm Hills RSA at 17km. There are 21 Gardens and Designed Landscapes within the study area, the nearest being Bowhill at 8.5km . The site is some distance from the Ale Water and River Teviot, which are tributaries

of the River Tweed Special Area of Conservation (SAC), although also close to the smaller tributaries feeding the system such as the Todrig Burn. There are no SSSIs within or immediately adjacent to the site, the nearest being Alemoor West Loch at 2.4km and Akermoor Loch at 3.4km.

PROPOSED DEVELOPMENT

The proposal is for a commercial wind farm comprising of seven turbines 132m to blade tip. The development also includes:

- Crane hardstandings (50m by 20m);
- Access track 580m long from the existing forest track then individual tracks to the turbines, typically 4.5m wide and surfaced in coarse aggregate. One area of track will be of floating construction across peat;
- Underground high voltage and control cables with an overhead 33kv grid connection link
- One or more borrow pits to source materials for ground infrastructure;
- Temporary construction compounds and hardstandings
- Substation/switchgear housing building (24m by 7m and 6m in height) with adjoining compound;
- Use of the existing access for Langhope Rig from the B711 for the delivery of the turbine components and then used for maintenance and decommissioning;

The construction phase would last for 8 months and the development would have a 25 year operational phase with site restoration and decommissioning at the end of the period. The wind farm is claimed to provide 24.5MW of installed capacity serving up to 16,300 homes and producing 40kt CO2 savings per annum. The application includes a 50m micro-siting allowance for turbines and infrastructure following detailed ground investigations and geotechnical surveys but up to 100m if allowed by SBC.

Access to the site would be via the A7 to the B711 at its junction south of Hawick, then into the site via the existing access off the B711 serving Langhope Rig. There are no intentions to reinstate the previous anemometry mast, wind speed and direction information being intended to be gathered via built-in anemometry on the turbine nacelles themselves.

It is claimed there will be around 30 staff employed during the main construction phase with an associated £8 million local spend. There would also be a community benefit fund, either in the form of annual payments or also including shared ownership.

PLANNING HISTORY

10/01506/FUL – Planning permission was granted for a temporary 70m anemometer in December 2010 for a three year period. This was erected, information gathered and the mast then removed.

12/00191/FUL – Planning permission was refused by the Council in March 2013 for a wind farm consisting of eight turbines at a tip height of 125m on a site partially within and to the south-east of the current site. The reason for refusal was as follows:

1. *The development conflicts with Policy I20 of the Scottish Borders Structure Plan 2001-2018 and Policy D4 of the Consolidated Scottish Borders 2011 Local Plan, in that by virtue of its adverse impact on the Ministry of Defence operations at:*
    (i) Eskdalemuir Seismological Recording Station; and
    (ii) Deadwater Fell ATC Radar at RAF Spadeadam
   it would be incompatible with Ministry of Defence objectives relating to protection of public safety at a UK level and the obligations set out in international treaties.

2. *The development conflicts with Policies N9, N20, I19 and I20 of the Scottish Borders Structure Plan 2001-2018, Principle S1 and Policies G1 and D4 of the Scottish Borders Consolidated 2011 Local Plan, in that the development, by virtue of:*

    (i) its vertical scale in relation to the scale of the receiving landscape;
    (ii) its prominent and dominant appearance in local, adjacent and wider landscapes;
    (iii) its poorly designed appearance from a range of vantage points due to overlapping and variation in heights viewed in relation to underlying topography;
    (iv) the intensification of adverse landscape and visual impacts due to cumulative visibility with the approved Langhope Rig wind farm, particularly from the area around the William Ogilvie Cairn on the road to Roberton (but also from a range of other areas/point of visibility)
    (v) the vertical scale of the turbines, combined with their elevated position in the landscape on what appears as a ridgetop from certain vantage points;
    (vi) the proximity of the development/turbines to residences and their environs, in particular Easter Alemoor and to a lesser extent Hawksnest (Whitslaid) and Wester Alemoor; and the inability to mitigate against the dominating presence of the development in relation to said residences would unacceptably erode landscape character and quality, thereby harming the landscape and visual environment of the Borders and would cause unreasonable prejudice to the private amenity currently experienced by residents.

The refusal was taken to appeal and was dismissed by a Reporter in August 2014, the Decision Letter summarising as follows:

43. I have found that the proposal would not be consistent with Policy D4 of the local plan in terms of its unacceptable adverse impacts on the landscape and on aviation. The policy allows for approval if the decision-maker is satisfied that the contribution to wider economic and environmental benefits outweighs the potential damage to the environment or to tourism and recreation. I have considered the benefits in paragraphs 37 and 38 above. These are the contribution to renewable electricity targets and to reduced carbon emissions. However, in my view these benefits are not sufficient to outweigh the negative impacts of the proposal, and so it fails to conform to Policy D4.

44. I therefore conclude, for the reasons set out above, that the proposed development does not accord overall with the relevant provisions of the development plan, and that there are no material considerations which would still justify granting

planning permission. I have considered all the other matters raised, but there are none which would lead me to alter my conclusions.

NEIGHBOURING SITES/SCHEMES RELEVANT TO CONSIDERATION OF THE CURRENT PROPOSAL:

Operational:

Langhope Rig is situated 1.8km to the north of the site and consists of 10 turbines 121.2m in height.

Consented

Windy Edge is approximately 18km to the south-east of the site and would consist of 9 turbines, 3 at 110m in height and 6 at 125m.

Pines Burn is 16km to the south-east of the site and comprises of 12 turbines, 7 at 149.9m and 5 at 130m. The Council refused planning permission in November 2017 but the scheme was recently consented by the Department of Planning and Environmental Appeals.

In the Planning System

Birneyknowe is 13km to the south-east of the site and comprises of 15 turbines 132m high. The Council objected to this Section 36 application in March 2017. A Public Local Inquiry has been held and the decision of the Scottish Ministers is awaited.

Other Schemes

Wauchope and Newcastleton Forest: A scoping opinion was issued by the Energy Consents Unit in March 2016 based on 90 turbines with a tip height of 132m at three separate sites (Wauchope East, Wauchope West and Newcastleton Forest).

Cliffhope: A scoping opinion was issued by the Energy Consents Unit in January 2018 based on 46 turbines with a maximum tip height of 200m on land approximately 21km of the site

Fawside: A scoping opinion was issued by the Energy Consents Unit in April 2018 based on 49 turbines with a maximum tip height of 200m on land approximately 12km south of the site.

REPRESENTATION SUMMARY

75 respondents have submitted representations in respect of the application, all but one objecting. These can be viewed in full on the Public Access portal on the Council's website. The principal issues raised include the following:

Objections:

- Detrimental impacts on landscape, visual amenity and rural tranquillity
- Detrimental landscape and visual impacts from viewpoints including iconic ones such as Carter Bar and Ruberslaw.

- Turbines are of industrial scale, higher than the previous scheme and out of scale with the landscape.
- Photomontages are lacking from Carter Bar.
- Visual material underestimates the visual and landscape impacts.
- There have been no reductions in ZTV coverage
- Inconsistent designs when compared with Langhope Rig
- Too many wind farms proposed in the area and significant cumulative issues, especially with Langhope Rig, defining and dominating the landscape.
- Reporter took Langhope Rig fully into account and the fact it has now been developed does not change the position.
- Previous Reporter decision stated Langhope Rig should not be extended.
- Langhope Rig should not be used as a precedent for more development.
- Scheme needs to be determined against the correct Ironside Farrar Landscape Capacity Study, the application being contrary to the 2016 Study as there is low capacity for very large turbines and insufficient separation with Langhope Rig
- Remaining significant impacts from public roads such as the A7, B711 and Ashkirk to Roberton Road.
- Detrimental impacts including on literary association at the Wm Ogilvie Cairn
- Scheme too similar to the previous scheme rejected by the Council and Reporter with an increase in turbine height. It must be compared with the previous scheme.
- SNH continue to maintain concerns over the revised scheme on landscape impact. Their lack of objection is normal and should not be overstated in weight.
- The applicant's challenge to the SNH position was lodged late in the process denying them sufficient response time.
- SNH do not normally visit the site and no indication they did in 2012.
- Impacts on the proposed National Park including pressure on areas outside the proposal
- Detrimental impacts on tourism and local tourist businesses in the area, including walkers, cyclists, horse riders and recently established tourist businesses and initiatives
- Contrary to the Scottish Borders Tourism Strategy.
- Challenges to the Biggar Economics Report, claiming increased economic detrimental impacts on the local economy including on property values
- Inadequate and unsafe road capacity for large construction traffic including the B711, on bridges and through Denholm Village
- Challenges to the need argument, identifying that the MW contribution is small and does not outweigh other impacts, being contrary to SESPlan.
- Wind energy is inefficient and unsustainable.
- Carbon reduction claims are questionable and unnecessary given the carbon position in Scotland
- Significant detrimental residential amenity impacts on several properties, especially Easter Alemoor. The turbines remain too close and dominant, one being within 1.2km and five within 2km. No photomontages have been produced and inadequate assessment from unrealistic wireline position, underestimating impact. Example alternative photomontages provided.
- Lack of recognition of impacts on living and working on a hill farm in very close proximity, quoting the Minnygap appeal decision.
- Detrimental noise impacts above regulation limits and little or inadequate mitigation
- Shadow flicker impacts.

- Criticisms of the lack of objection from SBC Landscape Architect including inadequate assessment of residential impacts
- Detrimental impacts on hydrology and private water supplies, especially at Easter Alemoor from turbine foundations, access tracks, borrow pits etc
- Criticisms of Scottish Government Energy Policy and Targets, stating that UK Policy is now for no more on shore large scale wind farms, that by Dec 2017 there was already 20.9GW consented surpassing the 16GW 2020 target and that the main issue remaining is the speed of implementation of developments. Interim target of 50% already surpassed.
- Further updated showing consented and operational scheme capacity increases since 2013, rising by 87% to 19.1GW for consented, by 102% to 8.7GW for consented but not operational, by 76% to 10.4GW for operational and by 56% to 11.9GW for operational and under construction. Only 12.2GW is needed to reach the 2020 target.
- The Scottish Energy Strategy states that renewable energy generation could rise to 140% of Scottish electricity consumption by 2030, in the region of 17GW
- Need arguments against other adverse effects are of less weight given the progress towards renewable energy targets.
- Scheme would be so restrained by suspensive conditions that it could not help meet the 2020 target.
- Constraint payments are still in place and wind energy remains subsidised, other forms of energy production needing to be utilised instead
- Detrimental impacts on archaeology especially Scheduled sites at Leap Hill and Kemp's Castle.
- Detrimental impacts on bird populations, especially black grouse, osprey, goshawks and other protected species
- Detrimental impacts on local wildlife sites including red squirrel
- Unresolved and sustained MOD issues, there being no control over the suggested suspensive condition which awaits works at Deadwater Fell
- Any condition regarding radar mitigation should be fully suspensive as SBC insisted at Gilston
- Detrimental impacts on telecommunication
- New wind farms are permanent and ground reinstatement may not occur
- Local employment opportunities are not created by wind farm construction
- Detrimental impacts on health
- Inadequate community consultation
- Local community small but largely opposed to the scheme
- Community Fund is very limited and specific to access
- New planting should be used to screen the development

Support:

- Impacts are exaggerated from minor roads
- Conifer plantations have greater impact
- Scheme necessary to counteract global warming

APPLICANTS' SUPPORTING INFORMATION

This full planning application is an EIA Development and is supported by a full Environmental Statement (ES) resulting from an Environmental Impact Assessment, which comprises the following documents, dated August 2017:

- Pre-application Consultation Report
- Design and Access Statement

Environmental Statement:

- Non-Technical Summary
- Volume 1: Main Statement
- Volume 2: Annexes A-K
- Volume 3: Figures
- Volume 4: Visualisations
- Confidential Appendices on Ecology/Ornithology

During the course of the application process, additional responses have been received from the applicant, notably the following:

- Archaeology letter and figures – 5 Dec 2017
- Ecology letter and figures – 7 Dec 2017
- Residential Amenity letter and comparative wirelines – 9 Feb 2018
- Response to Forestry Commission – 15 Mar 2018
- Supporting Statement – 14 Aug 2018 – this document summarises the key material considerations and how they should be considered by the Council in the overall planning balance. It concludes on:

- the absence of unacceptable environmental effects;
- the accordance with Scottish Government planning and energy policy;
- the demonstrated need for the low carbon energy, such as the proposed development would provide, to contribute to legally binding Scottish Government targets for 2020, for which there is a significant shortfall;
- the accordance with the Council's adopted and emerging spatial strategies for wind energy;
- the successful addressing of the reasons for dismissal of the appeal for the 2012 application.

CONSULTATION RESPONSES:

The following consultation responses have been received in respect of the application. The responses are available to view in full on the Council's Public Access System.

Scottish Borders Council Consultees

Landscape Architect: No objection to the application, given the number of significant effects is relatively small, there is new spatial guidance and Langhope Rig has created precedence for wind turbines in this landscape character area.

Consideration is given to LDP Policy ED9, the SBC Draft SG on Renewable Energy and the incorporated 2016 Wind Energy Landscape Capacity Study by Ironside Farrar. The latter identifies low capacity for larger turbines over 120m but does identify some, provided cumulative issues with Langhope Rig are overcome.

Also assesses the application against the 2017 SNH Guidance "Siting and Designing Windfarms in the Landscape". Identifies the landscape character as being appropriate, that there are no particular designations but various scenic viewpoints and that there are certain viewpoints and sections of the minor road and B711 where

there will be impacts. Also identifies significant effects on some residential receptors and notes improved design compared to the previous scheme. Considers there to be a high degree of landform containment and suitable larger landscape scale, albeit this is more localised around Alemoor Reservoir in particular. Then considers relationship with Langhope Rig, noting there is separation between the two schemes and little coincident view, with turbines appearing of similar height in any combined views. There is an impact on focal point from Viewpoint 6 but, overall, the cumulative impacts are accepted.

Compares the changes in the revised scheme to impacts experienced in the previous scheme. Considers that there is a reduction in landscape and visual effects overall, albeit the impacts from the William Ogilvie Cairn and Ashkirk to Roberton road remain significant. Given the improvements in the scheme overall, wary about such localised impacts justifying refusal of the scheme. Also considers there to be some improvements from the viewpoints cited in the appeal decision, with one turbine being removed and the remainder being sited further away from Viewpoints 1, 2 and 6, albeit the turbines are higher. There is also better balance and reduction in stacking from Viewpoint 2.

Clarifies that, at the time of his response, the 2016 IF Study had not yet been adopted within Supplementary Guidance and that the 2013 Study would carry much more weight, albeit both indicating some capacity for very large turbines. Reiterated that neither IF Capacity Study was available at the time of the original Barrel Law consideration but there is now identified capacity. The new scheme reduces the adverse effects from the previous scheme at several key viewpoints, there being modest but noticeable improvements in design and magnitude. Maintains there are insufficient grounds to oppose the application on landscape and visual impacts.

Flood Protection Officer: The site is at risk of a 1 in 200 year flood event but largely from several small watercourses within the site. Risk is considered minimal provided various mitigative measures are undertaken such as run-off attenuation to compensate for new hard surfaces, silt trips to minimise entry of sediment into watercourses, storm capacity culverts and adequate provision for protection of hydrology in the Construction Method Statement and Environmental management and Monitoring Plan.

Roads Planning Service: No objections as the development will use the previously improved route to Langhope Rig. Conditions should require agreement over swept path analyses which may require further improvements given the larger turbine size, consultation with Police Scotland over transporting of abnormal loads, a Traffic Management Plan, details of the grid connection and pre/post construction surveys of road condition, especially of the road from the A7.

Environmental Health: No objections. There should be a condition requiring a scheme of mitigation to protect private water supplies. In terms of noise, no objections to the assessments that have been undertaken, noting one property could experience noise above agreed limits as well as from impacts with Langhope Rig. A condition will require mitigation for this property. In terms of construction noise, predicted levels will be below the agreed noise threshold and a Construction Method Statement can be controlled by condition.

Access Officer: Right of Way BE132 from Ettrickbridge passes through the site as well as clear visibility from several noted routes such as the Borders Abbeys Way and the Cross Borders Drove Road. Notes that the ES states good practice will be followed during construction and this should include agreement of a Path Planning

Study, no obstruction to the right of way at any point and the availability of new tracks to the public once the development is complete. If approved, £3000 be secured per annum through Legal Agreement towards the promotion and management of the wider path network in the area.

Ecology Officer: Serious concerns over the adequacy of the Environmental Statement in relation to impacts on bats. Whilst SNH had advised the applicants over the lack of need for updated surveys for certain species, this should not apply to bats. The presence of shelter belts and potential connectivity to other plantations and the Todrig Burn, together with stand-off justification for turbine 6, determine that further updated bat surveys are required.

The Habitat and Management Plan also requires to be more detailed, especially in relation to heathland and grassland measures and there needs to be evidence that the mitigation can be delivered on or off site within the developer's control.

All other matters could be controlled by condition (and legal agreement if required) safeguarding such interests as otter, badger, red squirrel, lizard, fish and ornithology, including black grouse, curlew, goshawk, osprey and red kite. The conditions would include appointment of an Ecological Clerk of Works, a Construction Environmental Management Plan, Species Protection Plans, Habitat Management Plan, an ecological monitoring programme and various restoration measures.

Whilst maintaining concerns over adequacy of ES in relation to bat impacts, notes the acceptance by SNH of the surveys and concludes that impacts on bats not significant. Welcomes additional information on stand off distance for Turbine 6, habitat loss and the Habitat Management Plan commitment.

Archaeology Officer: Does not recommend refusal but has concerns regarding impacts on the setting of the Scheduled Monument of Kemp's Castle, noting that the ES identifies moderate significant and adverse effects. Particular impacts on the Ale Water valley viewed from the Monument, especially Turbine 5 which "overtops" the setting and head of the valley. Notes that HES also have concerns over this impact. Recommends that the Turbine be relocated to avoid the impacts but also notes that any adverse impacts must be weighed against other impacts under LDP Policy ED9 in the overall planning balance. Direct impacts on known and unknown archaeology can be covered by a condition requiring a Written Scheme of Investigation.

Upon receipt of more detailed information, agreement regarding direct impact mitigation and most comments regarding the setting of Kemp's Castle. However, disagreement remains over setting impacts on the Ale Water valley, considering Turbine 5 still to encroach adversely. Still maintains removal or relocation of Turbine 5 but does not object to the application, requiring assessment in the overall planning balance.

Forward Planning: Supports principle of renewable energy under SPP and SESPlan whilst ensuring environment is protected. Development needs to be assessed against LDP Policy ED9, including landscape and visual impacts and consideration of the 2013 Ironside Farrar Landscape Capacity guidelines. This identifies the landscape character type as having capacity for addition, updated by the 2016 Study which states low capacity for very large turbines above 120m. Little weight attached to the 2016 Study until it is incorporated into approved Supplementary Guidance. Also consider the Reporter decision on Barrel Law 1.

Statutory Consultees

SEPA: Initially objected due to lack of information on peat and potential impacts on groundwater and private water supplies. Prefer the handling of peat to be detailed at this stage rather than by Construction Method Statement, concerned that there is no information about what is intended with unused soil/peat that is excavated and risks to the water environment. Lack of information over impacts on groundwater terrestrial ecosystems and uncertainty over precise location of Easter Alemoor private water source. Also provides advice on borrow pits, water crossings and the content of the required Construction Environmental Management Plan.

Further clarified that information was still required in relation to impacts of the turbines on Groundwater Dependent Terrestrial Ecosystems, especially Turbines 3, 6 and 7. A condition could cover impacts on the other turbines together with access tracks. Subsequently considers additional information and believes that groundwater issues can be addressed by normal micrositing and linking with the Ecological Clerk of Works condition, albeit additional survey work still required for Turbine 3 and micrositing mandatory if the survey demonstrates necessity. Withdraws objection on basis of suitable condition. Also withdraws objections based upon conditions covering peat management and private water supplies.

Historic Environment Scotland: No objections. Key interests relate to impacts on the Scheduled Monuments of Leap Hill and Kemp's Castle, being content that the ES has provided the necessary information to enable full assessment. Impacts on both monuments are minor to moderate but do not adversely affect setting to warrant objection. Impacts on Leap Hill slightly greater than suggested in the ES and greater cumulative impact but still not sufficient to warrant objection. Several comments on setting assessment and reversibility of the scheme.

Scottish Natural Heritage: Some improvements to siting and design over original scheme but most of the significant and adverse effects still occur in relation to landscape and visual effects, namely from the William Ogilvie Cairn, minor road nearby, from Alemoor Reservoir, from short stretches of the B711 and from combined impacts with Langhope Rig.

From the Cairn and minor road, the impacts have been reduced due to movement further north and location behind the ridgeline, together with better spacing and design producing a uniformity of tip height. However, the focus of the view and the large blade diameter still cause adverse landscape impacts and visual effects, especially combined with Langhope Rig.

From Alemoor and the B711, whilst improvements have occurred around Viewpoints 1 and 2 and there is more compaction and coherence of design, adverse impacts still occur resulting from the larger blades and the heights will still be the same as the original proposal. There remain significant and adverse impacts on character and tranquillity.

There remain significant adverse effects on landscape character and visual amenity arising from cumulation with Langhope Rig, especially from Viewpoints 1 and 2 and at 13 and 17 from Ashkirk village. From middle and further distances, the revised scheme integrates better with Langhope Rig.

In terms of other issues, there will no significant impacts on the River Tweed SAC subject to mitigation, an area of deep peat can be avoided by re-routing an access

track and there are no objections on ecology or ornithology grounds, welcoming the improvements to habitat aimed at supporting the black grouse population.

RSPB: No objections. Content with the survey work which accommodates previous surveys. Black Grouse are present on site and given the fragility of the population, mitigation should be provided for any loss of habitat or disturbance in liaison with SBC Ecology. Support the mitigation in the ES controlled by conditions, including the need for a Habitats and Species Management Plan.

NERL: No safeguarding objection to proposed scheme but only represents management of en route air traffic.

Edinburgh Airport: No objections as outside of airport safeguarding zone.

Scotways: Response awaited.

Forestry Commission Scotland: Initial objection on the basis of lack of information on road construction through the existing forest, compliance with the Control of Woodland Removal Policy and impacts on the Hyndhope Forest Plan. Following receipt of further information, withdraws objection and considers the development would comply with the Control of Woodland Removal Policy.

Ministry of Defence: Initial Objection. Scheme will be detectable from and cause unacceptable interference to the ATC radar at RAF Spadeadam, creating confusion in the management and separation of military and civilian aircraft. This includes restrictions on arrival/departure routes into the range, restriction on aircraft operating areas, ZONE traffic patterns, entry/exit from the Low Flying System and frequency of provision of the Traffic Service and Deconfliction Service. They also comment that research is ongoing into solutions and suggests the developer consider mitigation.

Was also concerned that there would be further erosion of the Low Flying Area which is used to train against radar systems at Spadeadam and that there may be interference against threat radar at Wigg Knowe. If all these issues can be overcome, requests infra-red or omni-directional red lighting at the highest practicable level.

Following further discussions and consideration, withdraws objections on threat radar and low flying impacts, provided the turbines are fitted with omni-directional or infra-red lighting at the highest practicable point. Further consideration of technical mitigation with regard to impacts on the ATC radar at RAF Spadeadam then led to withdrawal of the objection as the MOD considered the proposed mitigation to be acceptable in principle. However, their suggested condition is partly suspensive requiring no turbines to be erected until an ATC Mitigation Scheme is submitted, approved and implemented. The MOD wishes to stress, however, the time and cost implications of delivering an acceptable mitigation scheme.

Scottish Water: The site falls partly within the drinking water catchment of Alemoor reservoir which is a protected area supplying Roberton Water Treatment Works, the access track and perhaps borrow pits impinging on, or very close to, the boundary of the catchment. The exact boundary and extent of impinging would need to be determined on site. Request that any development be moved outwith the catchment but recommend mitigation if not practicable. Any Scottish Water assets should be safeguarded and mitigation complied with after contact with Scottish Water.

Following further information, now satisfied borrow pits are outside Alemoor catchment but information should still be given to contractors about water catchment

impacts. Adequate water protection measures maintained along shared access route with Langhope Rig.

Visit Scotland: Any potential detrimental impacts on tourism be identified and considered fully, given the importance of the landscape, scenery, the natural environment and tourism to the Scottish economy. This should be via an independent tourism impact assessment and should take account of the 2008 Government research on wind farms and effects on tourism. There should also be consideration of tourist traffic routes, numbers, views from accommodation, scale of the impact, views of local organisations and any positives from the development.

Association for the Protection of Rural Scotland: Response awaited.

Scottish Wildlife Trust: Response awaited.

Scottish Badgers: Staff to be aware of badgers crossing access tracks in the early morning/evening, the Ecological Clerk of Works to secure dangerous materials nightly and though there may be some badger presence in nearby woodland, it is sufficient distance away.

Lilliesleaf, Ashkirk and Midlem Community Council: At a public meeting, 19 were against the development and 4 were in support. Those against cited adverse visual impacts, precedent and cumulation. Those in favour cited community income. A postal survey resulted in 33 in support and 28 against.

Upper Teviot and Borthwick Water Community Council: Oppose the proposals for following reasons:

- Significant cumulative impact with Langhope Rig
- Dominant visual impact from the B711, Ashkirk to Roberton Road and Right of Way.
- Detrimental impacts on residential amenity, especially Easter Alemoor, being 1200m away from the house. Significant visual impact, potential breaching of noise limits, shadow flicker to farmland and previous rejection at appeal.
- The B711 cannot cope with the impacts of increased construction and HGV traffic.

Still consider the changes to be minor to a previously rejected scheme. Disappointed at the contact from developer in the consultation process pre-submission.

Ettrick and Yarrow Community Council: Dissatisfied with Council over sufficient consultation time and with developer over community engagement. Some residents support the proposal in terms of green energy with less impact than other forms of electricity generation. However, twice as many residents oppose the development for reasons of detrimental impact on the environment and tourism, inefficiency of energy source, reduced community benefit and MOD impacts.

Hawick Community Council: Remains opposed to the revised scheme and supports the objections from adjoining Community Councils. Significant cumulative effect with Langhope Rig, highly prominent from the B711 to locals and tourists and impacts from construction traffic adding to HGV use of the B711.

Denholm and District Community Council: Opposed to the application for reasons of detrimental visual impact, cumulative impacts with other proposed wind farms and potential impacts/damage caused by construction traffic to local roads and houses.

Southdean Community Council: Disappointed at the resubmission which is little different from the previous refused scheme. Objects due to visual impacts from Abbotrule area and especially from Carter Bar, considering the ES understates the visibility of both Langhope Rig and the proposal. Cumulative impacts also understated, there being 189 turbines proposed. Backs the objections on residential impacts.

DEVELOPMENT PLAN POLICIES:

SESplan Strategic Development Plan June 2013:

Policy 1B: The Spatial Strategy: Development Principles
Policy 10: Sustainable Energy Technologies

SESplan Proposed Strategic Development Plan 2017:

Figure 4.2: Onshore Wind Spatial Framework

Local Development Plan 2016:

PMD1: Sustainability
PMD2: Quality Standards
ED9: Renewable Energy Development
HD3: Protection of Residential Amenity
EP1: International Nature Conservation Sites and Protected Species
EP2: National Nature Conservation Sites and Protected Species
EP3: Local Biodiversity
EP5: Special Landscape Areas
EP7: Listed Buildings
EP8: Archaeology
EP9: Conservation Areas
EP10: Gardens and Designed Landscapes
EP13: Trees, Woodlands and Hedgerows
EP15: Development Affecting the Water Environment
IS2: Developer Contributions
IS5: Protection of Access Routes
IS8: Flooding

OTHER PLANNING CONSIDERATIONS:

Adopted SBC Supplementary Planning Guidance (SPG) and other documents:

- Renewable Energy 2018
- Wind Energy 2011
- Biodiversity 2005
- Local Landscape Designations 2012
- Developer Contributions 2011
- Visibility Mapping for Windfarm Development 2003

- Ironside Farrar Study on Wind Energy Consultancy Landscape Capacity and Cumulative Impact 2016
- Borders Landscape Assessment 1998 Ash Consulting Group

Scottish Government Policy and Guidance:

- The Climate Change (Scotland) Act 2009
- The Scottish Renewable Action Plan 2009
- 2020 Routemap for Renewable Energy in Scotland – Update 2015
- National Planning Framework for Scotland (3) June 2014
- Scottish Planning Policy (SPP) June 2014
- Scottish Planning Policy and Electricity Generation Policy Statement
- Onshore Wind Turbines – Planning Advice 2014
- Climate Change Plan 2018
- Onshore Wind Policy Statement 2017
- Scottish Energy Strategy 2017
- Climate Change (Emissions Reductions Targets) (Scotland) Bill 2018

Scottish Government On-line Advice:

- Circular 1/2017 Environmental Impact Assessment (Scotland) Regulations
- PAN 69 Flood Risk 2015
- PAN 60 Planning for Natural Heritage 2008
- PAN 51 Planning, Environmental Protection and Regulation
- PAN 1/2011 Planning and Noise
- PAN 2/2011 Planning and Archaeology
- PAN 1/2013 Environmental Impact Assessment
- Scottish Government Good Practice Principles for Shared Ownership of Onshore Renewable Energy Development 2016

Historic Environment Scotland Publications:

- Historic Environment Scotland Policy Statement June 2016

SNH Publications:

- Siting and Designing Windfarms in the Landscape Version 3 February 2017
- Visual Representation of Wind Farms Version 2.2 February 2017
- Assessing the Cumulative Impact of Onshore Wind Energy Developments 2012
- Spatial Planning for Onshore Wind Turbines – Natural Heritage Considerations 2015

Other Publications:

ETSU-R-97: The Assessment and Rating of Noise from Wind Farms

KEY PLANNING ISSUES:

- Land use planning policy;
- Landscape and visual impacts, including landscape character and visual impacts, arising from turbines and infrastructure;

- Cumulative landscape and visual impacts with other wind energy developments;
- Physical and setting impacts on cultural heritage assets;
- Residential amenity including noise impacts and shadow flicker
- Ecological, ornithological and habitat effects;
- Impact on road safety and the road network;
- Impacts on the public path network and public access on accessible land;
- Impacts on defence and aviation
- Economic benefits attributable to the scheme;
- Benefits arising from renewable energy provision.

ASSESSMENT OF APPLICATION:

Comparison with previous scheme

Although the planning application could be considered as a revised scheme for one rejected by both Scottish Borders Council and on appeal to the Scottish Government, the application must primarily be tested against all current national and local Policies and Guidance pertaining to a wind farm in this location. The applicant stresses this point in their Supporting Statement with regard to the SNH response, in particular. However, given the similarities with the rejected scheme, the manner in which the scheme addresses the previous reasons for refusal will clearly also be of material significance in determining the acceptability, or otherwise, of this application. This report will, therefore, assess both the scheme in its own right and also the degree to which the revised scheme addresses the previous reasons for refusal and whether, or not, they have been sufficiently addressed that, after assessment against current Policies and Guidance, there is adequate justification to reverse the previous decisions of the Council and Government Reporter.

The impacts of the previous decisions and the changes and design iterations to the revised scheme are fully described by the applicant in the ES and, particularly, in the Design and Access Statement. This comparison was requested by the Department in the Scoping Opinion preceding the submission of the revised application. The reasons for refusal of the initial scheme are included in full in the Planning History section of this report. The applicant considers that the new scheme meets the following design objectives, taking into account the previous reasons for refusal:

- Minimise the prominence and vertical impact of turbines as seen on key skylines and in key views
- Ensure that the wind farm is associated with the upland landscape character and avoid encroachment into more complex, smaller-scale surrounding landscapes
- Create a balanced and cohesive appearance for the wind farm and a good fit with the landscape
- Minimise visual effects on residential properties
- Manage cumulative effects with Langhope Rig wind farm

The Design and Access Statement details the different design iterations responding to these objectives and leading to submission of the current scheme. The difference in turbine locations is highlighted in Drawing DAS 2 and in visual impact through wirelines DAS 4.1-4.5. One turbine has been removed and the southernmost turbines have been moved 350m north to be north of the summit of Lamb Knowe. Generally, the northernmost turbines have also moved north slightly, the whole site boundary shifting north but still overlapping partially with the original site boundary, especially

at the site access point. All seven turbines are, therefore, in different positions to the refused initial scheme of eight turbines. In terms of lateral spread east to west, there has been a very slight reduction to the west and a more significant reduction in the easternmost extent of the turbines.

In terms of the AOD ground level of the turbine bases, the refused scheme proposed eight turbines in a range from 329m to 374m. The new scheme ranges from 317m to 359m. However, to ensure a viable project, the remaining seven turbines have increased in tip height from 125m to 132m, the rotor diameter increasing from 90m to 112m, the hub height dropping slightly from 80 to 76m to accommodate the larger diameter.

The Design and Access Statement, at para 2.34, considers the effects of these changes compared to the initial refused scheme, to be as follows:

- Turbines not on skyline ridges and behind landform such as at Wm Ogilvie Cairn and Alemoor Reservoir
- Reduction in extent across all views
- Better association with upland landscape and avoidance of encroachment on smaller scale landscapes
- A more unified design not straggling down slopes and less overlapping and gapping from key views
- Significant improvements in residential amenity impacts on Easter Alemoor, Wester Alemoor and Blaewearie through reductions in prominence, vertical impacts and extent
- Consistency with Langhope Rig within the same upland landscape character type, maintaining separation and occupying similar AOD base heights and range

The initial Barrel Law scheme was also refused by the Council, then rejected on appeal, for adverse impacts on both the Eskdalemuir Seismological Recording Station and the Deadwater Fell ATC Radar at RAF Spadeadam. The Ministry of Defence had maintained objections on that scheme. The Government Reporter had also visited RAF Spadeadam before determining the appeal.

The applicant has addressed aviation and defence in Annex K of the ES. It concludes that the issue over distance from Eskdalemuir was resolved in 2014 with acceptance that the noise budget could cope with cumulative impacts from 15-50KW. On the issue of Deadwater Fell, the applicant believes the new radar installation in 2016 has led to acceptance of impacts from the proposed, and other developments, as not being significant. The planned replacement of this radar with a new version in 2019 will further reduce impacts due to mitigation built into the design.

The application, whilst being properly assessed in its own right against current relevant policies and Guidance governing wind energy development, must also be examined against the initial refused scheme and, in particular, the claimed changes and improvements made by the revised scheme in how it addresses the previous reasons for refusal and rejection on appeal.

Planning Policy

Scottish Government policy, regional strategic policy and local planning policy and guidance all support renewable energy, including wind farms, provided that there are no unacceptable and significantly adverse environmental impacts.

SPP sets out a Spatial Framework for determining appropriate sites for wind farms. The SPP states three classifications. Area 1 where wind farms are not acceptable in principle i.e. within National Scenic Areas and National Parks. Area 2 which reflects areas of significant protection including SSSIs, GDLs, Wild Land, settlements within 2km etc. The site, however, falls within Group 3 which suggests the remainder of all areas have potential for wind farm development *"..where wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria."*

SESplan policy 10 requires Local Development Plans to set a framework for the encouragement of renewable energy proposals that aims to contribute towards achieving national electricity and heat targets and taking into account economic, environmental and transport considerations.

These Policy documents have recently been supported by the statements in the Onshore Wind Policy Statement 2017, the Ministerial Foreword confirming clear support for wind energy, promoting the economic benefits it offers, helping to substantively decarbonise electricity supplies, heat and transport systems, boosting the economy, and meeting local and national demand. It identifies that all need to work together to ensure that projects continue to strike the right balance between environmental impacts, local support, benefit, and – where possible – economic benefits deriving from community ownership.

Similarly, the Scottish Energy Strategy is also a material consideration, setting out ambitious new energy targets of 50% of the energy for Scotland's heat, transport and electricity consumption to be from renewable sources by 2030 and an increase of 30% in the productivity of energy use across the Scottish economy.

Nevertheless, all Policies and Guidance still require development to be assessed on a case by case basis and only development in the right places will be supported. This report will need to consider, firstly, whether this development is in the right place, by considering the locational and landscape capacity guidelines that are in place, both at national and local level, before going on to consider the particular environmental effects of the proposed development.

All planning applications must principally be determined in accordance with the Development Plan unless there are other material considerations indicate otherwise. The proposal has to, therefore, be assessed against a number of Local Development Plan policies. Policy ED9 is the principal Policy dealing with renewable energy development and supports commercial wind farms where they can be accommodated without unacceptable significant adverse impacts or effects, giving due regard to relevant environmental, community and cumulative impact considerations. Proposals will be approved provided that there are no significant effects that cannot be satisfactorily mitigated. Where mitigation is not possible, the development will only be approved if the Council is satisfied that the wider economic, environmental and other benefits outweigh the potential damage arising from it. The policy contains a number of criteria by which to assess the proposal.

The Council's Supplementary Planning Guidance on Wind Energy 2011 contains a Spatial Strategy and the site is located partially within an area Minor Constraints and an area of Moderate Constraints (Higher) with a very small area of Moderate Constraints (Lower). Rubers Law, Drinkstone Hill, Hartwoodmyers, Fastheugh Hill and Pikestone Rig are identified as being scenic viewpoints in the area.

However, the 2011 SPG is now accepted as being updated and superseded by the 2018 “Renewable Energy” Supplementary Guidance which was recently approved by the Council and, subsequently, the Scottish Government. This contains a new Spatial Framework which demonstrates that the site lies within an “area with potential for wind farm development” and also within the area identified with the “Highest Capacity” for wind turbines.

Having assessed the proposal against national and local spatial framework considerations for wind farm development, the site is not located within an area which would automatically preclude the development of a wind farm. Indeed, it lies within a broader zone of “Highest Capacity” identification that runs south-west from the area containing Langhope Rig to the boundary with Dumfries and Galloway Council. The precise impacts of the proposal must, of course, be assessed in detail against the relevant Local Development Plan policies to establish whether the proposal is acceptable, informed by the more specific locational Landscape Capacity and Cumulative Impact Studies produced by Ironside Farrar in 2013 and 2016, the latter version now being the Study against which any application should be assessed.

It should be noted that at the time of determination of the initial Barrel Law scheme, the principal Local Plan policy in place (D4) was different to the terms of LDP Policy ED9. The current Policy reflects present national energy policy in that the wording and threshold for assessment of effects is worded to specify support unless there are *“unacceptable significant adverse impacts or effects”*. The introduction of the word *“significant”* indicates that adverse impacts can occur that could still be acceptable in the overall planning balance but also that *“significant adverse impacts”* could also still be considered acceptable and comply with ED9. This is considered to be a notable change in the weighting and wording of the current LDP Renewable Energy Policy.

Landscape and Visual Impacts

Policy ED9 requires consideration of the landscape and visual impacts, including the effects on wild land and the cumulative impact, taking into account the Ironside Farrar Landscape Capacity and Cumulative Impact Study as well as guidance from Scottish Natural Heritage. At the time of writing this report, the final approval of the Scottish Government has just been received for the “Renewable Energy” Supplementary Guidance, thus the advice contained within it in relation to landscape and visual impacts should be given significant weight. This should also now include consideration of the updated 2016 version of the Ironside Farrar Landscape Capacity and Cumulative Impact Study and the same weight given to its conclusions in relation to the site and the proposal. It should be noted that the decision by the Council and Reporter on the initial scheme at Barrel Law pre-dated the Ironside Farrar studies.

Landscape Character

In terms of the Borders Landscape Assessment 1998 the site lies within Landscape Character Type (LCT) BDR4(ii): Southern Uplands Type with Scattered Forest Dun Knowe. This is a larger scale upland landscape covering much of the south-western area of the Borders although there is some variation in character. The key characteristics are listed as:

- Large scale rolling landform with higher dome or cone shaped hills
- Significant areas of peatland and heather moorland
- Mosaic of grassland, bracken and rushes on lower ground
- Locally prominent scattered large coniferous plantations

The site is within 5km of other Landscape Character Types, including BDR5(i) (Upland Type), BDR10(i) and (iv) (Upland Fringe Types) and BDR26(v) and BDR28(ii) (River Valley Types), shown in Figure A3b of the ES. Figure A9b demonstrates a ZTV with Landscape Types overlaid within 20km. This demonstrates a relatively limited visibility from these other Landscape Character Areas which indicates limited influence on their respective characters.

Whilst the overall character of the landscape is large scale, it was identified in determination of the initial scheme at Barrel Law that there were substantial variations. The Reporter identified that significant Viewpoints demonstrated differences in scale. Viewpoint 1 at Alemoor Reservoir was medium scale in his opinion whilst Viewpoint 2 at Wester Alemoor varied from open moorland on the ridgeline to domestic scale in the middle ground. Similarly, Viewpoint 6 at the William Ogilvie Cairn site demonstrated a middle ground upland valley landscape compared to an open moorland ridgeline backdrop. Clearly, any wind farm development would have to be assessed against not only the actual and prevalent landscape character types but also the variations of landscape scale within the same character types.

The site is not one of the nationally designated areas of Wild Land, being nearly 20km from the designated Talla/Hart Fell WLA. Figure A5. Figure 3.6 of the Ironside Farrar Study and Figure A5 of the ES do indicate a comparative degree of wildness in the middle range. The site is 11.5km away from the nearest Special Landscape Areas of the Teviot Valley, Tweed, Ettrick and Yarrow Confluence and 12km from The Tweedsmuir Uplands. Although there is some public support for the designation of a Scottish Borders National Park, there are no policies within the Local Development Plan relating to a national park and so this cannot be taken into account in assessing this application.

Landscape Capacity

As mentioned above, the Ironside Farrar Landscape Capacity and Cumulative Impact Study July 2013 is referred to within policy ED9 and the updated version is a material consideration in respect of this application. The applicant accepts the materiality of the Study in para.25 of Annex A of the ES. The Study uses the Borders Landscape Assessment to assess the suitability of each landscape type for differing turbine typologies. It is also incorporated within the "Renewable Energy" Supplementary Guidance which also advises other guidance to be considered. These include publications by SNH "Siting and Designing Windfarms in the Landscape Version 3" 2017 and "Assessing the Cumulative Impact of Onshore Wind Energy Developments" 2012. Local Development Plan Policy, Supplementary Guidance and relevant guidance notes must all be used to assess the landscape impact and visual effects of the development. The Council Landscape Officer's consultation replies are included in full on the Public Access website and use the Policy and guidance in assessing the landscape impact of the proposal.

The purpose of the 2016 Ironside Farrar Study is *"….to determine the landscape capacity of (the) Scottish Borders to accommodate wind energy development and to determine the levels of cumulative development that would be acceptable across the local authority area."*

The application site is covered in the 2016 Ironside Farrar Study at Table 6.1(iii) covering the Central Uplands. The Landscape Character Type 4DKG (Dun Knowe Group) is classified as having a 'low capacity' for turbines, defined as being over

120m high to blade tip. In terms of difference from the 2013 Study, the same Landscape Character Type was then classified as having a 'medium capacity' for very large turbines defined as over 100m to blade tip.

When previously challenged on the issue of how much weight to attach to the more recent Study, the Council Landscape Officer accepted that greater weight needed to be attached to the 2013 Study which forms part of the adopted Local Development Plan. This was also the view of the Forward Planning Section although now that the Supplementary Guidance has been approved by the Council and Scottish Government, the 2016 Study must now be the relevant document used for assessment purposes.

It is useful, however, to note than in both versions of the Study, the site lies within an area identified as having some capacity for the largest scale of wind turbines. It is also a material fact to note that neither the Council nor the Reporter had access to either Landscape Capacity Study at the time of determination of the initial Barrel Law scheme.

The 2013 Study identified Langhope Rig and reflected the (undetermined at the time) Barrel Law application, acknowledging that there were no landscape designations, long distance footpaths and little human settlement. The Study considered that the surrounding topography provided a degree of containment for large and very large turbines and that intervisibility within the area was fairly low. The Study concluded that the *"… Dun Knowe Group has limited existing turbine development and can accommodate additional development of medium, large and very large turbines".* It went on to state that the *"…area could form part of a new cluster of turbine development as long as the spaces surrounding this new cluster are maintained free of turbine developments".* There was a minimum group separation advised of 5-10km but this would not necessarily refer to separation between wind farms but could also refer to separation between areas of wind farms and the space inbetween. The idea of cluster and space is, however, less prevalent in the 2016 Study although minimum areas of separation are stated.

The 2016 Study also identifies the area as having some capacity for very large turbines in the Dun Knowe Group area. The terminology has changed to define height thresholds for turbines and the amount of capacity has dropped from "Medium" to "Low". The commentary also recognises that cumulative impact with Langhope Rig was one of the reasons the initial Barrel Law scheme was rejected and that "significant separation" and "careful siting" would be necessary. Nevertheless, it clearly identifies that the Dun Knowe Group could accommodate a further 5-10 turbines above 120m in height to blade tip, in addition to the existing Langhope Rig turbines. Whilst it is appreciated that statements have been made about keeping significant separation with Langhope Rig, the reference to 5-10km between groups is unlikely to actually be achievable within this Landscape Character Type Area, given that it is a relatively modest area.

Even more modest is the oval area within the Dun Knowe Group identified with capacity for additional 120m plus turbines. This oval area is less than 10km in length and less than 5km in width and already contains Langhope Rig. Whilst it is appreciated that the boundaries of such identified areas are not meant to be precise, it would still be almost impossible to maintain the minimum separation from Langhope Rig and still be within the area identified as having low capacity – without

straying into surrounding less suitable landscapes having no capacity. It, therefore, has to be concluded that the "group" should refer to Langhope Rig and Barrel Law, there being at least 5-10km between that group and any other turbine groups intended in the vicinity – a separation that could be maintained given that the surrounding area is viewed as having no capacity. It is hard to draw any other conclusion than 5-10 turbines in, or close to, the application site is permitted by the Landscape Capacity Study.

It is understood that the guidance could be interpreted in different ways with regard to separation but what is consistent between the 2013 and 2016 Studies is the identification of capacity for a wind farm of the heights and scale intended at the current Barrel Law site. The separation from Langhope Rig, if indeed that is what is intended by the minimum group separation distances in the 2016 Study, is discussed further throughout this report, particularly with regard to design and cumulative impact. It will be concluded that sufficient separation would exist between the two wind farms and that with design and coverage improvements, the identification of capacity for further turbine development by successive Ironside Farrar Studies is of material significance in reassessing the acceptability of a wind farm on the application site.

These Studies and their identification of capacity were not available at the time of the initial Barrel Law application assessment and determination. The Council and Reporter decisions were taken without the benefit of the Study results. Any decision on the current revised application should take into account the Study findings as a material factor in any decision, whilst still properly examining the detailed landscape and visual amenity effects anticipated by the development.

Theoretical Visibility

In assessing effects on landscape character, the Council's Landscape Architect advises that it is helpful to focus on those areas which are affected directly by the development i.e. focus on those areas which have a clear view of the development.

The Zone of Theoretical Visibility (ZTV) Maps (Figures A7a to A12b) illustrate the potential visibility of the turbines to hub height and blade tip height within 20km and 40km zones and the extent of landform containment. Further ZTV maps are submitted showing potential impacts on Landscape Character, Landscape Designations, Wild Land, Tourism and other Principal Visual Receptors. There are also a series of ZTVs showing potential cumulative impacts (Figures A15a-A15w). The main visual impacts can be expected at the closer range and so the assessment focusses on the 20km range.

The Council's Landscape Architect assesses the overall visibility of the proposed wind farm using the ZTV maps and concludes that, in terms of landform, there is a fairly high degree of containment. Indeed, large areas within the more sensitive closer ranges of 5km or less will have little or no view of the development eg. Ettrickshaws Farm, the Ale Water valley at Ashkirk and the Borthwick Water valley at Roberton.

Figure A12b shows the ZTV with principal receptors within 15km, especially the public roads and footpaths expected to experience effects. This shows that a section of the B711 Hawick to Ettrick Road would be affected from the crest north of Borthwickbrae down to the Alemoor Reservoir and including Viewpoints 1 and 2. A

further section of this road will also experience visibility several kilometres west at Viewpoint 15, although the curvature of the road from that Viewpoint back to the Reservoir limits visibility to less than a 2km stretch. There is little or no visibility from the same road at, or in the vicinity of, Roberton.

There is less containment and greater visibility from a section of the Ashkirk to Roberton Road, from Shielswood at the northern end to Blawearie (Viewpoint 4) at the southern end before the road runs south over the crest of the land towards Roberton. This includes the Wm Ogilvie Cairn Viewpoint 6, albeit the Cairn has been currently dismantled. It also includes a section of core path from Shielswood to Viewpoint 6 on the road itself. Within the 5-10km range, there are areas of visibility on the A7 south of Ashkirk where both Langhope Rig and the proposed wind farm will be visible for a stretch before Groundistone Heights (Viewpoint 8), albeit this visibility is theoretical and impacted greatly by forestry. Similarly, a section of road from Synton Mains back to the A7 will provide visibility of all seven turbines – Viewpoint 17. At further distance, sections of the A698 around Denholm and the B6359 at Lilliesleaf will experience some visibility, albeit this will be up to 15km distant.

There are some shorter range areas of visibility from some Rights of Way including the route from Wester Alemoor via Easter Alemoor to Todrig. Views from routes such as the Borders Abbeys Way are more distant.

In comparison with the refused initial Barrel Law scheme, it is concluded that there are no reasons why lack of landscape containment would be a reason to oppose the current scheme. The revisions, whilst lifting blade tip heights, have conversely lowered base heights, removed one turbine, moved the siting north and reduced the spread of turbines from most viewpoints. The ZTV for the previous scheme led the Reporter to conclude that *"…adverse landscape effects would be perceived within a relatively limited area (about 5 kilometres from the site), and that the effect on the upland landscape of the Scottish Borders as a whole would be minor"*. Whilst he then went on to refuse the scheme as he felt *"…landscape character would be seriously damaged"*, this was for reasons of specific localised landscape and visual impacts from certain areas and viewpoints – not for reasons of wider lack of containment. His decision also reflected the wider cumulative impacts including Langhope Rig. These specific impacts and the effects of revisions to the scheme will be addressed in the next section of this Report.

It is concluded that, overall, the site is relatively well contained in the wider landscape and this is supported by the general findings of the Landscape Capacity Study. .

Landscape Impact

The site does not have any special landscape designations nor does it include or lie within close proximity to any designated Wild Land Areas. The receiving landscape is defined as a large scale upland character type (BDR4 (ii) Southern Uplands with Scattered Forest – Dun Knowe Group) covering much of the south-western area of the Borders and generally considered to be more suitable to accommodate large structures such as wind turbines. The receiving landscape is therefore suitable in terms of scale. However, it is recognised that there are variations in scale within that overall landscape character area. There are also a number of smaller scale upland fringe and river valley landscapes located within 5km of the site, including the Chisholme, Whitehaugh, Upper Teviotdale/Borthwick Water and Ale Water Landscape Character Areas. It is considered that impacts on the smaller scale landscape character areas are limited to small portions of the extremities of these areas, as defined in Table A13 of the ES. The Council Landscape Architect also

believes that some of these areas will have no visibility at all, such as in the Ettrick Valley, Ale Water at Ashkirk and the Borthwick Water Valley at Roberton.

Of particular concern with the initial refused Barrel Law scheme were the impacts on variations of landscape scale within the overall landscape character type. This is particularly the case at the Alemoor Reservoir shoreline (Viewpoint 1) where the shoreline, road and tree cover introduce a finer grain of detail than is reflected in the overall landscape character assessment. Scottish Natural Heritage comment on this viewpoint in their response and acknowledge that there have been improvements in compaction of layout, setting the turbines further behind the landform. However, the larger blade diameter has negated the effects of some of the improvements meaning that SNH continue to feel there will be significant and adverse effects on landscape character and tranquillity at the reservoir.

On the initial scheme, the Reporter was of the same view as SNH. He identified that in terms of vertical scale, the turbines at Viewpoint 1 would appear more than half the apparent height of the landform when measured from reservoir level. He made a similar point with Viewpoint 2 (Wester Alemoor) and Viewpoint 6 (William Ogilvie Cairn) where he felt buildings and conifer plantations would be *"…dwarfed by the 125 metre turbines"*. This issues of vertical scale and dominance in relation to detailed local landscape character were also reasons that the Council rejected the initial scheme.

The revised scheme has claimed that the revisions to design, layout and siting have addressed these concerns to acceptable levels, whilst acknowledging that the base to tip turbine height has increased. The Council Landscape Architect considers that in the overall balance and, whilst he still has concerns over the impact on local landscape character from Viewpoint 6, there has been sufficient improvement to reduce landscape and visual effects from other viewpoints to the extent that he cannot continue to oppose the application.

Taking Viewpoint 1 as an example and allowing for the slightly changed Viewpoint position, the scheme has resulted in the following changes:

- The turbines are further away from view, the nearest now being 300m further away.
- The omission of one turbine.
- A reduction in turbine tip heights but with a greater reduction in tower and hub heights, the turbines being more below the landform than before and six rather than eight hubs being visible. The highest turbine being 15m lower than the previous highest tip.
- The linear spread of the turbines significantly reduced and kept away from the lower slopes of the landform.
- More uniform design with less clustering and overlapping.

The SNH concern is fully appreciated that any improvements have been partially offset by the increased blade diameter. It is also accepted that the vertical scale of the turbines remains large in relation to this particular local landscape. Nevertheless, in the overall assessment of all other visibility and landscape impacts, it is considered that the improvements made, especially to linear spread and tip height of certain turbines, determine that the scheme should not be rejected on the basis of residual impacts from Viewpoint 1. This reflects that the revised scheme also addresses the Council's initial concerns from this viewpoint that two turbines were particularly prominent compared to the remaining six within the original scheme.

This point of vertical scale above a local reservoir setting was recently and unsuccessfully defended by the Council at Fruid Reservoir in Tweeddale where 14 turbines of similar height (133.5m) were consented by the Scottish Ministers following a Public Local Inquiry and Reporter recommendation for approval. It is considered that the impacts at Alemoor would be similar, but of lesser scale, than those the Council identified at Fruid and that localised impacts on a more intimate part of a wider upland landscape character type need to be considered overall against all other impacts. Consequently, it is not considered that the impacts at Alemoor, whilst remaining significant as identified in the ES, are able to be sustained as a reason to refuse the revised scheme.

Viewpoint 2 from the B711 at Wester Alemoor remains of concern to SNH in relation to impacts on scale and landscape character, despite the revisions. They acknowledge the more compact and coherent view of turbines from this viewpoint but still maintain that the impacts are significant and adverse. The Reporter, on the initial scheme, agreed with the original SNH concerns that the turbines from this location would dominate the gently undulating topography and other key landscape features and scale indicators such as fields, woodland plantations and buildings/farm groups. The Council agreed on the original scheme, identifying four in the foreground and two overlapping/ stacking to the right of the viewpoint.

Viewpoint 2, which has moved position slightly, is in a more open location than Viewpoint 1 where the impacts are more dispersed and more able to be accommodated than perhaps at Viewpoint 1. The revisions to the scheme have addressed the previously expressed concerns by making the following changes:

- The turbines are further away from view, the nearest now being 220m further away.
- The omission of one turbine.
- A reduction in turbine tip heights but with a greater reduction in tower and hub heights, the foremost turbines now being further away and more below the landform than before and seven rather than eight hubs being visible.
- The linear spread of the turbines significantly reduced at the eastern and kept away from the lower slopes of the landform.
- More uniform design with less clustering and overlapping at the eastern end.

Again, in the overall assessment of all other visibility and landscape impacts, it is considered that the improvements made, especially to linear spread and tip height of foreground turbines, determine that the scheme should not be rejected on the basis of residual impacts from Viewpoint 2. This reflects that the revised scheme also addresses the Council's initial concerns from this viewpoint, that four foreground turbines were particularly prominent compared to the remaining four within the original scheme and that there were stacking issues with the easternmost turbines. It is accepted that some blade tips of Langhope Rig are visible from this viewpoint but the cumulative impact on landscape character is not considered to be sufficiently significant to justify refusal.

Viewpoint 6 from the William Ogilvie Cairn looks towards a more localised and sensitive part of the Ale Water valley and there was significant concern expressed over the landscape and visual impacts resulting from the original scheme, from the Council, Landscape Architect, SNH and Reporter. The Council had felt that, in combination with Langhope Rig, the dominance and adverse impacts on this

attractive landscape could have been sufficient in themselves, to justify refusal of the scheme. Four turbines were initially identified as causing particular problems.

The literary significance of the viewpoint was, however, given less weight by the Reporter who felt that it was not sufficiently signposted to warrant any ranking as a major tourist attraction. It is, of course, also presently the case that the cairn has been dismantled and there is no on-site evidence of the association of the viewpoint with William Ogilvie. Nevertheless, the Reporter agreed with SNH and the Council on the initial scheme, that Viewpoint 6 was an important viewpoint in terms of landscape quality with an impressive view and that the view *"…would be severely affected by the intrusion of large out-of-scale turbines".*

The Council Landscape Architect remains of the opinion that the impacts from this viewpoint are dominant and make the landform less dramatic and remote, resulting in significant adverse effects. He also feels the impacts were on a specific focal feature of the cairn itself, given the location of the cairn to celebrate the landscape and view. However, he also recognises that from Viewpoint 6, the turbines have receded slightly due to a move north and that he cannot use this one impact as a reason to oppose the overall scheme, given the other improvements and the support in principle now offered by the Landscape Capacity Study.

Scottish Natural Heritage have also reviewed the changes to the scheme from this viewpoint, acknowledging that the turbines are slightly over the ridge than before, reduced in scale and of a better design with more compact and regular spacing. However, the larger blade diameter still causes them significant concerns and they remain of the opinion that significant and adverse effects still occur. The applicant does have some criticism for SNH not acknowledging the removal of the Ogilvie Cairn and an alleged lack of fieldwork at other viewpoints. Many of the objections from third parties to the development concentrate on this particular viewpoint and the impacts that would still occur as a result of this revised scheme.

In more detail, the scheme has resulted in the following changes to Viewpoint 6:

- The turbines are further away from view, the nearest now being 220m further away.
- The omission of one turbine.
- A reduction in turbine tip heights but with a greater reduction in tower and hub heights, the turbines being more below the landform than before although all seven hubs visible and partly offset by increased blade diameters
- The linear spread of the turbines improved to the south-west on the lower valley slopes but slightly offset by an increase in spread over the hill to the north-east
- More uniform and compact design with less clustering and overlapping.

In terms of overall impact on the landscape from Viewpoint 6, the ES still acknowledges that the revised scheme will have significant adverse effects (albeit the removal of the Cairn has reduced the sensitivity to "medium" according to the applicant's Supporting Statement). The scheme is more towards the Ale Valley landscape than Langhope Rig and much more in the focus of view. Whilst the original Committee Report identified this viewpoint and stated that *"…the wind farm would potentially be unacceptable on its own"* from that viewpoint, the revisions to the scheme and the general support from the "Landscape Capacity Study" have led the Council Landscape Architect to consider that there would be no justification to refuse

purely because of the impacts from this viewpoint and receptor. This view is accepted.

Impacts from other viewpoints are generally discussed in the remaining sections of this report, as they affect principal receptors such as roads, public paths, cultural heritage assets and residential properties. Some of the viewpoints mentioned by objectors are from hill summits and iconic scenic viewpoints such as the Eildon Hills, Ruberslaw and Carter Bar. However, none of these were identified as instrumental in the reason to dismiss the previous scheme by the Reporter, in that he considered that the scheme was generally well contained within the wider landscape. The Council had previously identified impacts from two of these viewpoints but, given the changes that have now occurred to the scheme, the conclusions of the ES are accepted that none of these impacts are significant.

This is also the case with other hilltop viewpoints such as Viewpoint 7 at Witchie Knowe where the impacts merge with Langhope Rig, albeit there is one less turbine, some hub heights are lower and a couple of hubs are now below the skyline. The improvements are offset slightly by the increased blade diameters and an increase in clustering. Overall, however, and despite the revised scheme moving closer to this viewpoint, there are sufficient improvements from this viewpoint to result in it not being material in determination of the scheme.

The same with Viewpoint 9 at Broomy Law and Viewpoint 19 at Scott's View. Despite some increase in overlapping, the lower hub heights and one fewer turbines combined with the greater impacts of Langhope Rig, contribute to impacts that are not significantly adverse and did not previously result in the scheme being refused at appeal.

It is noted that there are criticisms there should be a proposed photomontage from Carter Bar rather than just existing photomontages and wirelines. Given the lengthy distance and the small scale of the turbines within such a photomontage, the submitted wireline is considered to be a sufficiently clear depiction to portray the likely impacts – which will not be significant.

There are similarly non-significant impacts on Gardens and Designed Landscapes. The ES identifies 21 such designations within 40km but only 9 with any visibility at all. Of these, the closest is Bowhill at 8.5km from the nearest turbine. All 9 would have very limited or intermittent visibility and, apart from Bowhill, all lie outwith 15km distance. The ES conclusions are accepted that there would not be significant adverse impact on any of the designated Gardens and Designed Landscapes.

In summary, the receiving landscape is characterised as large scale, upland and is acceptable in scale and provides a degree of containment, especially to the wider landscape. There are no landscape designations within, or significantly affected by, the scheme. The landscape impacts that had been identified as sufficiently adverse to justify refusal of the previous scheme, have now mostly all been reduced to acceptable levels by a combination of reduction in turbine numbers, ground levels, hub heights, more compact design and greater distance from sensitive viewpoints. The Ironside Farrar Landscape Capacity Study clearly offers some support for the development of very large turbines in this specific part of the Dun Knowe Group. Taking these factors into account together with the lack of formal objections from SNH and the Council's Landscape Architect, it is considered that there are insufficient reasons to sustain a recommendation for refusal on grounds of general landscape impact.

Visual Impacts – Roads and Paths

The submitted ZTV plans confirm the extent of theoretical visibility of the wind farm and viewpoints have been selected based on this to illustrate the visual impact of the development from various high sensitivity receptors, including public roads and paths. The ES has considered a number of such receptors, with significant effects identified in locations close to the site. The viewpoints mentioned in the previous section were considered to have been influential in the consideration of landscape impacts as a result of the previous scheme, leading to its rejection. Those viewpoints remain important and have identified significant impacts, all three being locations alongside either the B711 or the minor road from Ashkirk to Roberton. Annex A of the ES fully considers the impacts from sensitive receptors, para 676 onwards considering the visibility from roads and paths.

The A7 is a major tourist route through the Borders. The ZTV demonstrates that the wind farm would potentially be visible only from sections where the A7 becomes more elevated, especially along a stretch south of Ashkirk and briefly south of Teviothead. The initial section of visibility from the A7 is depicted through Viewpoint 8, the ES concluding that the angle of view is oblique and the distance, afforestation and proportion of turbines on view all contribute to an impact concluded as not significant. The Council's Landscape Architect accepts this assessment.

The view from the A7 at Viewpoint 8 was not an influential factor in refusal of the previous scheme. The Reporter felt that, at 7.9km distance and with the added impact of Langhope Rig, the development would be absorbed by the landscape and effects would be minor. The revised scheme makes little difference in impact due to the larger blade diameters offsetting any benefits of hub reduction. However, the design of the scheme is much better from this viewpoint with less gap and clustering and the removal of one turbine. The lateral spread is little different having shrunk to the south but enlarged to the north, although the screening by trees is perhaps more effective now. As impact from the A7 did not contribute to the previous reason for refusal, there is no reason to oppose the revised scheme which makes improvements when viewed from this location. The theoretical visibility from the A7 elsewhere within a 20km radius is almost non-existent and demonstrates significant topographical containment along this route.

The B711 public road connects the A7 south of Hawick with the B709 in the Ettrick Valley via Roberton and West Buccleuch. Examination of the ZTV demonstrates that visibility of the wind farm is fleeting or non-existent along this route from the A7 until the ridge of Firestane Edge is reached approximately 3km from the nearest turbines. Visibility of all seven towers and hubs is then possible along this section of road as it travels north and westwards to Alemoor Reservoir via Viewpoints 2 and 1. Then visibility is concealed until a stretch of the road further west, about 5-7km from the wind farm, centred on Viewpoint 15.

Viewpoints 1 and 2 from the road have been considered in the previous section on landscape impact. Viewpoint 15 has been little improved as a result of the revised scheme. Whilst there is obviously one less turbine and the nearest turbine is now 500m further away, the turbines are above the skyline when approaching from the west and more in the focus of view. The ES identifies that impacts will still be significant and for approximately a 2km stretch of the B711 at this point. However, the design of the layout has been improved, Langhope Rig remains visible and distinct and the overall distance is 6.61km to the nearest turbine at this point. Given these facts and that visibility disappears from Viewpoint 15 for 3km until nearer Alemoor Loch, it is not considered that this impact is sufficiently adverse in itself to

oppose the revised scheme. Viewpoint 15 was also not influential in the previous decision by the Council and Reporter. Indeed, the Council's previous comments on overlapping of turbines has been addressed from this viewpoint in the revised design.

The ZTV also demonstrates proportionately long areas of visibility of the wind turbines along the minor road from Ashkirk to Roberton. The main area of visibility of all seven turbines is a 3km stretch from the ridge at Blaewearie (Viewpoint 4) to just north of the William Ogilvie Cairn site (Viewpoint 6). Beyond that, there is varying visibility of fewer turbines at Burnfoot and Shielswood for approximately 1.5km. South of the Blaewearie ridge to the junction with the B711, visibility is fleeting and negligible.

The landscape impacts from Viewpoint 6 have been discussed earlier. The only other submitted viewpoint on this road is Viewpoint 4 at Blaewearie. At this point, the nearest turbine within the revised design is 2.59km away which represents 290m movement further away from the refused scheme. Whilst one turbine has been removed from the scheme and there has been some lateral spread improvement on lower landform to the south, the height reductions are not as noticeable at this viewpoint compared to others, mainly as a result of the blade diameter increases. The amount of clustering and overlapping has possibly been increased in the revised scheme albeit there was already overlapping in the centre of the previous scheme – identified by the Council in the Committee Report.

This viewpoint, as with Viewpoint 6, demonstrates that from the minor road and at closer proximity than other roads and paths in the area, the revisions have less effect and impacts will remain significant and adverse, albeit the revised scheme does reduce and improve the impacts. The Reporter felt on the previous scheme that the scenic quality of the road would be significantly diminished and the Council's Landscape Architect continues to identify the impacts from Viewpoint 6 in particular. Nevertheless, he remains of the opinion that impacts from a single receptor (the William Ogilvie Cairn) on the minor road could not in isolation, and in the overall planning balance, justify opposition to the scheme which has otherwise demonstrated improvements in landscape impact across nearly all viewpoints, albeit more limited between Viewpoints 4 and 6 on the minor road. Within this consideration, it also needs to be accepted that the road is very lightly trafficked, albeit with likely increased traffic in the summer months to reflect the scenic nature of the route and the previous draw of the William Ogilvie Cairn.

In terms of impacts from other roads, the Reporter on the previous scheme felt that any impacts beyond the 7km distance would not be sufficiently significant to justify opposition to the scheme. Brief areas of visibility may be possible from the A699, A698, A68, A6088, B6358, B6399 and B7009 but at distances at or beyond that previously considered not to be significant by the Reporter. Viewpoint 17 from the minor road at Synton lies 7.3km from the nearest turbine, an increase of 200m further distance separation compared to the previous scheme. Improvements from this viewpoint result from the omission of one turbine albeit any height reductions have been offset by the larger blades. The lateral spread improvements to the south have also been offset by movement to the north, albeit design of the scheme is better from this viewpoint with less overlapping and the loss of the outlier to the left of the view. Given the modest improvements and the lack of significance attached to this viewpoint within the previous decision, there is no reason to oppose the revised design in terms of impacts on public roads beyond the 7km distance, including the minor road to Synton. The applicant also wishes to correct the SNH statement that this viewpoint is from Ashkirk village.

There are a number of core paths, public rights of way, promoted paths and permissive paths within the 20km range. These are linked to several significant hills within the area. The Reporter, on the previous scheme, assessed but made little comment on significance of impacts from pedestrian routes and hill summits. He identified Witchie Knowe (Viewpoint 7) and Broomy Law (Viewpoint 9) but felt that at the 9-14km distances and with the presence of Langhope Rig, impacts would not be significant.

In terms of the main footpath routes, the ES identifies The Borders Abbeys Way which is a strategic long distance footpath and links Hawick, Selkirk and Jedburgh. The nearest stretch to the wind farm is the 19km long Hawick to Selkirk route. The ES concludes impacts will not be significant at distances of approximately 5.8km, the longest length of visibility being 400m at Drinkstone Hill (an iconic viewpoint in the SPG on Wind Energy) and demonstrated by Viewpoint 14. The Council Landscape Architect does not think long distance footpaths such as the Borders Abbeys Way will be significantly affected and the Council had previously accepted the impacts from this viewpoint. Certainly, the revised scheme is significantly improved from this viewpoint with no hubs now visible, less blade overtipping, reduced lateral spread and 350m further distance.

The ES also identifies The Cross Borders Drove Road which passes through the Study area and which largely shares similar visibility and distance impacts with the Borders Abbeys Way. The longest stretch of visibility will be 1.25km on Drinkstone Hill but is considered to have the same level of impact and significance. The Romans and Reivers Route is also identified with a long 5.5km section of visibility from Roberton to Broadlee Loch, generally 6-7km distant and where the impacts are considered to be not significant. Some shorter areas of medium significance are identified and Viewpoint 16 demonstrates this, south of Roberton. The revised scheme moves the turbines 270m further north but there is little other difference from this viewpoint as the larger blade diameter offsets the benefits of the lower hub heights. The Council were not originally concerned at impacts from this viewpoint.

Impacts on the Borders Loop Cycle Route are also considered but the ES concludes that, apart from the section that shares the B711 south of the site (and which is assessed elsewhere in this report), impacts will be beyond 15km generally and will have negligible impact.

Paragraph 888 of Annex A of the ES then considers all other core paths, Rights of Way, promoted and Permissive Paths in the 15km Study Area, demonstrated on Figure A6b. A number of the viewpoints would represent views expected by walkers, including 2, 3, 5 – 7, 9, 10, 14 and 16 within 5km of the proposed wind farm. It is acknowledged that some of these routes will have significant and close-up uninterrupted views of the wind farm, including Right of Way BE38 from Wester Alemoor to Todrig, via Easter Alemoor and Whitslaid. BE132 also passes through part of the site and there are three other sections of Rights of Way within 2km. Viewpoint 5 was previously of limited value and has now moved north on the Right of Way at Tod Rig, demonstrating that the revised scheme would be of greater impact than before due to it moving nearer the viewpoint. However, Langhope Rig remains the dominant scheme from this location on the Right of Way.

The ES concludes that within uninterrupted areas of visibility within 5km, the effects will be significant from a number of these paths, albeit there are also sections of path within that radius where impacts will be more limited. The Reporter on the initial scheme did not specifically refer to impacts from rights of way and paths, albeit he did reflect on impacts from some viewpoints that did share paths

Viewpoint 3, for example, whilst of significance in terms of residential amenity assessment (below), is also taken from Right of Way BE38. From this viewpoint, the ES concludes that impacts will be significant with a high magnitude of change. This viewpoint was influential in the previous decision, especially in relation to residential amenity – and will be discussed in more detail below.

In summary, significant visual impacts remain, especially from stretches of the B711 and minor road to Ashkirk, generally closer to the site, where there are clear uninterrupted views of the proposed development. From certain receptors such as Alemoor Loch and the William Ogilvie Cairn site the development would still appear dominant on the skyline. However, even those viewpoints demonstrate improvements within the revised scheme in height, design and lateral spread. Taking into account the improvements to significant impacts from other viewpoints on public roads and paths and the impacts caused by Langhope Rig, it is not considered that the visual effects from these sensitive receptors remain so significant that the revised application becomes unacceptable, especially when considered in the overall planning balance and against current Policies and Guidance, including the Landscape Capacity Study.

Visual Impacts – Residential Amenity

Scottish Planning Policy advocates the identification in Local Development Plans of an area not exceeding 2km around settlements (that have settlement boundaries within Local Development Plans) as a community separation for consideration of visual impacts. This separation distance was not specifically referred to individual properties but it is regularly used as a threshold by Reporters in decisions and it is generally recognised that most overbearing and unacceptable impacts on residential amenity would tend to occur within that distance rather than between 2 and 5km distance. The Council's "Renewable Energy" SG also clarifies that individual properties within 2km should be considered.

Visual impacts on residential amenity, whether from settlements or individual properties, tend to use the "Lavender Test". The "Test" is an assessment approach that has been taken in a number of appeal cases to assess impacts, even though it is not universally applied nor is there any Scottish Government guidance recommending its usage. The "Lavender Test" not only refers to the impact on houses but also their gardens. It sets quite a high threshold of whether a wind farm would be so overbearing and dominant on a property that it would make it an unattractive place to live. Much would contribute to that assessment including proximity, elevation, main outlook from windows, interruption by screening or buildings, location of garden ground, approach roads and tracks etc. These matters are considered and advised in the "Renewable Energy" SG.

Whilst all matters must be considered in the overall assessment, the greatest weight simply has to be given to direct and unavoidable impacts from inside dwellinghouses and, in particular, main habitable room windows. There is also evidence that decisions are taken on the number and proportion of properties within an area that may experience such impacts. The fewer the properties impacted, the less weight that would hold in the overall planning balance. This argument was unsuccessfully defended by the Council at the Whitelaw Brae PLI in Tweeddale where the Reporter stated that *"…assessment of this issue has had regard to both the number of properties affected and … the severity of the predicted effects".*

There is no question that the previous scheme at Barrel Law was refused by the Council then dismissed by the Reporter, for reasons of residential amenity impacts. The Reporter identified at least three properties that would experience significant adverse effects – Easter Alemoor, Wester Alemoor and Blaewearie. Whilst other properties were also mentioned (such as Hawksnest which was of more concern to the Council), it is clear that the impacts on these three properties led to his conclusion that the Development Plan Policy was not able to be complied with in respect of residential amenity. It is, therefore, important to consider how the revised scheme has addressed these impacts whilst also taking into account the influence of the limited number of properties affected when set against the remainder of the improvements in the scheme and the general Policy and Guidance background.

Criticisms have been made by objectors of the quality and level of information provided by the applicant to demonstrate the predicted residential amenity effects and, in particular, the chosen viewpoint position at Easter Alemoor and lack of photomontages. However, it is considered that the information provided on the revised scheme is improved on the quality and detail of the information provided for the refused scheme and it is also noted that there was no obvious criticism from either the Reporter or the Council on the quality of the previous Residential Amenity Assessment. Each affected property has a map, aerial view, larger scale wireline and written dialogue with predicted effects. Additional information was also submitted, upon request, demonstrating “before and after” wirelines from the most affected properties to enable a better assessment of how the revised scheme has addressed the previously identified significant adverse impacts.

Appendix A2 of the ES contains the Residential Visual Amenity Assessment which has been considered alongside the more recently submitted comparative wirelines. Concerns from the objectors have also been considered including their comments on the material submitted and, where relevant, their own visual material and other appeal decisions.

In terms of settlement impact, Roberton is the nearest settlement with a boundary in the Local Development Plan, lying within the 5km radius. However, the ZTV shows there to be no visibility of the wind farm from the settlement due to the screening effect of the ridge formed by Hangingshaw Hill. Hawick lies within the 5-10km range and similarly has no visibility with the exception of small areas of elevated ground at Crumhaugh Hill and Orchard Terrace. Viewpoint 10 indicates impacts from outwith the town on a Right of Way at Crumhaugh Hill. Although this viewpoint has changed slightly from the previous scheme, there are still improvements noticeable from this viewpoint due to the move further away from the viewpoint, lower hubs, one fewer turbines etc. Whilst the overlapping has perhaps increased, the distance from Hawick and the very limited areas of visibility determine that impacts from the settlement are not significantly adverse and do not justify rejection of the scheme.

The same would apply to the other identified settlements within the 5-10km range – Ashkirk and Ettrickbridge. Ashkirk has some theoretical visibility of some of the turbines but not at any scale or distance that impacts would be considered dominant or overbearing. Ettrickbridge would have no visibility due to the valley location of the settlement and intervening ridgelines.

Figure 1 of Appendix A2 indicates 33 individual properties with theoretical visibility of the wind farm within a 5km radius. Assessments are carried out for all of these properties with the exception of uninhabitable ones. Of particular relevance, however are the three inhabited properties within the 2km radius of the wind farm (Easter Alemoor, Whitslade and Hawksnest) and two further properties just outside the 2km

line with predicted significant visibility at Wester Alemoor and Blaewearie. Other properties at these distances are also affected including Todrig, Langhope and Borthwickshiels and, whilst these were considered collectively by the Reporter as contributing to adverse residential amenity impact, they would not in themselves have been considered sufficiently overbearing to have justified rejection of the scheme in their own right.

It is therefore more relevant to examine those properties that were of greatest concern to the Council and Reporter and how the revised scheme has addressed the identified impacts. These properties are Easter Alemoor, Wester Alemoor, Hawksnest, Whitslade and Blaewearie. Comparative wirelines have been provided for all these properties and some properties also coincide with main viewpoints such as Viewpoints 2-4

The greatest impact on residential amenity of the previous scheme was identified at Easter Alemoor and this continues to be the case. The Reporter had assessed that from 1.1km proximity, all eight previous turbines were visible on the ridgeline. Despite vegetation and the orientation of main rooms facing away from the wind farm, the turbines would be *"a dominant and oppressive presence that would severely limit the enjoyment of the domestic curtilage and substantially impact on residential amenity".* The Council also previously considered the impact to be dominant and that *"Occupiers of the house and land would live and work hand in glove with the development".*

The owner and tenants of the house and farm continue to strongly object to the revised scheme and have raised many points including the greater impact of the wind farm when moving around the environs of the steading at different positions – a fact Members saw for themselves on the Committee site visit. They also raise the importance of considering impacts on living and working on a hill farm, quoting an appeal decision at Minnygap near Moffat where the sensitivity of hill farm workers to impact was taken into account by the Reporter.

Appendix A2 and the Comparative Wirelines show the changes to the scheme with regard to impacts on Easter Alemoor. They are all improvements and they are proportionately significant in that there is one less turbine and the turbines have moved further away from 1.1 to 1.25km. Perceived height reductions are greater here despite the blade diameter increases and only four hubs are now visible with much less vertical tower presence. Four towers were particularly noticeable in the previous scheme. The lateral spread has been greatly reduced from the south and there remains no particular design problem from this location in terms of cluster and overlapping. The ES continues to identify the impacts as significant and, despite the fact that the changes are more noticeable from Viewpoint 3 and the farmhouse than from other viewpoints, the impacts remain significant and unacceptably adverse when applying the "Lavender Test".

However, as pointed out by the Landscape Architect, the impacts on single receptors need to be considered in the overall balance, a fact demonstrated in appeal decision making. Whilst a few properties may experience impacts considered to be unacceptable in themselves, the low numbers of those impacted is a material consideration in terms of weight attached to residential amenity impacts in the overall planning balance. Whilst it is accepted that the impacts at Easter Alemoor remain the most significant of all of the affected properties, the revisions to the scheme are acknowledged and there is no doubt that visibility from the house itself is negligible. Some weight does have to be attached to impacts around the farm given that it is a working hill farm but, although this was recognised by the Reporter in the Minnygap

decision, that scheme was still approved, indicating such impacts were outweighed in the overall balance.

Wester Alemoor is further away from the wind farm at 2.258km and is located on the B711, coinciding with Viewpoint 2. The Reporter accepted that the view towards the windfarm would be partially obscured by buildings but that eight turbines and two overlapping from the property would be dominant and would *"have a significant impact on visual amenity"*. The improvements from this viewpoint have previously been considered in this report, namely:

- The turbines are further away from view, the nearest now being 220m further away.
- The omission of one turbine.
- A reduction in turbine tip heights but with a greater reduction in tower and hub heights, the foremost turbines now being further away and more below the landform than before and seven rather than eight hubs being visible.
- The linear spread of the turbines significantly reduced at the eastern and kept away from the lower slopes of the landform.
- More uniform design with less clustering and overlapping at the eastern end.

Taking these improvements into account and the undoubted screening afforded by the large outbuilding between the house windows, its garden and the revised position of the windfarm, it is not considered that the resulting visual impact remains as domineering and overbearing that it would make Wester Alemoor an unattractive property to live in.

Blaewearie lies close to Viewpoint 4 on the minor road to Ashkirk and will be 2.658km from the revised position of the windfarm. The nearest turbine has generally moved 350m further away from this property. The Reporter had previously felt the scheme would be in the main view of the property although there was screening by trees and other vegetation in the garden, plus their own domestic wind turbine. He still felt there would be a significant adverse effect on their residential amenity.

From Viewpoint 4 and assessing the comparative wirelines, the movement further away and the loss of a turbine has combined with the lower hub heights to reduce the impacts, albeit again, the larger blade diameter has partially negated the height reductions. There is no doubt that lateral spread is curtailed to the left of the view, albeit at the expense of some increased overlapping. The influence of Langhope Rig is also a consideration. Taking these reductions and improvements into account together with the screening afforded by the garden trees and vegetation, it is not considered that the resulting visual impact remains as domineering and overbearing that it would make Blaewearie an unattractive property to live in. It is also considered that there are expansive views in different directions away from this property that contribute to visual amenity and would not be affected by the proposed wind farm.

Hawksnest was also identified by the Council as experiencing significant adverse impacts from the initial scheme, lying east of the wind farm originally at a distance of just over 1km. The Reporter was less inclined to consider the impacts at Hawksnest as anything more than moderate or minor. However, comparing the wirelines of this viewpoint between the previous and proposed schemes shows a dramatic change in visibility of the turbines to an extent that can no longer be considered to be overbearing or dominant. Only two hubs and four blade sections are now visible at 350m further away, the vertical extent decreasing significantly. Given this and the fact that the main aspect of the house is south towards the minor Ashkirk road, the

impacts on this property can now be considered acceptable. The same with Whitslade which sits alongside Hawksnest but is closer to the hill and much greater screening results in only one section of blade tip being visible.

The Reporter did include other properties in the initial decision to refuse for reasons of adverse residential impacts, albeit most were to the south and the scheme has now moved further away to the north. Individually they were less problematic but cumulatively, together with the three properties where significant effects were expected, the overall effects were unacceptable. As the scheme has moved north, these properties are no longer considered to experience effects that could be considered to be overly dominant or overbearing.

Conversely, the scheme is nearer several properties to the north such as houses at Todrig and Langhope as well as at Wester Essenside. The Residential Amenity Assessments show little significant impact and few turbines being visible because of the nature of the valleys and the topography. The comparative wireline for Wester Essenside does show turbines now becoming visible around the shoulder of the hill but still at a distance and of a scale that is not considered to be dominant or overbearing.

The ES concludes that the turbines would not be present in such numbers, size and proximity that they represent an unpleasant, overwhelming or oppressive presence in the main views from the nearest settlements. Given the sporadic and low population within the general area, the ES then rightly concentrates on individual properties and farms surrounding the wind farm within 5km. Of those, it identifies significant impacts still at four main properties whilst demonstrating the level of improvements from the revised design that have undoubtedly occurred. In all but one case (Easter Alemoor), it is considered that the dominance and scale of the significant effects have been reduced to levels that are within the tolerances of the “Lavender Test “at these properties, especially comparing the residential amenity impacts to those considered acceptable within recent appeal decisions at Whitelaw Brae and Pines Burn.

The impacts at Easter Alemoor remain significant and dominant, especially to the environs of the farm and steading, including access tracks. The changes to the scheme improve the impacts, but not to acceptable levels. Nevertheless, in line with previous Council and appeal decisions on wind farms and residential amenity, impacts on one property carry limited weight within the overall planning assessment of other landscape and visual impacts on all receptors. The revised scheme has made sufficient improvements in these respects that the application cannot be justifiably rejected for impacts on one property alone.

Cumulative Landscape and Visual Impacts

Policy ED9 requires all cumulative landscape and visual impacts to be considered and recognises that in some areas the cumulative impact of existing and consented development may limit the capacity for further development. The “Renewable Energy” SG contains advice on cumulative impact as does the Ironside Farrar “Landscape Capacity” Study. Both the Policy and the Guidance advise that there will be a presumption against development where cumulative impacts are expected to be significant and adverse.

SNH define cumulative impacts in their Guidance Note “Assessing the Cumulative Impact of Onshore Wind Energy Developments” (2012) as *“..the additional changes caused by a proposed development in conjunction with other similar developments”.* Where a particular receptor will be affected by more than one wind farm, there can

be a greater incremental effect either directly or in sequential progression. SNH also produced further guidance on cumulative impacts in "Spatial Planning for Onshore Wind Turbine – natural heritage considerations".

The initial scheme at Barrel Law was refused by the Council partly for cumulative impact reasons, stating:

"(iv) the intensification of adverse landscape and visual impacts due to cumulative visibility with the approved Langhope Rig wind farm, particularly from the area around the William Ogilvie Cairn on the road to Roberton (but also from a range of other areas/points of visibility".

In dismissing the subsequent appeal, the Reporter agreed with this and the views of SNH in particular. Whilst initially separated by 2km and whilst partly according with SNH Guidance on designing multiple wind farms in the landscape, the Reporter felt that impacts from closer viewpoints such as at Wester Alemoor (Viewpoint 2) and the William Ogilvie Cairn (Viewpoint 6) would result in intensification of wind farm development on locally visible skylines as a result of the proposal and Langhope Rig. He concluded that this would increase *"…the perception of the area as one with multiple wind farm developments".*

In responding to the revised application, SNH maintain their concerns over cumulative impact. They remain content that from middle and further distance viewpoints, the proposals are related acceptably to Langhope Rig. However, at closer proximity, their concerns increase. They refer to Viewpoints 2 and 6, the strong cumulative influence exerted by the more prominent Barrel Law scheme creating significant adverse effects on local landscape character and visual amenity. They also highlight Viewpoint 13 and especially Viewpoint 17 from east of Ashkirk, the latter being of more dominant scale compared to Langhope Rig, despite the revisions making the scheme more compact.

The Council Landscape Architect is of a similar opinion with regard to more distant views of both windfarms. On closer impacts such as from Viewpoint 6, there will be significant coincidental cumulative impact. He considers that sequential impacts are more difficult to quantify although he believes that the site is relatively isolated and the addition of Barrel Law to Langhope Rig will not increase the extent of sequential impact to the extent that the original development of Langhope Rig would on the previously undeveloped landscape. He concludes that the presence of Langhope Rig sets a precedent in the Dun Knowe Landscape Character Area although objectors counter that Langhope Rig was already approved and fully considered by the Reporter in dismissing the previous scheme. Perhaps the point made by the Landscape Architect is one of certainty in that a completed windfarm has an established impact on an area compared to one that is approved and not yet developed where there will always remain that level of uncertainty over its implementation. The applicant also comments in Appendix 1 of the Supporting Statement that *"A constructed wind farm will inevitably provide a more realistic basis for cumulative assessment than one that is depicted only in visualisations…".*

The Ironside Farrar Study, both 2013 and 2016 versions, refer to Langhope Rig in their assessment of landscape capacity for further development. The 2013 Study made it clear that at the time it was prepared and considered, Langhope Rig existed and Barrel Law 1 was proposed. It stated that the area *"…could form part of a new cluster of turbine development as long as the spaces surrounding this new cluster are maintained free of turbine developments"*. The 2016 version also identified that, whilst significant separation and siting issues between the two wind farms be

addressed, there remained capacity within the Dun Knowe Group for 5-10 further turbines 120m plus.

The issue, therefore, is whether the revisions to the scheme, combined with changed and enhanced guidance on wind farm developments in relation to landscape capacity, results in any reduction in the degree of adverse cumulative impact to the extent that refusal is no longer justified for this reason within the overall planning balance

The ES with the revised application analyses impacts expected within a 60km radius of any wind farms that either exist, have been approved or are within the application process. Following SNH advice, wind farms within the inner 40km radius have been assessed in more detail and a series of 22 wind farms identified with associated cumulative ZTVs – Figures A15a – A15w and wirelines A16-A34. Scoping sites have not been included such as Cliffhope, Fawside or the Wauchope/Newcastleton Forest sites, some of these post-dating the submission of the revised application. The nearest of these schemes would have been Fawside approximately 12km south of the site but, given the distance and the early Scoping stage of the project, the impacts of this scheme combined with the revised proposal cannot be given much weight in the overall decision.

The cumulative impact ZTVs demonstrate that the most significant impacts occur at closer proximity with Langhope Rig, as identified in the previous decision. Long Park and Pines Burn do cause some cumulative impacts but only at middle range for most receptors. The Reporter, in his decision on Pines Burn, felt that the 15km separating distance meant there would be *"little cumulative effect"*. Figure A15q does show the theoretical visibility of both Langhope Rig and the proposed wind farm to be frequent across the area where visibility exists – there would be few areas where just Barrel Law would be viewed on its own.

However, there were certain viewpoints, in particular, that were of concern to the Council, Reporter and SNH, as follows:

Viewpoint 2

As previously noted, the following improvements have occurred at this viewpoint:

- The turbines are further away from view, the nearest now being 220m more distant.
- The omission of one turbine.
- A reduction in turbine tip heights but with a greater reduction in tower and hub heights, the foremost turbines now being further away and more below the landform than before and seven rather than eight hubs being visible.
- The linear spread of the turbines significantly reduced at the eastern and kept away from the lower slopes of the landform.
- More uniform design with less clustering and overlapping at the eastern end.

The previous criticism of the cumulative impact from this viewpoint was that Barrel Law would increase the intensity and extent of wind farm development on a locally visible skyline. Although the Council had not identified a problem at this location with cumulative impact, the Reporter and SNH had. However, given the movement of the scheme further towards Langhope Rig and the reductions in scale, number and spread, it is considered that the new layout relates better to the blade tips of Langhope Rig to the north and behind the proposed turbines. Of particular benefit is

the reduction in height and linear spread to the right of view, creating a more compact view of what could be perceived as one wind farm from this location. The Council Landscape Architect considers the interaction between the two wind farms to be limited from this viewpoint.

Viewpoint 6

As previously noted, the following improvements have occurred at this viewpoint:

- The turbines are further away from view, the nearest now being 220m further away.
- The omission of one turbine.
- A reduction in turbine tip heights but with a greater reduction in tower and hub heights, the turbines being more below the landform than before although all seven hubs visible and partly offset by increased blade diameters
- The linear spread of the turbines improved to the south-west on the lower valley slopes but slightly offset by an increase in spread over the hill to the north-east
- More uniform and compact design with less clustering and overlapping.

The previous criticism of the cumulative impact from this viewpoint was the same as for Viewpoint 2 – an increase in the intensity and extent of wind farm development on a locally visible skyline. The Council had also identified the cumulative issue here with the windfarm-space-windfarm rhythm introducing new dominant elements to the view. From this viewpoint, there would never be an impression that the two wind turbine groupings are part of one wind farm. Yet, despite moving to the right of view and over the brow of the hill to a greater extent, sufficient and significant separation still exists between the two wind farms – a requirement acknowledged in the "Landscape Capacity Study". Given the linear spread and hub/tip height reductions from this viewpoint, the cumulative impacts are improved and reduced. The Council Landscape Architect considers that, although both sites are fully visible, the direction of view is different and any coincident cumulative impacts are not sufficient to cause concern.

Viewpoint 13

The following improvements have occurred at this viewpoint:

- The turbines are 160m further away from view
- The omission of one turbine
- A more noticeable reduction in turbine and hub heights although offset partially by blade increases
- Linear spread improved to the left of view with reduction in turbines straggling down landform but partly offset by increase in turbines to the right
- Improved design and much reduced overlapping

The previous criticism of the cumulative impact from this viewpoint was raised by SNH and the Council, the original Committee Report stating that *"..both developments would appear as striking yet separate components of the view from the hilltop"*. Overall, the improvements identified above have less beneficial effect in terms of cumulative impact. There remains obvious separation between the two schemes but the revised scheme still occupies a separate hilltop when compared to Langhope Rig. However, the new scheme is still improved over the previous one due

to the more noticeable reduction in vertical scale when compared to the landscape and Langhope Rig turbines.

Viewpoint 17

As previously noted, the following improvements have occurred at this viewpoint:

- The turbines are now 200m further away.
- The omission of one turbine
- Slight height reductions but partially offset by the larger blades.
- The linear spread improvements to the south have been partly offset by movement to the north
- Design of the scheme is better with less overlapping and the loss of the outlier to the left of the view.

SNH are concerned about cumulative impact from this viewpoint (although the applicant has corrected their apparent misconception that the viewpoint is not from Ashkirk village but from a minor road east of the A7 away from the village). The Council also previously considered Barrel Law would be more prominent and less well related to the landscape than Langhope Rig, commenting on the differing levels and prominence of certain turbines. The Reporter felt there would be a rather cluttered horizon, although at 7.1km distance, did not consider the impacts significant. The aforementioned improvements still maintain sufficient separation between the two wind farms but helpfully reduce the extent of spread to the left of view, down the landform and furthest away from Langhope Rig. The relationship is more compact and the hub and blade tip reductions improve the previously identified discordant relationship of vertical scale.

Other viewpoints that were considered by the Council to previously exhibit unsatisfactory cumulative impacts were Viewpoints 4, 7, 11, 15, 18 and 19. However, neither the Reporter nor SNH felt that cumulative effects from these viewpoints were significantly adverse, especially given the distance from which the wind farms were viewed at these locations. A number of these are reiterated by objectors who feel that the scheme has not generally resolved the impacts from these viewpoints. However, given the views of the Reporter, SNH and the revisions and improvements to the new scheme, it cannot be considered that the cumulative impacts are sufficiently adverse that refusal of the scheme would be justified for these reasons alone.

Indeed, for those viewpoints where cumulative impacts with Langhope Rig were significantly adverse and identified as such by the Reporter or SNH, there have been improvements in vertical scale, height, design, location and lateral spread to an extent that allows the Council's Landscape Architect to accept the cumulative impacts in accordance with current Policies and SNH/SBC Guidance. In particular, the landscape capacity work carried out by Ironside Farrar on behalf of the Council identified capacity within this modest part of the Dun Knowe Group for a further 5-10 very large turbines whilst still maintaining significant separation from Langhope Rig. It is considered that the revised scheme does that whilst also making various scale and design improvements to largely overcome the previous cumulative impact criticisms, points also explored in Appendix 1 of the applicant's Supporting Statement. For these reasons, it is not considered that cumulative impact, in itself, is a reason to reject the revised application.

Visual Impact – Construction

The associated works would include crane hardstandings, turbine bases, a substation/switchgear building, access tracks, temporary construction compounds, borrow pits and overhead/underground cabling. The ES evaluates the construction impacts on the predominant rough grassland as well as forestry, landscape character and viewpoints. Access tracks share Langhope Rig and forest tracks for significant stretches and, where new tracks and structures are required, no key landscape features will be removed and land take will be relatively small.

In terms of impacts from viewpoints, only those within 5km are likely to experience any effects. The ES considers that a short section of access track will be visible at 3km from Viewpoint 4 to one turbine as well as theoretical visibility of part of the control building. Viewpoint 13 may also have a view of a short section of access track and parts of both borrow pit search areas at 4.3km distance. The ES concludes that none of the construction activities will result in any significant effects and these conclusions are accepted.

It is the intention that the majority of the associated infrastructure is to be removed either at the end of the construction period or the operational life of the wind farm which is generally consented for 25 years. The ES basically states that the decommissioning will occur in the reverse methods set out in the Outline Construction Method Statement, to be preceded by the submission of a Decommissioning Method Statement for the approval of the Council. The control building would be removed but concrete bases, access tracks and cables would be left in situ, provided no environmental damage will result. To avoid unnecessary lasting environmental impacts, suitably worded conditions can agree the eventual removal (or any retention in situ) of ancilliary infrastructure.

Forestry

Impacts of a wind farm development on existing forestry are taken into account under the general considerations of landscape, ecological and visual impacts under Policy ED9 and the “Renewable Energy” SG. There are few impacts on forestry as a result of the scheme, the ES detailing that the only impacts are caused by accessing the site.

There was an initial objection by Forestry Commission Scotland on the basis of lack of information on road construction through the existing forest, compliance with the Control of Woodland Removal Policy and impacts on the Hyndhope Forest Plan. The applicant responded with further detail on the access track proposals. Whilst this initially follows the main Langhope Rig track and then an existing forestry track, there would then be a new section of access track leading to the open ground to the south-east of Hyndhope Forest.

Following reassessment of the precise route of this new section of access track, it has been identified that whilst there would be no felling of existing trees, a section of recently clear-felled area would be necessary to achieve the required 15m corridor width for the new access track, resulting in a total land take loss of 0.88HA which approximates to less than 2% of the overall afforested area. The applicant considers such a modest reduction to be an exception allowed under the Government Control of Woodland Removal Policy and, in any case, would comply with any replanting of broadleaves as part of the black grouse habitat replacement measures in the required Habitat Management Plan.

Forestry Commission Scotland has now withdrawn their initial objection and accept that the development complies with the Control of Woodland Removal Policy. The Council's Landscape Architect also has no objections to the impacts on woodland given that the objection has been lifted by Forestry Commission Scotland.

Turbine Micro-siting

The ES states that a micro-siting allowance of 50m is appropriate for turbines and associated infrastructure, albeit there is also a request for the allowance to be extended up to 100m with the agreement of the Planning Authority. As with all wind farms, the principle of micro-siting is generally accepted and a standard 50m distance is nominally included in the Government recommended conditions. Whilst a degree of flexibility is suitable to allow for further investigation into ground conditions, all other potential impacts of micro-siting need to be considered, including visual and other environmental effects.

Given the concerns expressed in relation to cultural heritage and hydrology, there are particular reasons why micro-siting would have to be controlled, or even prevented, in relation to certain turbines. Similarly, the benefits and advantages that have arisen as a result of the revision to the initially refused scheme, in relation to landscape, design, visual and residential amenity effects, could be reduced with any micro-siting and these effects would all have to be properly assessed within an appropriate condition.

There is not considered to be any reasonable justification for a micro-siting allowance of 100m and, thus, the suggested condition would limit the distance to 50m, subject to no micro-siting nearer residential properties not financially involved with the scheme, to Scheduled Monuments, to areas of deep peat or to watercourses, private water supplies or Groundwater Dependent Terrestrial Ecosystem (GWDTEs). Any increase in ground level height Above Ordnance Datum would require the applicant to undertake wireframe analysis to illustrate that each turbine's revised position can be tolerated in the landscape without increased adverse visual impacts.

The maximum tip height of each turbine is controlled by both the application description and by the clause within the micro-siting condition preventing any higher base positions AOD. There is no necessity to repeat tip heights in a separate condition.

Residential Amenity

Policy ED9 requires the impacts on communities and individual dwellings (including visual impact, residential amenity, noise and shadow flicker to be considered. Policy HD3 states that development that is judged to have an adverse impact on the amenity of residential areas will not be permitted. Members will note that visual impacts have been considered earlier in the report.

Noise

The "Renewable Energy" SG states that noise assessments should be carried out within 2km of the site and should follow The Assessment and Rating of Noise from Wind farms (ETSU-R-97) in conjunction with the Institute of Acoustics Good Practice Guide 2013 (IOA GPG). Environmental Health have been consulted to provide advice on whether noise generated by the proposed development, either individually or cumulatively in association with noise from Langhope Rig will have an unacceptable impact on residential receptors.

A noise assessment has been carried out by the applicant and is contained within the ES. This is derived from the background noise survey carried out for the original wind farm scheme, a method accepted by Environmental Health who are also content that the assessment has been undertaken in accordance with the aforementioned regulation and good practice guide. The noise predictions for the development have been undertaken using the recommended noise modelling methodology and correction factors.

Noise levels arising from the development have been calculated and a table of noise limits has been produced, giving a maximum level for each identified receptor at each integer wind speed. Separate tables have been produced for day time and night time. There are no financially involved properties identified. The Assessment has also undertaken a cumulative impact study including noise from the Langhope Rig wind farm

Environmental Health has confirmed that the modelling and assessment work undertaken in connection with this application has demonstrated that there will be no unacceptable noise impacts on local receptors from the operation of the wind farm. There is one property, Easter Alemoor, where a risk of exceeding of noise thresholds has been identified at a wind speed of 7m/s by the level of 0.9dB. Cumulative noise will also exceed the threshold at Langhope Farm at wind speeds of 6-12m/s by up to 1.3dB. The ES states that "…the proposed development will be operated in such a way that operational noise levels remain within these limits".

Although this has been queried by objectors who believe that any exceeding of the limits should determine the scheme is not acceptable or requires adjustment, Environmental Health do not object to the development and consider that a specific condition requiring mitigation, as proposed by the applicant to address the issue, would resolve matters. Whilst this is doubted by objectors, the recommended condition would be suspensive requiring agreement of the mitigation before any development could commence.

As standard practice, it is also recommended that the condition adopted by the Scottish Government is used to control noise levels from the development. If planning permission is granted it would then be the responsibility of the developer/operator to comply with these noise limits. The condition sets out a requirement on the operators of the development to appoint independent noise consultants to record noise emissions from the development and to investigate and resolve any noise issues and complaints to the satisfaction of the Planning Authority.

In terms of construction noise, the ES states that construction will not take place at nights or weekends. The applicant has undertaken an assessment of the noise arising from construction of the scheme, including blasting within the borrow pits and traffic movements within the site and along local roads. This concludes that no major noise impacts are predicted, the noise levels predicted to be below the lowest construction noise threshold levels. Although an outline Construction Method Statement has been provided within the ES, it is intended to control noise impacts by condition via a final Construction Method Statement. A condition will also control the timing of construction activity.

In summary, there are no noise-related reasons to consider that the scheme could not be in compliance with LDP Policies and Supplementary Guidance. Albeit the development has moved north, it is also noted that there were no noise-related issues identified by the Council or the Reporter with the original scheme.

Shadow Flicker

Policy ED9 and the "Renewable Energy" SG require assessment of residential amenity to include the impacts caused by shadow flicker. The ES includes the relevant assessment at Annex I. The Study Area of 2km reflects advice within the SG, following on from a 2015 research paper which extended the effects zone from 10 rotor diameters to 2km. Within the 2km zone, three inhabited dwellinghouses were identified – Easter Alemoor, Whitslade and Hawksnest. These range from 1.25 – 1.36km from the nearest turbine. None of the three properties are within the cumulative 2km overlap when Langhope Rig is considered so no cumulative effects require to be assessed.

In terms of established maximum shadow flicker effects that are considered to be acceptable, there are no statutory UK figures although best practice suggests a worst case scenario of 30 hours per year or 30 minutes on the most affected day. The best practice also suggests a more realistic threshold of eight hours per year. The assessment identifies that none of the three identified properties are within the previous guideline of ten rotor diameters.

The results demonstrate that there is no significant shadow flicker effect at all three identified properties. The greatest impact would be expected at Hawksnest where in the worst case scenario, 0.17 hours on the most affected day and 7.48 hours per annum would be well within the best practice threshholds. Similarly, under the realistic scenario, Hawksnest would experience 0.03 hours on the most affected day and 1.11 hours per year.

The findings of the assessment demonstrate that there is no significant impact on residential amenity caused by shadow flicker. This was similarly not an issue when the original scheme was considered.

Cultural Heritage Impacts

The application has to be assessed against Policy ED9 in respect of impacts on the historic environment and Policy EP8 which seeks to protect the appearance, fabric or setting of Scheduled Monuments or other national, regional or local significance. Development proposals that adversely affect such sites would only be permitted if it is demonstrated that the benefits of the proposal clearly outweigh the heritage value of the asset and there are no reasonable alternative means of meeting the development need. The supporting text of Policy EP8 establishes the aim of the policy is to give Scheduled Ancient Monuments and any other archaeological or historic asset or landscapes strong protection from any potentially damaging development.

The Council's "Renewable Energy" SG contains advice on assessing the impacts of wind energy developments on the historic environment, both direct and indirect impacts. It augments the aforementioned Policies and also provides information on how setting of historic structures and places are assessed, including the use of guidance from Historic Environment Scotland – "Managing Change in the Historic Environment: Setting".

The Council's Archaeology Officer does not object to the application but does have concerns that the development impacts on the setting of the Scheduled Monument, Kemp's Castle, to a degree of adverse moderate significance. This is discussed below.

Direct Impacts on Known and Unknown Assets

The Council's Archaeology Officer advises that impacts will be to three known assets – two tracks and an earth bank. The impacts will be linked to access tracks crossing the routes of the assets, with one turbine and crane pad also affecting one of the tracks. The ES proposes that in order to mitigate the loss or damage of these features through development, archaeological intervention is required. This can be covered by a condition for a Written Scheme of Investigation can also be broadened to include all mitigation works, including post-excavation analysis and appropriate dissemination of results, as an alternative. The exact mechanism of delivery can be negotiated following consent.

The ES also suggests there is some potential for encountering buried archaeological features. The Archaeology Officer considers that the landscape is largely covered by thick vegetation and blanket peats making identification of features difficult without intensive survey. He disagrees slightly regarding preservation of remains within peat, especially within deep peat – this is likely to contain at least paleo-environmental evidence (preserved pollens, seeds, vegetation) of prehistoric and later date that can be used to re-construct a sense of land-use over time. Although it is agreed that there is a low potential for encountering buried archaeological features through development, the Archaeology Officer suggests a mitigation strategy consider the potential for peats and water-logged sub-soils to contain paleo-environmental evidence. This should include both a watching brief and targeted paleo-environmental sampling, all included within the Written Scheme of Investigation.

Setting

With the exception of impacts on Kemp's Castle, the Archaeology Officer is satisfied that the ES has adequately assessed potential impacts on the setting of designated and undesignated sites. There is some concern, however, that more information could have been provided regarding what elements of the development contribute to significant effects, rather than presuming it is the development as a whole.

Two significant impacts are identified by the ES on Scheduled Monuments – Kemp's Castle and Leap Hill. Impacts on Leap Hill are considered to be of minor significance and thus there is no maintained concern by the Archaeology Officer or HES. However, the ES judges impacts to be moderately significant on the setting of Kemp's Castle, agreed by both the Archaeology Officer and HES.

The Archaeology Officer does not agree, however, with the ES assumption that long distance views of the Castle were not important in establishment of it and its associated settlements and field systems. The ES does establish that long distance views of the western part of Kemp's Castle are to the south and south-west, especially from the western Ale Water valley. The eastern parts of Kemp's Castle, set on a ridge, have panoramic views in all directions, interrupted only by woodland. Of particular historic significance are the views south and south-west to other contemporary settlements. Visibility of water features from the Castle would have also been of importance for stock and agricultural purposes, especially the Ale Water. The Archaeology Officer considers that, whether intentional or not, the views are a key element in appreciation of the site and the ES has significantly underestimated this aspect of the setting. This also applies to views towards the Castle.

Whilst the Archaeology Officer agrees with the ES identifying impacts to be moderately significant and adverse, the impacts on views out from the Castle are particularly affected by the domination of the turbines over the Ale Water Valley, emphasised by the Bleakhill Burn. He identifies that Turbine 5, in particular, overtops the valley and creates dominance impacts on the setting of Kemp's Castle. Unless this turbine is omitted or moved, the Archaeology Officer considers that Policies ED9 and EP8 could be contravened in terms of adverse effect on setting of a Scheduled Monument. However, he does not object to the application and recognises that the impacts on setting must be viewed in the overall planning balance and assessment of the wider application.

The concerns of the Archaeology Officer were responded to by the applicant in the form of a more detailed appraisal of the setting impacts on Kemp's Castle, including new wirelines from the eastern and western settlements. Whilst much is agreed regarding long distance views and setting preservation, there is still concern from the Archaeology Officer that the Ale Water and Bleakhill Burn valley settings have been underestimated in terms of historic significance. Turbine 5 is still considered to encroach into the Ale Water catchment adversely affecting the integrity of the perceived historical relationship. Even if omitted or moved, however, there would still be a moderate significant impact on the setting of Kemp's Castle.

The views of the Archaeology Officer have been raised with the applicant and there is no amendment proposed to Turbine 5 as they do not consider there to be justification. Given that the Archaeology Officer is not objecting to the application and suggests the recommendation to move or omit Turbine 5 is considered in the overall planning balance, it is also important to consider the views of HES on setting impacts as part of that balanced judgement. They do not raise any objection in terms of impacts on the setting of either Kemp's Castle or Leap Hill. Whilst they have some comment upon methodology and the slightly increased cumulative impacts, especially on Leap Hill, there is no comment to suggest they share the same strength of concerns as the Archaeology Officer. They consider the integrity of the setting of Kemp's Castle to be maintained despite the moderately significant effects.

Taking into account their views and the lack of objection from the Archaeology Officer, whilst also recognising that even without Turbine 5, the remainder of the scheme would still have moderately significant impacts on setting which have not warranted an objection, it is not considered that there is sufficient justification to seek omission or relocation of the turbine. Indeed, whilst modest micrositing within the normal 50m allowance would be carefully assessed in terms of impacts on this setting, greater relocation could cause issues of design, clutter, visual impact etc. It should also be noted that, whilst the scheme has resulted in relocation and omission of a turbine, there were no archaeological reasons for the rejection of the initial Barrel Law application, nor indeed any particular concerns expressed in the original Committee Report or Reporter's Decision Letter. These points have also been made by the Applicant in the Supporting Statement.

Subject to conditions controlling direct impacts on known and unknown archaeology, it is considered that the development would be generally in compliance with LDP Policy ED9 and the "Renewable Energy" SG. There is insufficient justification to refuse or seek amendment to the scheme under the aforementioned Policies, Guidance and LDP policy EP8, taking into account the comments received and the overall planning balance.

<u>Other Cultural Heritage Impacts</u>

Policy EP7 seeks to safeguard the character, integrity and setting of listed buildings. Policy EP9 has similar aims for Conservation Areas and EP10 for Gardens and Designed Landscapes. Policy ED9 also requires wind energy development to consider the effects on these cultural heritage assets and this is augmented in the "Renewable Energy" SG.

There are no such cultural heritage assets within the site nor within 1km. Within the 1-5km range, there are 9 listed buildings including the Category A "Harden" 4.3km south-east. The nearest listed building is the Category B "Todrig Tower House" 2.1km north-east of the closest turbine. Within the 5-10km study distance, there are 202 listed buildings (8 Category A), two Gardens and Designed Landscapes (Bowhill and The Haining), one Conservation Area (Hawick) and an historic battlefield (Philiphaugh).

The ES findings resulted from ZTV and visibility assessments within and outwith the 5km range, including further investigation and field visits. No effects were identified on the setting of any listed buildings within 5km any greater than "negligible" and there were similarly no effects identified on the Conservation Area or either Garden and Designed Landscapes. Notable listed buildings such as Harden, Todrig, Borthwickshiels and Chisholme House may have some theoretical visibility but, following site assessment, ratings of "negligible" impact on setting have resulted from consideration of alignment, tree cover etc.

The findings of the ES are accepted in relation to impacts on cultural heritage assets other than archaeological sites and it is considered that the proposal complies with LDP Policies ED9, EP7, EP9 and EP10 together with the "Renewable Energy" SG

Ecology, Habitat and Hydrology Impacts

The proposal has to be assessed against policies EP1, EP2 and EP3, which seek to protect international and national nature conservation sites, protected species and habitats from development. Policy ED9 requires consideration of the impacts on natural heritage, hydrology and the water environment, augmented by the "Renewable Energy" SG. The ES contains an assessment of the likely impacts on ecology, the water environment, water supplies and flooding and puts forward mitigation measures through a series of reports.

The proposed development is not located within any international or nationally important areas of nature conservation or known protected species. The closest sites are the River Tweed SAC/SSSI and the Alemoor West Meadow and Loch SSSI. SNH accept that whilst there may be connectivity, there would be unlikely to be significant effects on the qualifying interests of the SAC provided appropriate mitigation is put in place. This would include the Outline Construction Method Statement in Appendix 3 of the ES. On this matter, the Council Ecology Officer agrees.

The site largely occupies a habitat of marsh/marshy grassland, coniferous woodland, bog, bracken and dry/wet heath. The Ecology Officer notes that whilst there is a reduced land take of heath compared to the earlier application, bog habitats are predicted to be lost. This is of some concern and should be compensated for in the Habitat Management Plan, including impacts on peat and floating tracks where appropriate. SNH seek an adjustment to an access track to avoid an area of deep peat. SEPA had also initially objected due to lack of information on the management of peat but subsequently withdrew their objection on the basis that a fully detailed Peat Management Plan would be required by condition.

In relation to ornithology and mammals, the Ecology Officer has concerns over the adequacy of bat surveys, considering that the updated 2016 surveys do not comply with survey requirements for a low risk site. However, he notes that SNH are content with the bat surveys carried out and subsequently accepts that impacts are unlikely to be significant on bats, aided by clarification of the stand-off distance for Turbine No. 6. The Ecology Officer and SNH have no specific concerns about other wildlife impacts, including impacts on badger, otter, red squirrel and common lizard. The ES does identify further mitigation will be necessary for impacts on black grouse. This is also likely to be required off-site and can be included in the Habitat Management Plan. This should also include measures for habitat loss as well as for reptiles and breeding waders. SNH also welcome the Habitat Management Plan which should cover Species Management in relation to black grouse. The RSPB also welcome this.

The Ecology Officer recommends further conditions to cover an Ecological Clerk of Works, a Construction Environmental Management Plan (CEMP), a Species Protection Plan, an Ecological Monitoring Programme and a monitoring/mitigation plan for goshawk. There would also be a significant ecology involvement in the details of the Decommissioning and Aftercare Plan that would be required. SEPA have confirmed their requirements for pollution prevention measures in the CEMP and Construction Method Statement.

SEPA initially objected regarding the impact of the development on the water environment. Whilst the ES proposed mitigation in relation to groundwater impacts through site layout, best practice construction methods and site management , SEPA requested further information on water courses, infrastructure and peat depth to allow assessment of effects on Groundwater Dependent Terrestrial Ecosystem (GWDTEs). They also objected due to concerns over direct and potential dewatering impacts on the private water supply for Easter Alemoor, given that dewatering of the borrow pits is anticipated. Six private water supplies were identified within 2km of the development but none within 100m.

Further discussion ensued on groundwater matters between SEPA and the applicant, SEPA then withdrawing their objection on impacts on the private water supply, once more detailed information was provided about the source of the supply in relation to the nearest turbine and access track. They requested that any micro-siting, however, was away from the water source. Environmental Health request a condition on planning consent requiring a scheme of mitigation to protect the private water supplies

In relation to impacts on GWDTEs, the concerns of SEPA related mainly to impacts caused by three of the seven turbines, the remaining impacts being able to be addressed through the CEMP and via the Ecological Clerk of Works. SEPA had initially considered that their concerns regarding the other turbines could be addressed through additional survey work and micrositing of the turbines – albeit they could not accept that the micrositing would necessarily be restricted to the normal 50m. After further information and discussion, SEPA indicated they would be willing to accept a condition requiring micrositing of no further than the normal 50m allowance, subject to submission of further survey work and provided that survey work justified the movement of Turbine 3. On that basis, SEPA have withdrawn the final element of their objection.

In terms of flood risk, the site is not at risk from a flood event with a return period of 1 in 200 years. However there are a number of small watercourses located within the

site that may be at risk of flooding. Overall, there is minimal flood risk to the site so the Council's Flood Protection Officer has no objections to the proposal on the grounds of flooding provided requirements regarding hard surfaces, silt traps to minimise the amount of sediment entering the watercourse, culverts and water crossing are agreed.

Water supply impacts also initially concerned Scottish Water over the drinking water catchment of Alemoor Reservoir and the proximity of the access track and borrow pits. They had requested either relocation outwith the catchment of all infrastructure or submission of more detailed information to resolve their concerns. The applicant provided additional information which led to withdrawal of their objection, subject to contractors being provided with information on water catchments and adequate water protection measures along the access route shared with Langhope Rig.

Subject to the aforementioned conditions, the impacts of the development on ecology, habitats and hydrology are considered to be acceptable and in compliance with LDP Policy ED9 and the approved "Renewable Energy" SG.

Traffic and Road Safety

Policy ED9 of the LDP requires impacts of the construction on wind farms on public and trunk roads to be considered, the approved "Renewable Energy" SG also requiring full consideration of the impacts including the structural and physical ability of the network to accommodate the traffic and impacts on local communities.

The ES states that traffic to the site during the construction phase (8 months) would consist of construction workers (average 17 personnel per day), HGVs carrying construction materials (including imported aggregate), plant and machinery and abnormal loads vehicles carrying the wind turbine components. The maximum traffic is estimated within Month 3 consisting of 66 HGV movements per day with a further 18 car and light van movements. This corresponds with ground work construction, turbine component delivery occurring later in the eight month period when numbers of movements are much lighter. It also envisages no use of stone from on-site borrow pits.

A finalised route is not specified for the delivery of the turbine components to the site in the ES but it is likely to follow the A68 southwards, the A698 through Denholm to Hawick, Hawick High Street then the A7 to the B711 junction to Roberton. The site access would then be that serving Langhope Rig, 10.5km from the A7. Upgrading works have been identified to facilitate the abnormal loads, following a Transport Assessment and Swept Path Analysis. Mitigation is fully set out in Section G of the ES which also includes before/after road condition surveys, a Traffic Management Plan and signage. The greatest effects are envisaged to be upon pedestrian users of the B711, albeit the ES feels such impacts would affect relatively low numbers.

The Roads Planning Service has no objections to the principle of a wind farm in this location, noting that the route was used for the construction of the Langhope Rig wind farm. However, they do require a number of issues to be addressed. A Traffic Management Plan (TMP) is required to be submitted for approval before the development is commenced together with details of the National Grid connection. Given the turbine components are larger than Langhope Rig, further swept path analysis and mitigation require to be submitted for approval, any accommodation works potentially requiring planning permission in their own right. In terms of the abnormal load movements, full consultation would be necessary with Police Scotland

as they had concerns over the number of components with each delivery for Langhope Rig

Roads Planning also will require joint pre and post construction surveys to identify and seek any necessary mitigation in the form of remedial works. There has been particular concern expressed to Roads Planning over the condition of the B711, a theme also followed in the submissions from objectors to the application. Concerns are also expressed over Denholm village impacts. Whilst all concerns over traffic and road impacts are noted, Roads Planning do not object and there was previously acceptance of the construction of Langhope Rig. Similarly, the initial Barrel Law scheme was not refused on roads grounds. It is concluded that, subject to appropriate conditions and mitigation agreed within those conditions, there are no roads grounds to reject the application against Policy ED9 or the approved "Renewable Energy" SG.

Public Access and Footpaths

Policy ED9 requires the impact on public access to be considered and the approved "Renewable Energy" SG seeks proof that any turbines within 2km of a core path or other significant access route would not have a significant impact on the path or route. There are no claimed rights of way or core paths on the site apart from a small section of Right of Way BE132 that consists of the shared access route through Hyndhope and Alemoor Forest to the Langhope Rig wind farm. There are three sections of other Rights of Way within 2km of the nearest turbines, the nearest being 0.6km to the south-east (BE38 Easter Alemoor to Whitslade).

The ES considers there to be some construction impacts on BE132 for a temporary period but, overall, minor or negligible impacts on the public accesses and footpaths surrounding the site. The Council's Access Officer advises that there should be no obstruction to that route. The Officer also notes there would be clear visibility from several noted routes such as the Borders Abbeys Way and the Cross Borders Drove Road and that the ES states good practice would be followed during construction. The Officer raises no objection but considers that conditions should cover agreement of a Path Planning Study, no obstruction to the right of way and the availability of new tracks to the public once the development is complete.

The Access Officer also recommends that developer contributions should be sought for the promotion, maintenance and management of the wider path network in the local area. However, this is not considered to be appropriate as this would affect land outwith the applicant's control and is not a direct requirement of the development. This is a similar stance to that taken on other wind farm developments where the request has also been made.

Subject to the aforementioned conditions, it is considered that the impacts on the path network are in compliance with Policy ED9 of the Local Development Plan and the requirements of the approved "Renewable Energy" SG.

Ministry of Defence/Aviation

Policy ED9 of the Local Development Plan advises that proposals will be assessed against "..aviation and defence interests and seismological recording". This is augmented in the approved Supplementary Guidance by stating that schemes will be supported unless there would be significantly detrimental effects on such interests. The initial Barrel Law scheme was refused by the Council then rejected on appeal for adverse impacts on both the Eskdalemuir Seismological Recording Station and the

Deadwater Fell ATC Radar at RAF Spadeadam. The Ministry of Defence had maintained objections on that scheme. The Government Reporter had also visited RAF Spadeadam before determining the appeal.

The applicant has addressed aviation and defence in Annex K of the ES. It concluded that the issue over distance from Eskdalemuir was resolved in 2014 with acceptance that the noise budget could cope with cumulative impacts from 15-50KW. On the issue of Deadwater Fell, the applicant believes the new radar installation in 2016 has led to acceptance of impacts from the proposed, and other developments, as not being significant. The planned replacement of this radar with a new version in 2019 will further reduce impacts due to mitigation built into the design.

In consultation responses on this revised application there appear to be no aviation or radar issues with regard to civilian aircraft. No objections have been received from Edinburgh Airport or NERL. However, the Ministry of Defence originally objected to the application. They considered that the scheme would be detectable from, and cause unacceptable interference to, the ATC radar at RAF Spadeadam, creating confusion in the management and separation of military and civilian aircraft. This includes restrictions on arrival/departure routes into the range, restriction on aircraft operating areas, ZONE traffic patterns, entry/exit from the Low Flying System and frequency of provision of the Traffic Service and Deconfliction Service. They also commented that research was ongoing into solutions and suggested the developer consider mitigation. They were also concerned that there would be further erosion of the Low Flying Area which is used to train against radar systems at Spadeadam and that there may be interference against threat radar at Wigg Knowe. If all these issues could be overcome, the MOD would then request infra-red or omni-directional red lighting at the highest practicable level.

The applicant has been in liaison with the MOD over their objections and this has been the main reason for the delay in presenting the application for decision to Committee. However, after further consideration, the MOD have now withdrawn both their objections to impacts on the Wigg Knowe threat radar and on low flying, subject to omni-directional or infra-red lighting being required by condition and fitted at the highest practicable level. With regard to impacts on the ATC radar at Spadeadam and after further consideration of the technical mitigation advanced by the applicant, the MOD have also withdrawn this final part of their objections subject to an appropriately worded condition.

This condition will require the submission and approval of an Air Traffic Control Mitigation Scheme (by the Planning Authority after liaison with the MOD) and the full implementation of all the measures included in the mitigation scheme. There are a number of recent examples of wind farms that have been determined subject to such mitigation schemes, including within the Borders eg. Windyedge, Aikengall IIA, Whitelaw Brae and Pines Burn. What has differed, within the relevant conditions attached to these schemes, is the timing element. Whilst some conditions state that there should be no development until such a scheme has been approved, there has also been acceptance that a two stage approach would be possible, allowing groundworks but no turbines to either be erected or operational until the approval and implementation of the mitigation scheme.

There are issues with both approaches. The Council argued at Gilston Wind Farm that, to enable ground works before any mitigation scheme was approved, presented a substantial risk, not only to the developer but also to the environment if such a scheme could not, subsequently, be agreed. Developers are concerned that the agreement processes for such a scheme could significantly delay the

commencement of those elements of the scheme that could not affect the principle purpose of the condition ie.. interference with Air Traffic Control Radar. The MOD, within their consultation response and whilst accepting some development could occur without a mitigation scheme being approved, urges some caution regarding the time and cost of meeting the condition which *"…should not be underestimated by the applicant".*

Given the stance of the Council on Gilston and Pines Burn (in terms of the Departmental recommendation), it could be considered that it would be unreasonable and imprecise to allow development before the submission and approval of the mitigation scheme. This could pose a risk of allowing unnecessary development to occur on the ground that could become redundant should a mitigation scheme not be agreed, despite the indications that it could. However, it is also clear from the MOD response that they accept the wording *"No turbines to be erected"* on the basis that they have been liaising with the applicant on suitable mitigation and there is an expectation that such mitigation will both be proposed and will, ultimately, prove acceptable. They go further in their latest response and state that the technical mitigation proposal has been accepted.

The reason for the condition is to ensure protection of radar and air traffic control operated by the MOD. It is clear that it is the vertical and moving elements of the proposal that would cause the issues to their facility. As it is their facility that is intended to be protected by condition, the MOD response should carry significant weight in considering the timing of the condition. They draw a distinction in timing dependant on whether mitigation proposals have been discussed and accepted leading up to the decision on the application. In this case, there has been a mitigation scheme submitted and accepted, allowing them to agree to a wording which states *"No turbines to be erected"* rather than *"No development to be commenced"*, making it, in effect, a phasing condition. For this reason, it is considered that the condition, in this instance, should be on the basis of the MOD advice. Had there not been any discussion or progress made towards a mitigation scheme, then the wording would have been retained as *"No development to commence".*

Economic and Socio-Economic Benefits

Wind energy developments can make an important contribution to the UK economy. Net economic impact is a material planning consideration and local and community socio-economic benefits include employment, associated business and supply chain opportunities.

SPP states that where a proposal is acceptable in land use terms, and consent is being granted, local authorities may wish to engage in negotiations to secure community benefit. The Scottish Government's Good Practice Principles for Shared Ownership of Onshore Renewable Energy Developments advises that where local benefits are proposed through a shared ownership opportunity and there is an intention to secure a partner organisation, this may be taken into account in determining a planning application.

The ES outlines the socio-economic benefits of the development and these include:

- Direct and indirect job creation (estimated at 30) during the construction and operational phase of the wind farm and the use of some local contractors;
- Investment in Scottish Borders economy of £8 million

- Community Benefit Fund for community projects and/or
- Shared Ownership Scheme allowing the community to invest in the project and receive an annual return.

It is accepted that some jobs would be created during construction if the developer uses local firms and businesses and there is the potential for employees to use local facilities and services, such as accommodation and shops. Following the construction phase a relatively low level of employment would be generated, though this would rise again during decommissioning. It is also noted that a number of objectors query the benefits of the construction of the wind farm to the local economy, stating that experience of the Langhope Rig development resulted in little local employment and a Community Fund hard to access.

One issue of significance raised in the representations received is the impact of the wind farm development on tourism. This has been particularly highlighted by the Community Council responses. Tourism is a well-established and valuable contributor to the Borders economy based on the scenery and the natural and cultural environment. Policy ED9 and the approved "Renewable Energy" SG seek an impact statement on tourism and recreation to be submitted with any application. Visit Scotland also responded seeking an impact statement

Whether the wind farm would deter visitors from this area is difficult to quantify. There are reports submitted by objectors to counter the impact claims made by the applicant in Section H of the ES. In the ES, it relies on a series of Customer Surveys by the Government, the Council and, in particular, the Biggar Economics Report from 2016. The conclusions are that wind farms would not detrimentally impact on tourism. This is contested in submissions by objectors who claim there would be increased detrimental economic impacts, not just on tourism but also on property prices and other local economy matters. The applicant counters with references to several appeal decisions where it was felt there was no convincing evidence that wind farms detrimentally affected tourism.

Similarly within the recent Pines Burn decision, the Reporter attached some weight to the 2013 Council study which concluded that wind farms did not have any significant effect on tourism. Despite similar claims from the local community and tourism businesses, he was not persuaded there was any evidence to show there would be significant adverse impacts on tourism. Taking all matters into account, it is considered that there is no firm evidence that the proposal would have significantly adverse effects on tourism in this part of the Borders.

The socio-economic benefits of the proposed wind farm development can be taken into account as a material consideration in assessing the application. It is clear that there are arguments on economic impact from both sides. It is possible that there may be some economic gain but the objectors believe this would not be the case. The potential for such benefits and thereby economic growth in the consideration of energy proposals must be balanced against any potential adverse environmental impacts that are likely to occur. In this case, the changes in the scheme siting and design combined with the compliance with the Landscape Capacity Study are the principal reasons why the scheme can now be considered to be in compliance with local and national renewable energy policies. The claimed socio-economic benefits or disadvantages have, therefore, less material weight on the acceptability of the scheme in the overall planning balance and are not sufficient, in themselves, to affect the final recommendation.

Renewable Energy benefits

The national background to renewable energy progress and targets is set out in Chapter 4 of the ES. NPF3 is clear that the planning system must facilitate the transition to a low carbon economy and facilitate the development of technologies that will help to reduce greenhouse gas emissions from the energy sector. The efficient supply of low carbon and low cost heat and electricity from renewable energy sources are vital to reducing greenhouse gas emissions and can create significant opportunities for communities. This has been augmented by more recent publications, including the Climate Change Plan, Onshore Wind Policy Statement and Scottish Energy Strategy. LDP Policy ED9, therefore, requires consideration of the scale of contribution to renewable energy generation targets and the effect of greenhouse emissions.

SPP supports the development of a diverse range of electricity generation from renewable energy technologies. It contains the following targets:

- 30% of overall energy demand from renewable sources by 2020;
- The equivalent of 100% of electricity demand from renewable sources by 2020.

The 2017 Scottish Energy Strategy updated the contribution percentages to 50% of overall energy demand by 2030 from renewable resources and an increase in production of energy use by 30% across the Scottish economy.

This proposed development would have a total installed capacity of 24.5MW, producing electricity to serve up to 16,300 homes and saving 40,000 tonnes of carbon emissions each year. The weight to be attached to this contribution is significantly questioned by objectors who submit information to suggest that ample consented and operational capacity exists to comfortably meet, and on the latest figures, exceed targets. They quote that 19.1GW operational or consented is more than sufficient to allow less weight to be attached to the proposed scheme. They state that only 0.3GW is needed to become operational to reach the 2020 target of 100% of electricity use from renewables and that this is projected to rise to 140% by 2030, in the region of 17GW. There is also particular criticism of the Government's energy policy in relation to wind farms.

The applicant has responded in the Supporting Statement by stating that against the 30% overall energy demand target by 2020, 17.8% had been achieved by 2015. They also quote that the Government uncapped target of 100% of electricity use from renewables by 2020 stood at 69% last year. Their Supporting Statement updates with March 2018 figures stating 21.4GW of relevant schemes "in the pipeline" of which 10.4GW was operational and 8.7GW consented. The applicant acknowledges that, although there have been very recent increases in the amount of electricity produced by operational schemes, a 31% shortfall with three years to go still represents a significant shortfall. They summarise in para 2.70 of their Supporting Statement that "need" for a renewable energy development should not be a material factor in any planning balance, given that the latest Government renewable energy guidance reiterates that targets are not caps and that weight should continue to be attached to the contribution of every scheme towards the targets.

Local Development Plan Policy ED9 does state that there should be consideration in any proposed renewable energy development of both greenhouse emissions and the scale of contribution to renewable energy targets. In the case of this scheme, the contribution would be relatively modest compared to larger developments and the amount of weight to be attached in the overall planning balance potentially reduces

as a result of the scale of the scheme and given the increasing rate of progress towards renewable energy targets. The Reporter also took this view when rejecting the initial Barrel Law scheme.

However, the applicant disagrees and views the contribution as valuable, believing the shortfall is still significant. Certainly, the Reporter, in considering the energy target position on the Pines Burn appeal, restates the position that the Government Policy is meant to be ambitious and there should be no attempt to cap provision, provided a balanced approach is taken relating to environmental impacts. Had the environmental impacts been considered to be marginal and unacceptable, then the renewable energy contribution of this scheme may not have been sufficient to outweigh those environmental impacts. However, as it is considered that the environmental impacts and landscape capacity allow for acceptance of the scheme, the contribution offered by the scheme towards renewable energy targets can be considered to be positive in the overall planning balance.

The same should be considered for the contribution towards carbon reduction, the scheme claiming 40kt of CO2 per annum whereas some objectors claim Scotland is already carbon neutral. The applicant also points out the increased targets in the latest Climate Change Bill of 56% reduction by 2020 and 80% by 2050. Given there is no specific evidence to disprove the level of carbon reduction claimed, the scheme's contribution to lowering CO2 should be considered positive in the overall planning balance, albeit weighted in accordance with the modest scale of the scheme.

CONCLUSION

The Council remains supportive of wind energy development, as reflected in its policies and guidance. This application must be fully considered against current Policies and Guidance, including new Government publications, the Council's approved "Renewable Energy" SG and the Ironside Farrar Landscape Capacity Guidance. The scheme should also be fully assessed against the reasons for previous rejection and the various changes examined in relation to those reasons. As required by policy considerations, the advantages of energy production and the disadvantages of environmental impacts must be carefully weighed against one another.

In terms of landscape and visual impact, the site does retain a high level of containment from middle and longer distance views, limiting the visual impact to wider view. Impacts are more significant in closer proximity from a limited number of viewpoints, any reductions in hub, base and tip height partially offset by increased blade diameter. In this respect, influential viewpoints from the William Ogilvie Cairn site and at Easter Alemoor continue to demonstrate that, whilst improved, those improvements are not sufficient in themselves to result in acceptable impacts. Nevertheless, as explained by the Landscape Architect in his response, rejection of the revised scheme could not be justified for these reasons alone. It is considered that from the majority of the viewpoints, the improvements in the scheme result in impacts that can no longer be considered sufficiently adverse when considered against other factors in the overall planning balance.

Amongst those other factors to be considered are the findings of the Ironside Farrar Landscape Capacity and Cumulative Impact Study which offers support for the development of very large turbines in this specific part of the Borders, identifying capacity for 5-10 further turbines within an area already containing Langhope Rig. The cumulative impact of the two wind farms together is considered to be improved

over the previous relationship and, whilst those improvements are relatively modest, it is considered that the Landscape Capacity Study intends that the two wind farms be considered as a group around which there should be no capacity for further development. Taking into account the limited number of receptors that would be significantly affected by the development and the lack of objections from SNH and the Council's Landscape Architect there are insufficient reasons to sustain a recommendation for refusal on landscape and visual grounds.

The original scheme was rejected partly as a result of MOD sustained objections for adverse impacts on the Eskdalemuir Seisomological Recording Station and the Deadwater Fell ATC Radar at RAF Spadeadam. After consideration of mitigation proposals, the MOD has now withdrawn their objections subject to conditions.

Cultural Heritage impacts are largely related to impacts on the Scheduled Monument of Kemp's Castle and by one turbine in particular. However, neither Historic Environment Scotland nor the Council's Archaeology Officer formally objects to the proposals. Given this and the fact that the previous scheme was not rejected for any archaeological reasons, it is considered that there are insufficient reasons to reject the revised scheme.

Other aspects of the development can be mitigated and controlled through conditions and various reports and mitigation strategies required. This will include ecology, noise, road and traffic impacts. It is also acknowledged that the proposal would make a contribution towards energy targets.

Taking the above conclusions into account, it is considered that the scheme complies with national and local policies and guidance on renewable energy development and also demonstrates that any detrimental impacts of the proposal are no longer so significant as to warrant refusal of the revised scheme.

The commencement recommendation of allowing five rather than three years (Condition 2 below) reflects acceptance of the applicant's request and a number of recent appeal decisions, also reflecting the nature and number of fully suspensive conditions that require to be addressed and discharged.

RECOMMENDATION BY CHIEF PLANNING OFFICER:

I recommend the application is approved subject to the following conditions and informatives:

CONDITIONS

Commencement and Conformity

1. The consent is for a period of 25 years from the earlier of: i) the date when electricity is first exported to the electricity grid network from all of the wind turbines hereby permitted; and ii) the date falling 18 months after electricity is generated from the first of the wind turbines hereby permitted. Written confirmation of the date on which electricity is generated from the first of the turbines hereby permitted shall be submitted to the Planning Authority no later than one calendar month after that date. The consent will expire at the end of the 25 year period unless the planning authority has expressly approved an extension in writing.
   Reason: To define the duration of the consent.

2. The commencement of the development shall be no later than five years from the date of this consent. Written confirmation of the intended date of commencement of Development shall be provided to the planning authority no later than one calendar month before that date.
   Reason: In accordance with section 58 of the Town and Country Planning (Scotland) Act 1997. To avoid uncertainty and ensure that the consent is implemented within a reasonable period.

3. The development hereby permitted shall not be carried out otherwise than in complete accordance with the application, drawings, Environmental Statement and other documentation lodged in support of the application and approved by the Planning Authority.
   Reason: To ensure that the development is carried out in accordance with the approved details.

4. This consent may not be assigned without the prior written authorisation of the Planning Authority. The Planning Authority may authorise the assignation of the consent (with or without conditions) or refuse assignation as they may, in their own discretion, see fit. The consent shall not be capable of being assigned, alienated or transferred otherwise than in accordance with the foregoing procedure. The Company shall notify the Planning Authority in writing of the name of the assignee, principal named contact and contact details within 14 days of written confirmation from the Planning Authority of an assignation having been granted.
   Reason: To safeguard the obligations of the consent if transferred to another company.

Micro-Siting

5. All wind turbines, buildings, masts, areas of hardstanding and tracks shall be constructed in the location shown on Drawing Reference Figure 1.3. Wind turbines, buildings, masts, areas of hardstanding and tracks may be adjusted by micro-siting within the site. However, unless otherwise approved in advance in writing by the Planning Authority (in consultation with SEPA and Scottish Natural Heritage), micro-siting is subject to the following restrictions:

a) No wind turbine foundation shall be positioned higher, when measured in metres Above Ordinance Datum (Newlyn), than the position shown on Figure 1.3 unless a scheme of details, including wirelines showing the alternative positioning of the turbine have been submitted to and approved in writing by the Planning Authority (in consultation with Scottish Natural Heritage and SEPA) and thereafter no development shall take place except in strict accordance with the approved details;
b) No wind turbine, building, mast, access track or hardstanding shall be moved more than 50m from the position shown on the approved plan (Figure 1.3);
c) No micro-siting shall take place within areas of peat of greater depth than the original location;
d) No micro-siting of Turbine 3 shall take place within areas hosting Ground Water Dependent Terrestrial Ecosystems unless a pre-construction survey and any mitigation has been submitted to, and approved by, the Planning Authority in liaison with SEPA;
e) No micro-siting shall take turbines closer to watercourses, Scheduled Monuments or residential properties (not financially involved with the development);

f) No micro-siting of access roads or wind turbines any nearer the Private Water Supplies identified in the Environmental Statement, including the PWS serving Easter Alemoor.

g) All micro-siting permissible under this condition must be approved in advance in writing by the Environmental Clerk of Works (ECoW).

No later than one month after the date of First Commissioning, an updated site plan must be submitted to the Planning Authority showing the final position of all wind turbines, masts, areas of hardstanding, tracks and associated infrastructure forming part of the development. The plan should also specify areas where micro-siting has taken place and, for each instance, be accompanied by copies of the ECoW or Planning Authority's approval, as applicable.
Reason: To control environmental impacts, while taking account of local ground conditions, and to restrict micro-siting to a reasonable distance to ensure that any movement of turbines or infrastructure does not give rise to significant change to the layout and appearance of the development.

Design and Operation of Turbines

6. No development shall commence until full details of the actual wind turbines (including, but not limited to, the power rating and sound power levels, the size, type, external finish and colour, which should be non-reflective pale grey semi-matt), any anemometry masts and all associated apparatus have been submitted to and approved in writing by the Planning Authority. The development to be constructed and operated in accordance with the approved details and maintained in the approved colour until such time as the wind farm is decommissioned, unless otherwise agreed in writing by the Planning Authority.
Reason: To ensure that the turbines are compatible with the locality in terms of their appearance and noise output, to protect residential and visual amenities.

Substation and Ancillary Development

7. No development shall commence until final details of the siting, external appearance, dimensions and external materials of the substation/switchgear building, associated compounds, any construction compound boundary fencing, external lighting and parking areas have been submitted to and approved in writing by the Planning Authority. The substation/switchgear building, associated compounds, fencing, external lighting and parking areas shall be constructed in accordance with the approved details.
Reason: To ensure that the environmental impacts of the sub-station and ancillary development forming part of the development conform to the impacts assessed in the Environmental Statement and in the interests of the visual amenity of the area.

Signage

8. Notwithstanding the provisions of the Town and Country Planning (Control of Advertisements) (Scotland) Regulations 1984 none of the wind turbines, buildings, other structures, means of enclosure or plant shall display any name, logos, sign, lettering or other advertisement (other than health and safety signage) without the prior written approval of the Planning Authority.

Reason: To ensure that the environmental impacts of the turbines and ancillary development forming part of the development conform to the impacts assessed in the Environmental Statement and in the interests of the visual amenity of the area.

Turbine Failure/Removal

9. In the event of any wind turbine failing to produce electricity supplied to the local grid for a continuous period of 12 months, not due to it being under repair or replacement, then it will be deemed to have ceased to be required, and unless otherwise agreed in writing with the Planning Authority, the operator shall:
   i. by no later than the date of expiration of the 12 month period, submit a scheme to the planning authority setting out how the relevant turbine(s) and associated infrastructure will be removed from the site and the ground restored; and
   ii. implement the approved scheme within six months of the date of its approval, all to the satisfaction of the planning authority.

   Reason: To safeguard against the landscape and visual environmental impacts associated with the retention of any turbines that are deemed no longer to be operationally required.

Construction Hours

10. Construction work on the site which is audible from any noise-sensitive receptor and HGV movements to and from the site (excluding abnormal loads) shall only take place between the hours of 07.00 to 18.00 on Monday to Friday inclusive and 08.00 to 14.00 on Saturdays, with no construction work taking place on a Sunday or on national public holidays (except by prior notification to the planning authority). Outwith these specified hours, development on the site shall be limited to concrete pours, turbine erection, maintenance, emergency works, dust suppression and the testing of plant and equipment, unless otherwise approved in advance in writing by the Planning Authority.
    Reason: To safeguard residential amenity.

Noise

11. No development to be commenced until a Construction Method Statement is submitted to, and approved in writing by the Planning Authority. Once approved, all construction activities to comply with the details in the approved Statement.
    Reason: To safeguard residential amenity.

12. No development to be commenced until a Scheme of Mitigation is submitted to, and approved in writing by the Planning Authority in respect of exceedances of the consented noise limits at those properties identified at risk in the Environmental Statement. Once approved, the development shall not be operated other than in accordance with the approved Scheme of Mitigation
    Reason: To safeguard residential amenity.

13. The rating level of noise emissions from the combined effects of the wind turbines forming part of the Development (including the application of any tonal penalty) shall not exceed the values for the relevant integer wind speed

set out in, or derived from, the tables attached to this condition (Table B4 in the Applicant's Environmental Statement Vol 2 - 1C – Annex B - Noise) at any dwelling which is lawfully existing or has planning permission at the date of this consent. The turbines shall be designed to permit individually controlled operation or shut down at specified wind speeds and directions in order to facilitate compliance with noise criteria and:

The Company shall continuously log power production, wind speed and wind direction. These data shall be retained for a period of not less than 24 months. The Company shall provide this information to the Planning Authority within 14 days of receipt in writing of a request to do so.

There shall be no First Commissioning of the Development until the Company has received written approval from the Planning Authority of a list of proposed independent consultants who may undertake compliance measurements in accordance with this condition. Amendments to the list of approved consultants shall be made only with the prior written approval of the Planning Authority.

Within 21 days from receipt of a written request from the Planning Authority following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, the Company shall, at its expense, employ a consultant approved by the Planning Authority to assess the level of noise emissions from the wind farm at the complainant's property. The written request from the Planning Authority shall set out at least the date, time and location to which the complaint relates and any identified atmospheric conditions, including wind direction, and include a statement as to whether, in the opinion of the Planning Authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.

The assessment of the rating level of noise emissions shall be undertaken in accordance with an assessment protocol that shall previously have been submitted to and approved in writing by the Planning Authority. The protocol shall include the proposed measurement location(s) where measurements for compliance checking purposes shall be undertaken, whether noise giving rise to the complaint contains or is likely to contain a tonal component, and also the range of meteorological and operational conditions (which shall include the range of wind speeds, wind directions, power generation and times of day) to determine the assessment of rating level of noise emissions. The proposed range of conditions shall be those which prevailed during times when the complainant alleges there was disturbance due to noise, having regard to the written request of the Planning Authority under paragraph c, and such others as the independent consultant considers likely to result in a breach of the noise limits.

Where the property to which a complaint is related is not listed in the tables attached to this condition, the Company shall submit to the Planning Authority for written approval proposed noise limits selected from those listed in the tables to be adopted at the complainant's property for compliance checking purposes. The proposed noise limits are to be those limits selected from the tables specified for a listed location which the independent consultant considers as being likely to experience the most similar background noise environment to that experienced at the complainant's property. The rating level of noise emissions resulting from the combined effects of the wind

turbines shall not exceed the noise limits approved in writing by the Planning Authority for the complainant's property.

The Company shall provide to the Planning Authority the independent consultant's assessment of the rating level of noise emissions within 2 months of the date of the written request of the Planning Authority for compliance measurements to be made under paragraph e, unless the time limit is extended in writing by the Planning Authority. Certificates of calibration of the instrumentation used to undertake the measurements shall be submitted to the Planning Authority with the independent consultant's assessment of the rating level of noise emissions.

Where a further assessment of the rating level of noise emissions from the wind farm is required, the Company shall submit a copy of the further assessment within 21 days of submission of the independent consultant's assessment pursuant to paragraph (d) above unless the time limit has been extended in writing by the Planning Authority.

Table 1 – Between 07:00 and 23:00 – Noise limits expressed in dB LA90,10 minute as a function of the standardised wind speed (m/s) at 10 metre height as determined within the site averaged over 10 minute periods.

Location (including coordinates)	Standardised wind speed at 10 meter height (m/s) within the site averaged over 10-minute periods										
	X	Y	4	5	6	7	8	9	10	11	12
Whitslade	342775	618044	40	40	40	41	43	45	47	50	53
Easter Alemoor Farmhouse	340646	616059	35	35	35	36	39	42	45	49	53
Langhope Farmhouse	342210	620115	35	36	37	38	38	39	39	41	43

Table 2 – Between 23:00 and 07:00 – Noise limits expressed in dB LA90,10-minute as a function of the standardised wind speed (m/s) at 10 metre height as determined within the site averaged over 10 minute periods.

Location (including coordinates)	Standardised wind speed at 10 meter height (m/s) within the site averaged over 10-minute periods										
	X	Y	4	5	6	7	8	9	10	11	12
Whitslade	342775	618044	43	43	43	43	44	46	48	50	52
Easter Alemoor Farmhouse	340646	616059	43	43	43	43	43	43	43	44	48
Langhope Farmhouse	342210	620115	43	43	43	43	43	43	43	43	43

Reason: to protect nearby residents from undue noise and disturbance. To ensure that noise limits are not exceeded and to enable prompt investigation of complaints.

Shadow Flicker

14. No development shall commence until a written scheme has been submitted to and approved in writing by the Planning Authority setting out a protocol for the assessment of shadow flicker in the event of any complaint to the Planning Authority from the owner or occupier of a dwelling which lawfully exist or for which planning permission has been granted at the date of this permission. The written scheme shall include mitigation measures to alleviate any shadow flicker attributable to the development. Operation of the turbines shall take place in accordance with the approved protocol unless the Planning Authority gives its prior written approval to any variations.
Reason: To offset impacts of shadow flicker on residential amenity.

Television interference

15. No development shall commence until a Television Reception Mitigation Plan has been submitted to and approved in writing by the Planning Authority. The Television Reception Mitigation Plan shall provide for a baseline television reception survey to be carried out prior to the installation of any turbine forming part of the development, the results of which shall be submitted to the Planning Authority. The approved Television Reception Mitigation Plan shall thereafter be implemented in full.

    Any claim by any individual person regarding television picture loss or interference at their house, business premises or other building, made during the period from installation of any turbine forming part of the development to the date falling twelve months after the date of Final Commissioning, shall be investigated by a qualified engineer appointed by the developer/operator and the results shall be submitted to the Planning Authority. Should any impairment to the television signal be attributable to the development, the developer/operator shall remedy such impairment so that the standard of reception at the affected property is equivalent to the baseline television reception.
    Reason: To ensure local television services are sustained during the construction and operation of this development.

Air Traffic Safety

16. No development shall commence until the developer has provided written confirmation to the Planning Authority and the Ministry of Defence of the:

    a) Anticipated date of commencement and completion of each stage of construction;
    b) The maximum height above ground level of construction equipment, each turbine and any anemometry mast and
    c) The position of each turbine (in latitude and longitude).

    The developer shall provide the Planning Authority and Ministry of Defence with details of any changes to this information as soon as reasonably practicable.
    Reason: In the interests of aviation safety.

17. Prior to the erection of the first wind turbine a scheme of aviation lighting for the wind farm shall be submitted to and approved in writing by the Planning Authority in consultation with the Ministry of Defence. The scheme shall include details of infra-red aviation lighting to be applied. The turbines shall be erected with the approved lighting installed and the lighting shall remain

operational throughout the duration of the consent. No other lighting other than that described in the scheme shall be applied at the site unless otherwise agreed in advance and in writing by the planning authority.
Reason: In the interests of aviation safety.

18. No turbines shall be erected until an Air Traffic Control Mitigation Scheme setting out measures to mitigate impacts of the development upon the Primary Surveillance Radar at RAF Spadeadam Deadwater Fell ("the Radar") and the air traffic control operations of the Ministry of Defence reliant upon the Radar, has been submitted to, and approved in writing by, the Planning Authority in consultation with the Ministry of Defence.

    The turbines shall not become operational until those measures within the Air Traffic Control Mitigation Scheme have been fully implemented and evidence of this has been submitted to and approved in writing by the Planning Authority, in consultation with the Ministry of Defence.

    The development then to be operated fully in accordance with the approved Air Traffic Control Mitigation Scheme for the operational life of the wind farm or during the time that the Radar is retained as operational by the Ministry of Defence.
    Reason: To secure mitigation of impacts on the primary surveillance radar at RAF Spadeadam Deadwater Fell and the air traffic control operations of the Ministry of Defence reliant upon the Radar.

Road Safety

19. No development shall commence until a Traffic Management Plan (TMP) has been submitted to and approved in writing by the Planning Authority. The TMP to include:

    i. The detailed delivery route and vehicle numbers for all cars, HGV deliveries and abnormal loads associated with the development and measures to ensure that the specified routes are adhered to, including monitoring procedures and evidence of notification to Police Scotland;
    ii. Details of all ancillary works required to the public road network to facilitate deliveries, including swept path analysis drawings for agreed areas of concern along the route for the abnormal loads and any remedial measures, all signage and lining arrangements, a programme and timescales for implementation and reinstatement proposals after the development is complete and a programme and timescales for completion; the submission of planning applications may be subsequently necessary depending on the nature of the ancillary works identified;
    iii. Joint pre-construction and post construction surveys to be undertaken of all construction routes with the relevant staff from SBC and the applicant's representatives. An agreed method of repairing any damage caused to the public road network by traffic associated with the wind farm to be drawn up and all remedial works identified as a result of the construction period to be undertaken within an agreed timescale;
    iv. Details of tree or hedge removal along the route for the abnormal loads and a scheme for replacement planting and a timescale for its implementation and completion;

v. Areas of the abnormal load route where the removal of street furniture, including lighting, is required and all temporary lighting measures required for the duration of the abnormal load movements;
vi. Details of the proposed connection to the National Grid;
vii. Name and contact details of a nominated person to whom any road safety issues can be referred;

The approved TMP thereafter to be implemented in full, unless otherwise agreed in advance in writing by the Planning Authority and all work within the public road boundary to be undertaken by a contractor first approved by the Council.
Reason: To ensure all construction traffic access the site in a safe manner and that any upgrading works or repairs to public roads are carried out timeously to the Council's specifications, in the interests of road safety.

Access Tracks

20. No development shall commence until details of the position, length, width, materials and drainage of the new and upgraded tracks within the site have been submitted to and approved in writing by the Planning Authority. The tracks then to be installed in accordance with the approved details. Newly formed hard surfaces should be attenuated to existing greenfield runoff rates.
Reason: To safeguard areas of ecological interest, watercourses and visual amenities and to ensure there is no increased flood risk to Ashkirk and other sensitive receptors.

21. No development shall commence until details of all watercourse crossings, culverts and alterations to existing crossings (position and design) have been submitted to and approved in writing by the Planning Authority, in consultation with SEPA. These should be designed to convey the 1 in 200 year flow. The development then to be completed in accordance with the approved details.
Reason: To ensure that all construction operations are carried out in a manner that minimises their impact on the water environment and thereby minimising residual impacts on the River Tweed Special Area of Conservation.

Public Access

22. No development shall commence until a scheme for enhancing public access within the site upon completion of the development has been submitted to and approved in writing by the Planning Authority. The Plan shall include (but not be limited to) the following:
    i. timings of any intended diversion, closure or obstruction of any public right of way (note that these are likely to need a separate consent);
    ii. measures for ensuring that paths kept open during development are safe and can be traversed without undue harm to the amenity of users;
    iii. measures to ensure that users of the path network and accessible areas more generally are able to navigate through and adjacent to the site, including mapping and signage;
    iv. any temporary installations such as gates, stiles and bridges and the duration of their installation;
    v. proposals to restore original paths to an acceptable condition between construction and decommissioning and once full decommissioning has taken place;

vi. proposals to enhance public access within and adjacent to the site during the lifetime of the development.

Reason: the development would interact with a range of public paths and accessible areas, with development effects causing changes that require careful management to ensure that the experience of users is not harmed unacceptably or, where it will be harmed, that the level and nature of harm is limited and controlled to minimise development effects. To ensure that access across the site is improved to provide access to areas of cultural heritage in the area of the site and to improve access to the countryside.

Private Water Supplies

23. No development shall commence until a Private Water Supplies Risk Assessment has been submitted to and approved in writing by the Planning Authority, detailing all mitigation measures to be delivered to secure the quality, quantity and continuity of water supplies to properties which are served by private water supplies at the date of this consent and which may be affected by the development. The Risk Assessment shall include water quality sampling methods and shall specify abstraction points. The approved method statement shall thereafter be implemented in full.
Reason: To maintain a secure and adequate quality water supply to all properties with private water supplies that may be affected by the development.

Borrow Pits

24. No development shall commence until a site specific scheme for the working and restoration of each borrow pit forming part of the development has been submitted to and approved in writing by the Planning Authority in consultation with SEPA. The scheme shall include:

a) A detailed working method statement based on site survey information and ground investigations;
b) Details of the handling of any overburden (including peat, soil and rock);
c) Drainage, including measures to prevent surrounding areas of peatland, water dependant sensitive habitats and Ground Water Dependant Terrestrial Ecosystems (GWDTE) from drying out;
d) A programme of implementation of the works described in the scheme; and
e) Full details of the reinstatement, restoration and aftercare of the borrow pit(s) at the end of the construction period, to include topographic surveys of pre-construction profiles, and details of topographical surveys to be undertaken of the restored borrow pit profiles.

The approved scheme shall thereafter be implemented in full.

Reason: To ensure that excavation of materials from the borrow pit(s) is carried out in a manner that minimises the impact on road safety, amenity and the environment, and that the mitigation measures contained in the Environmental Statement accompanying the application, or as otherwise agreed, are fully implemented. To secure the restoration of borrow pit(s) at the end of the construction period.

Archaeology

25. No development shall take place within the development site until the developer has secured the implementation of a programme of archaeological works in accordance with a Written Scheme of Investigation (WSI) which has been submitted by the applicant, agreed by Scottish Borders Council Archaeology Service, and approved by the Planning Authority. The WSI shall be formulated and implemented by a contracted archaeological organisation working to the standards of the Chartered Institute for Archaeologists (CIfA) approval of which shall be in writing by the Planning Authority. Thereafter the developer shall ensure that the programme of archaeological works is fully implemented and that all recording, recovery of archaeological resources within the development site, post-excavation assessment, reporting and dissemination of results is undertaken to the satisfaction of the Planning Authority in agreement with Scottish Borders Council Archaeology Service.
Reason: The site is within an area where development may damage or destroy archaeological remains, and it is therefore desirable to afford a reasonable opportunity to record the history of the site.

Ecology

26. No development shall commence until an Ecological of Works (ECoW) has been be appointed to carry out pre-construction ecological surveys, to inform a Construction Environmental Management Plan (CEMP) and to oversee compliance with the Construction Environment Management Plan, Species Protection Plan, Ecological Monitoring Plan and Decommissioning, Restoration and Aftercare Plan ("the ECoW works"). The terms of the appointment shall be submitted for the approval in writing by the Planning Authority in consultation with SEPA and SNH. The terms shall include the requirement to:

a) Impose a duty to monitor compliance with the ecological and hydrological commitments provided in the Environmental Statement and other information lodged in support of the application, the Construction Environmental Management Plan and other plans; and

b) Require the ECoW to report to the Company's nominated construction project manager, the Planning Authority and SEPA any incidences of non-compliance with the ECoW works.

No later than 18 months prior to decommissioning of the development or the expiration of this consent (whichever is the earlier), the developer shall submit details of the terms of appointment by the developer of an independent ECoW throughout the decommissioning, restoration and aftercare phases of the development to the planning authority for approval. The ECoW shall be appointed on the approved terms throughout the decommissioning, restoration and aftercare phases of the development.
Reason: To secure effective monitoring of and compliance with the environmental mitigation and management measures associated with the development.

27. No development to be commenced in relation to Turbine 3 until a survey and any necessary mitigation (including micro-siting as per Condition 4) has been submitted to, and approved by, the Planning Authority in liaison with SEPA, in relation to the potential impacts on Groundwater Dependent Terrestrial Ecosystems. Thereafter, the development to be carried out fully in accordance with the agreed details.

Reason: To ensure that all construction operations are carried out in a manner that minimises their impact on the water environment and thereby minimising residual impacts on connected water systems and that mitigation measures contained in the Environmental Statement accompanying the application, or as otherwise agreed, are fully implemented.

28. No development shall commence until a Construction Environment Management Plan (CEMP) has been submitted to and approved in writing by the Planning Authority, in consultation with SEPA. The CEMP shall include:

a) Risk assessment of potentially damaging construction activities;
b) Identification of "biodiversity protection zones";
c) Method Statements to avoid or reduce impacts during construction, to include the location and timing of sensitive works to avoid harm to biodiversity features, the times during construction when specialist ecologists need to be present on site to oversee works, include the use of protective fences, exclusion barriers and warning signs;
d) A Drainage Management Plan including the impacts on, and treatment of, GWDTEs as identified in the Environmental Statement including the demarcation of "no development" areas and demonstration of how all surface and waste water arising during and after development will be managed and prevented from polluting any watercourses or sources.
e) A Peat Management Plan
f) A Site Waste Management Plan;
g) A dust management plan
h) A pollution and prevention control method statement including arrangements for the storage of fuel and oil on the site
i) details of measures to be taken to prevent loose or deleterious material being deposited on the local road network including wheel cleaning and lorry sheeting facilities, and measures to clean the site entrances and the adjacent local road network;
j) the construction or improvement of access tracks, turbines, construction compound, crane pads, turbine foundations and cable trenches
k) soil storage and management
l) temporary site illumination
m) a felling and tree management plan
n) post-construction restoration/ reinstatement of the working areas not required during the operation of the Development, including construction access tracks, borrow pits, construction compound and other construction areas. Wherever possible, reinstatement is to be achieved by the careful use of turfs removed prior to construction works. Details should include all seed mixes to be used for the reinstatement of vegetation;
o) An Accident Management Plan;
p) Noise mitigation and complaint procedures
q) Responsible persons and lines of communication;
r) The role and responsibilities on site of an Ecological Clerk of Works (ECoW).

The approved CEMP shall be implemented throughout the construction period and operational phase as appropriate, strictly in accordance with the approved details, unless otherwise agreed in writing by the Planning Authority in consultation with SEPA.
Reason: To ensure that all construction operations are carried out in a manner that minimises their impact on the water environment and thereby minimising residual impacts on the River Tweed SAC and that mitigation

measures contained in the Environmental Statement accompanying the application, or as otherwise agreed, are fully implemented.

29. No development shall commence until a Species Protection Plan (including supplementary surveys and mitigation measures for bats, otter, badger, red squirrel, breeding birds and reptiles as appropriate) has been submitted to and approved in writing by Planning Authority. Any works shall thereafter be carried out in accordance with the approved scheme.
    Reason: To ensure that the species affected by the development are afforded suitable protection from the construction, operation and decommissioning of the development.

30. No development shall commence until a Habitat Management Plan, including measures to compensate for habitat loss and enhance existing habitats including blanket bog, wet modified bog, peat, acid grassland, marshy grassland, dry dwarf shrub heath, black grouse (including species management proposals), wetland habitat (as identified in the Environmental Statement), woodland habitats (including native broadleaves and scrub) and measures to enhance breeding wader habitat in suitable locations have been submitted to and approved in writing by the Planning Authority. Any works shall thereafter be carried out in accordance with the approved scheme.
    Reason: To mitigate the loss of habitats as a result of the development.

31. No development shall commence until an ecological monitoring programme, including monitoring in years 1, 3, 5, 10 and 15 following construction, for Schedule 1 raptors, black grouse and breeding waders has been submitted to and approved in writing by the Planning Authority. This should also include proportionate post-construction monitoring of protected mammals (bats, otter, and badger as appropriate) and habitats. Any works shall thereafter be carried out in accordance with the approved scheme.
    Reason: To ensure suitable procedures are in place to monitor the impacts of the development on ecological interests.

32. No development shall commence until a monitoring and mitigation plan for goshawk has been submitted to and approved in writing by the Planning Authority. Any works shall thereafter be carried out in accordance with the approved scheme.
    Reason: To ensure that the species affected by the development are afforded suitable protection from the construction, operation and decommissioning of the development.

Decommissioning and Financial Guarantee

33. The Development will be decommissioned and will cease to generate electricity by no later than the date falling twenty five years from the date of Final Commissioning. The total period for restoration of the site in accordance with this condition shall not exceed three years from the date of Final Decommissioning without prior written approval of the Planning Authority.

    No development shall commence until a Decommissioning, Restoration and Aftercare Plan has been submitted to and approved in writing by the Planning

Authority in consultation with SEPA and Scottish Natural Heritage. The Plan shall detail measures for the decommissioning of the development, restoration and aftercare of the site and will include proposals for the removal of the above ground elements of the development, the treatment of ground surfaces, the management and timing of the works and environmental management provisions.

No later than 3 years prior to decommissioning of the development the Decommissioning, Restoration and Aftercare Plan to be revised and submitted to and approved in writing by the Planning Authority in consultation with SNH and SEPA. The revised Decommissioning, Restoration and Aftercare Plan will provide updated and detailed proposals for the removal of above ground elements of the development, the treatment of ground surfaces, the management and timing of the works and environment management provisions.

The development shall be decommissioned, site restored and aftercare thereafter undertaken in accordance with the approved Plan, unless otherwise agreed in writing in advance with the Planning Authority in consultation with SNH and SEPA. Any decommissioning works shall be carried out in accordance with the approved Plan.
Reason: To ensure the decommissioning and removal of the development in an appropriate and environmentally acceptable manner and the restoration and aftercare of the site, in the interests of safety, amenity and environmental protection.

34. No development shall commence until the developer/operator has delivered a bond or other form of financial guarantee in terms acceptable to the Planning Authority which secures the cost of performance of all decommissioning, restoration and aftercare obligations contained in condition 35 to the Planning Authority. The financial guarantee shall thereafter be maintained in favour of the Planning Authority until the date of completion of all restoration and aftercare obligations.

    The value of the financial guarantee shall be determined by a suitably qualified independent professional as being sufficient to meet the costs of all decommissioning, restoration and aftercare obligations contained in condition 35. The value of the financial guarantee shall be reviewed by a suitably qualified independent professional no less than every five years and increased or decreased to take account of any variation in costs of compliance with restoration and aftercare obligations and best practice prevailing at the time of each review.
    Reason: to ensure that there are sufficient funds to secure performance of the decommissioning, restoration and aftercare conditions attached to this deemed planning permission in the event of default by the developer/operator.

INFORMATIVES

1. In respect of condition 17 the aviation lighting should either be Ministry of Defence accredited 25 candela omni-directional red aviation lighting or infrared warning lighting with an optimised flash pattern of 60 flashes per minute of 200ms to 500ms duration at the highest practicable point on the turbines. The turbines should be erected with this lighting installed.

2. In respect of Condition 20, SNH advise that the route of the floating access track where it impacts on the identified deep peat, be revised north-eastwards to avoid the area of deep peat.

3. In respect of Condition 21, SEPA advises that any culverts may be subject to CAR licensing and that works should follow the UK Forestry Standard for implementation of good pollution prevention measures.

4. In respect of Conditions 27 and 28, SEPA advise that when designing the drainage strategy, no SUDs or treatment ponds should be located on GWDTEs or fluvial wetlands. Any tracks must have suitable drainage which maintains hydrological connectivity and cut-off drains do not discharge dirty water to GWDTEs or fluvial wetlands. All tracks on areas of GWDTE should be semi-porous to maintain hydrological connectivity and must be non-alkaline in nature. Scottish Water advise that contractors should note they are working close to a drinking water catchment boundary and should ensure no pollution enters this catchment.

DRAWING NUMBERS

Figure 1.1 Site Location Plan
Figure 1.2 Site Context Plan
Figure 1.3 Site Layout Plan
Figure 2.1 Typical Turbine Elevation
Figure 2.2 Typical Turbine Foundation Details, Plans and Sections
Figure 2.3 Typical Crane Hardstanding Layout and Sections
Figure 2.4 Typical Road Sections and Cut/Fill Scenarios
Figure 2.5 Typical Culvert Plans and Sections
Figure 2.6 Typical Gate Details
Figure 2.7 Electrical Control Building and Compound Layout Plan
Figure 2.8 Electrical Control Building and Compound Elevations
Figure 2.9 Site Layout Plan with Environmental Constraints

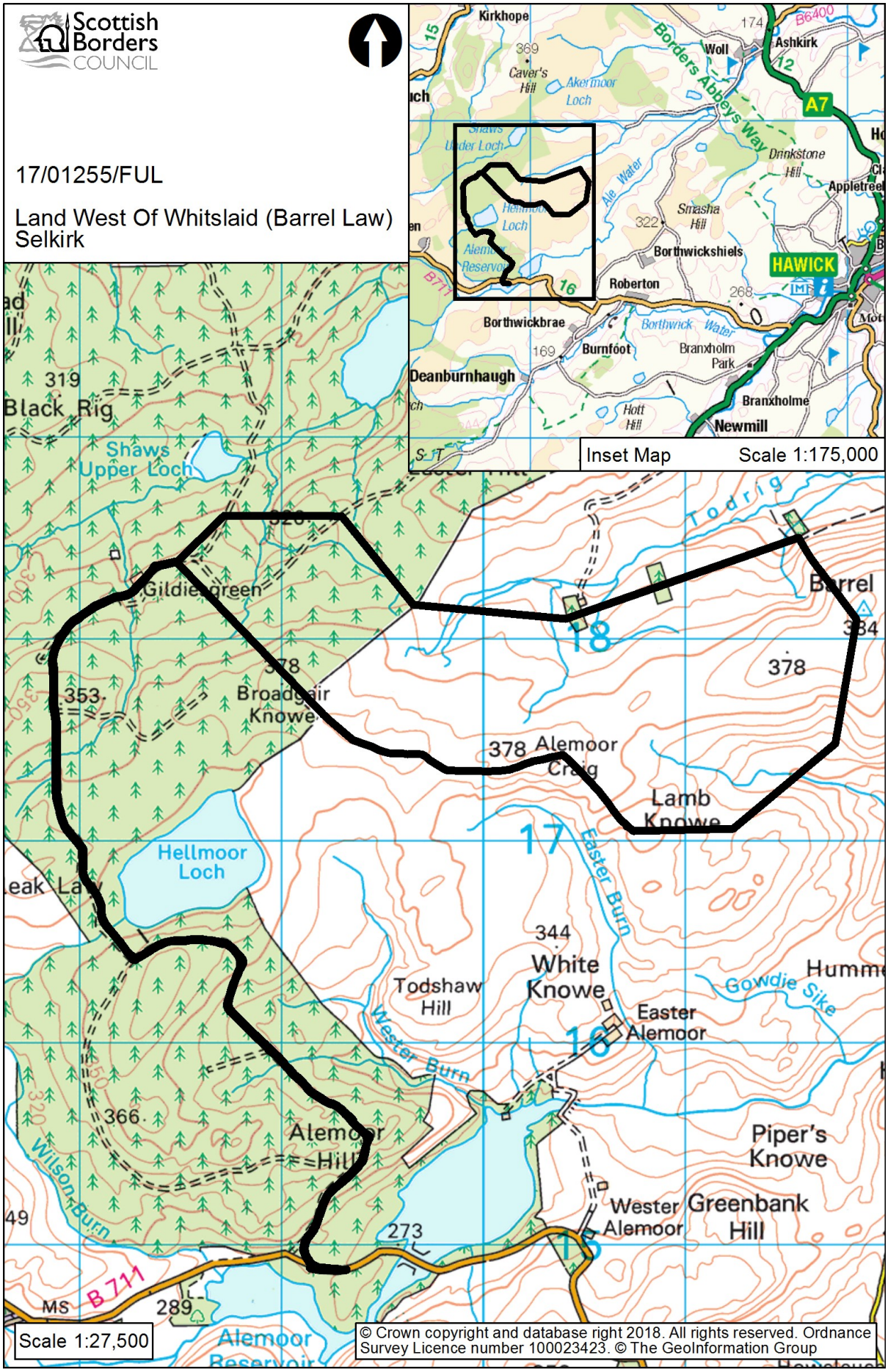
Approved by

Name	Designation	Signature
Ian Aikman	Chief Planning Officer	

The original version of this report has been signed by the Service Director (Regulatory Services) and the signed copy has been retained by the Council**.**

Author(s)

Name	Designation
Craig Miller	Principal Planning Officer


Scottish Borders COUNCIL
17/01255/FUL
Land West Of Whitslaid (Barrel Law)
Selkirk
Kirkhope
Caver's Hill
Akermoor Loch
Woll
Ashkirk
Borders Abbeys Way
A7
B6400
Drinkstone Hill
Appletreehall
Ale Water
Smasha Hill
Borthwickshiels
HAWICK
Roberton
Borthwickbrae
Borthwick Water
Burnfoot
Branxholm Park
Deanburnhaugh
Branxholme
Newmill
Hott Hill
Inset Map
Scale 1:175,000
Black Rig
Shaws Upper Loch
Gildiesgreen
Broadgair Knowe
Barrel
Todrig
Alemoor Craig
Lamb Knowe
Hellmoor Loch
Easter Burn
Todshaw Hill
White Knowe
Gowdie Sike
Easter Alemoor
Wester Burn
Alemoor Hill
Piper's Knowe
Wester Alemoor
Greenbank Hill
Wilson Burn
B711
Alemoor Reservoir
Scale 1:27,500
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SCOTTISH BORDERS COUNCIL

PLANNING AND BUILDING STANDARDS COMMITTEE

3 SEPTEMBER 2018

APPLICATION FOR PLANNING PERMISSION

ITEM:	**REFERENCE NUMBER**: 18/00309/LBC
OFFICER:	Carlos Clarke
WARD:	Galashiels and District
PROPOSAL:	Demolition of Church and Church Hall
SITE:	St. Aidans Church And Church Hall, Gala Park Galashiels
APPLICANT:	Book Development Ltd
AGENT:	Camerons Ltd

SITE DESCRIPTION

The site is located between Gala Park to the north-east, and St Andrew Street to the south-west, and comprises a Category B Listed 19th Century Church on its north-east side, and a hall (listed with the church) on its south-west side built in the 1939. The Church is of Gothic design, with a tower and octagonal spire on its north-east corner, and is built in whinstone, with sandstone dressings, and a tall, steep pitched slated roof. Internally the building retains its symmetrical plan form, which includes a curved timber gallery on cast iron columns, barrel vaulted timber Jacobean panelled roof with hammer beams on stone corbels.

The church faces 2 ½ storey properties, and is flanked by the same either side, mainly residential in use. It backs onto the gardens of residential properties fronting St Andrew Street. The hall is flanked by residential properties to the south-east, with a public car park to the north-west, and mainly 2 ½ storey properties face the site from the south side of St Andrew Street.

PROPOSED DEVELOPMENT

The application seeks Listed Building Consent for demolition of the former church building and hall, albeit consent has already been granted previously for the demolition of the hall (see Planning History below)

PLANNING HISTORY

Planning Permission (08/01209/FUL) and Listed Building Consent (08/01208/LBC) applications for the demolition of the church hall, the conversion of the church to eleven residential flats, and the erection of fifteen flats on the site of the hall, were withdrawn in May 2015.

Planning Permission (14/00750/FUL) and Listed Building Consent (14/00751/LBC) applications were approved for the demolition of the church hall, conversion of the church to eleven residential flats, and the erection of five houses on the site of the hall, were approved in October 2015, subject to conditions and a legal agreement. The conditions included a requirement for a maintenance scheme for the communal fabric of the church and a scheme for the salvage of its fabric and fittings. The legal agreement required a renovation schedule to be agreed for making the church wind and watertight before the hall is demolished.

A Listed Building Consent (16/00860/LBC) application for demolition of the church was withdrawn in August 2016.

REPRESENTATION SUMMARY

Thirteen representations have been received in response to the application, all of which can be viewed in full on *Public Access*. The key concerns raised are:

- Loss of building of such beauty, at a time when Galashiels is attracting visitors and tourists. It is surely important to retain local heritage. The building was built in 1880 and is a prominent skyline feature. It has been unfortunately left to decay. It has a magnificent frontage, with rose window and tower with spire and is a very impressive landmark. The frontage with tower and spire must be retained. The building should be given to an organisation that is capable of giving it another use, and there should be no demolition without proper consideration of giving it to a not-for-profit organisation capable of obtaining grant aid. There should be a thorough independent assessment of the potential for retaining the frontage. Alternative uses should be energetically explored.
- There are other derelict sites just as a suitable for affordable housing
- The building retains war memorials in its vestibule that were to be transferred to Trinity Church when the church closed. These remain and the unwritten agreement to transfer them was not followed through. These are far too important to be lost and must be retained, taken out intact and transferred to the church or other organisation.

APPLICANT'S SUPPORTING INFORMATION

Supporting information was submitted with the application initially and, during the course of the application, additional information was submitted. This comprises:

- Building survey – March 2016
- Feasibility Cost Plan June 2016
- Demolition Method Statement October 2014
- Valuation Statement October 2014
- Inspection Report February 2016
- Supporting Statement July 2016 – Updated March 2018 and again in June 2018
- Costs for Façade retention – Options 1, 2 and 3 - August 2018

DEVELOPMENT PLAN POLICIES:

Local Development Plan 2016

EP7 Listed Buildings
EP1 International Nature Conservation Sites and Protected Species

OTHER PLANNING CONSIDERATIONS:

Scottish Planning Policy 2014
Historic Environment Scotland – Managing Change in the Historic Environment Guidance Note - Demolition 2010
Historic Environment Scotland – Policy Statement – June 2016

CONSULTATION RESPONSES:

Scottish Borders Council Consultees

Heritage and Design Officer:

Commented on the application initially, and on additional supporting information (including updated costings).

Historic Environment Scotland 2016 Policy Statement requires this assessment to consider one of the criteria of Paragraph 3.48 to be fully satisfied. Whilst there is no doubt that in particular the former church makes a positive contribution to the skyline of Galashiels within its prominent spire, its condition continues to be of concern (there is a Heras fence around the property) and the building has been on National Buildings at Risk Register since 2009. His assessment focuses on part (d) of paragraph 3.48, which requires that the repair of the building is not economically viable, and that it has been appropriately marketed. These policy requirements are considered in turn:

A That the repair of the building is not economically viable

The applicant has submitted a cost estimate provided by Marsh and Riddell (initially based on October 2014 prices) for the conversion costs of 11 flats in the former church and the provision of 5 new town houses on the site of the former church hall.

The overall costs were estimated, at that time, to total just about £3 million (including professional fees, VAT and development contributions). The development costs submitted did not seem to include either finance costs or developers profit, both of which are legitimate costs. The estimated sales return was shown as a range of between £2,500,000 and £2,570,000. This shows a large funding gap, which would be larger still with the finance costs and profits added. The development costs also provide a break down between the new build and conversion costs and anticipated values. Based on the current costs submitted this actually appears to show that the costs of the new build are slightly higher than the anticipated sales receipts for these, so the new build elements cannot be considered as enabling works. The HDO requested that the applicants submit up to date figures for both the development works and the estimated sales figures and clarify any recent inquiries for support grants from the public sector.

B That the property has been marketed at a price reflecting its location and condition to potential restoring purchasers for a reasonable period:

He was involved in discussion before the recent marketing campaign concerning the appropriate price, the need to market the whole of the site and agreement, in conjunction with HES, that a reasonable period of times meant a minimum period of six months. The marketing started at the end of August 2017 and ran until the end of February 2018, so a period of six months exposure has been achieved. The property featured on the landing page of the national “Buildings at Risk” website for a number of months to increase exposure to the marketing campaign and the web information was updated with contact details of the selling agent. The HDO also contacted a number of potential developers direct to draw their attention to the fact that the property was being marketed. The feedback he received was that they could not make the project stack up.

He is content that the applicant has fulfilled the requirements to market the property for a suitable period of time and that the selling agent has adequately recorded the responses to the marketing campaign which has not resulted in any formal interest in acquiring the building as a restoring purchaser. Based on the initial submission information, he was

minded to consider that the policy criteria had been met to support the application for demolition. He did, however, subsequently comment on additional information as follows:

Case for demolition

The applicants have added an update on the projected development costs and projected income, and included a potential grant income of £500k towards repair work at the church which he considers to be possible although no formal application to Historic Environment Scotland has actually been submitted. Crucially however, even with the inclusion of some grant support, the projected gap (deficit) between income and expenditure (which now includes financing costs etc) has increased to a range of £637k - £712k. He is, therefore, satisfied that the application has satisfactorily demonstrated that the retention and conversion of the former church and church hall is simply not economically viable.

Façade retention:

The applicant has also responded to a question raised by Historic Environment Scotland in its initial response when it accepted that overall retention of the church looks to be not possible but raised the question of the potential retention of the façade and tower only and building a new development to the rear. Whilst the applicants have included in their revised supporting statement some figures within the text which appears to also show this not to be economically viable.

He was broadly content that the new build values and building costs can be taken to be similar to the conversion/repair costs and using the same numbers of residential units, but sought additional information. He also requested an additional set of figures which showed how many new residential units would be required in order to close the gap financially for a scheme involving the retention of the façade.

Comments on additional costing information including different façade retention options:

Subsequent to the above comments, and following submission of updated cost information, the HDO advises that he is content that the applicant has demonstrated that neither a conversion nor a façade scheme with a similar number of residential units is financially viable – both showing a deficit of more than £0.5million even with a HES grant. He notes that the applicant has also provided information showing that 24 units would be needed behind a retained façade to break even (a small profit is indicated if the units realise top sales values). These included developer contributions and £0.5million HES grant aid. Whilst such a scheme may make the retention financially viable, there is no doubt that there is simply not the capacity to accommodate this number of units – even at 6 units per floor, this would require 4 stories on what is a tight site, compounded by real overlooking issues and need for car parking. The number of units would, in his view, represent a considerable overdevelopment on the site.

He, therefore, concludes that the applicant has explored all options required and, with some regret, confirms that the applicant has met the ‘test’ required for the Council to grant consent to demolish.

Conditions are recommended, covering recording of the building; a scheme for the disposal of internal monuments/plaques – in particular, the war memorials should be made available to the wider community for future display; and, a scheme for the disposal of materials arising from the demolition, including slate, stone and glazing and internal fittings. A quantity of stone should be retained for the potential incorporation into the street frontage of the site’s redevelopment.

Ecology Officer:

Bats

The bat survey found no evidence of current or historic bat roosts within the structure proposed for development. The survey states that the roofs of both buildings proposed for development are in “quite good” condition. This is in contrast to the building survey which states that roofs and stonework are in poor condition in numerous locations. The detailed inspection also describes roof slates as in “very poor condition and rotted”, indicating potential opportunities for bats in gaps within the roof. However, more information is provided in the building survey that internally, collapse of roofs and other areas is due to water ingress. These damp conditions are unlikely to be suitable for roosting bats. One dusk survey was undertaken. No evidence of bats roosting in the buildings proposed for development was observed. Evidence of roosts in adjacent houses was found and bats were observed commuting across and foraging within the site. A licence is not required. The Ecology Officer recommends an informative note covering actions required of the applicant/developer if bats are found

Breeding birds

The survey comments on finding “no bird nests that were active”. It is unclear whether any historic nesting signs were observed. A condition preventing works during the bird breeding season unless compliant with a species protection plan is recommended.

Statutory Consultees

Historic Environment Scotland:

Were consulted on the initial application, and on additional information provided in the June 2018 updated supporting statement.

Their initial comments noted that they had objected to the previous application in 2016. A major issue then was that previous marketing was not adequate. Their guidance allows justification if there is both a financial deficit for its repair and reuse and there is none available to retain it. The building was subsequently placed on the open market for six months, resulting in no significant interest and, critically, they understand that no offers had been submitted. They were conscious that the asking price appeared to be optimistic, and they believed that any offer for the site, however low, should be seriously entertained. However, they also recognised that the marketing process was undertaken in a more open and transparent manner, and has genuinely attempted to attract a restoring purchaser. They also noted that the building is on the Buildings at Risk Register and the Council has been active in trying to use local contacts to generate interest.

They suggested that Council investigate areas including – having more detail of the reasons why those viewing the building did not take forward their interest (e.g. was it the asking price, were they aware of potential grant aid, did they consider more invasive schemes). Additionally, the financial figures are a few years old now and having these updated and fully assessed should help the Council define more precisely the financial position e.g. possible uplift in the residential market in Galashiels from the impact of the reinstated rail line and propose Tapestry for example. They haven’t reviewed the figures in detail and assume this will be carried out by the Council. Any such valuation should consider possible grant aid from HES.

They also considered it useful to investigate whether more invasive schemes that could retain elements of the building may be possible. The building is such an important

townscape element it is possible it could remain listed even if the only the tower and frontage remain, with new work behind. They suggested the Council analyse these approaches. Having said that, they are conscious that an effort has been made to find a restoring purchaser. The subsequent absence of any serious interest leaves them inclined to believe that the retention of the building may not be viable. They consider that the application does not now raise significant national issues and do not object. Their strong desire is, however, to retain the building in some form.

If demolition is justified, salvage of the more significant elements of the building should be investigated. This may even include retention of the tower and frontage gable, salvage of stone, slates, joinery etc. and war memorials may survive in the building and there is noted interest in safeguarding these. As the application involves demolition, if consent is granted, there is a separate requirement to allow HES the opportunity to carry out recording. The applicants are strongly encouraged to complete and return a referral form for this purpose.

In a subsequent letter (and in response to updated figures and supporting statement June 2018), they advise that they are now concentrating on that approach rather than reverting to discussions regarding the retention and conversion of the entire building which they concede is unlikely to be possible.

Regarding façade retention, they note the cost for retaining the front façade and spire of the listed building is estimated at £315,000, (no engineers' reports or costings are attached). It may be worth investigating whether VAT at 20% would be payable on what is essentially a façade retention scheme for substantial demolition and significant new build. They also note that they have not been approached for a potential Building Repair Grant. Despite what is noted in the supporting statement, grant aid may is available for the repair element within a conversion scheme.

They note the statement suggests increasing the number of new-build flats on the site of the church hall – but not, inexplicably, on the church site itself. Instead, a paper cost assessment provided for the church site simply follows the layout and envelope of the former conversion scheme. The loss of the entirety of the church with the exception of the front elevation facing Gala Park, would free-up a considerable development plot where, subject to permission, new development could take place. They do not consider it is appropriate to simply rely on the layouts and designs from the church conversion scheme, for what would be a completely new design and new assessment. It appears no exercise has been undertaken to see what level of development could take place behind a retained facade. They would assume that any new-build for the church site would a) provide more units and b) could be designed with a freer-hand, resulting in more cost-effective planned units than the necessarily constrained church conversion scheme. Figures in the statement suggesting a new-build and retained façade scheme would be more expensive than a conversion would seem unusual, challenging the orthodoxy of such projects. They would expect, through experience, that the façade retention and new build option would be at a much-reduced build-cost than conversion, with the potential for additional units also affecting the economics.

They are not convinced that the updated statement justifies the loss of the church's façade and that the difference between retention and loss does not appear insurmountable. The cost difference may be met by increased new development on the church site. The significant streetscape presence and character of the listed building could conceivably be largely retained by a façade retention scheme, and thus it could remain a listed building. They urge the Council to work with the developer to try to retain the façade and incorporate it successfully within the overall development. This may mean a significant new-build development behind, but the retention of the significant historic façade would lead to a more characterful and successful overall scheme immediately adjacent the Council's Conservation Area.

Planning authorities are expected to treat their comments as a material consideration, and this advice should be taken into account in their decision making. Their view is that the proposals do not raise historic environment issues of national significance and therefore they do not object. However, their decision not to object should not be taken as support for the proposals. This application should be determined in accordance with national and local policy on listed building/conservation area consent, together with related policy guidance.

Architectural Heritage Society of Scotland:

The applicants continue to ignore the basic structural repairs that have permitted the church to deteriorate to its existing condition, from a known condition on acquisition of requiring urgent repairs. They continue to urge a rapid change from this position of, essentially, waiting until parts of the building fall down on their own.

St Aidan's Church is B-listed, and makes a significant contribution to the Gala Park area, particularly its tower and fine North façade with an impressive rose window. The sides and adjacent church hall to the rear are progressively simpler, and existing planning permission allows for demolition of the hall as part of a wider development scheme.

It is misleading to use the proposed economics of the approved scheme (which is not to be developed) to justify complete demolition, when an alternative scheme taking into account the current condition of the church may present a viable means of preserving the most important elements of the structure. Such a scheme would be likely to involve more radical interventions into the listed building, rather than the over-complex suggestion to first restore the existing church then convert it.

The HES listing notes that the finest portion of the building is the north frontage – the tower, the attached bell-ringers' chamber, and the gable with the rose window. An emphasis on preservation of the most significant features would give a great deal of flexibility for more creative thinking than has been displayed thus far.

They note the marketing of the property, and further note that the brochure makes no mention of the condition or likely works necessary to the building, ensuring that prospective buyers would be viewing it as a usable building in its present condition instead of something requiring considerable intervention. This is likely to have discouraged many buyers while not clearly making the creative development opportunity it presents visible to more imaginative purchasers.

They do not accept that the property is entirely beyond economic retention in part. They encourage the existing owners to look for solutions that will balance retention of the most significant features of the building with their stated desire to offer a high quality residential development on the site.

Accordingly, the AHSS object.

Galashiels Community Council: No reply

<u>Other Consultees</u>

None

KEY PLANNING ISSUES:

Whether or not the proposed demolition of this Category B Listed Building is justified, having accounted for material factors, including the economic viability of its repair and reuse and the extent to which it has been marketed to prospective restoring purchasers

ASSESSMENT OF APPLICATION:

Principle

Policy EP7 of the Local Development Plan 2016 requires that demolition of a Listed Building not be permitted unless there are overriding economic, environmental, social or practical reasons. It must be demonstrated that every effort has been made to continue the current use or secure a suitable new use. This is underpinned by Scottish Planning Policy 2014 which also seeks to safeguard Listed Buildings from demolition. The LDP states that demolition should be in accordance with the Scottish Historic Environment Policy (now the Historic Environment Scotland Policy Statement June 2016), HES Guidance Notes (i.e. Demolition 2010 – this also requires that all reasonable efforts be made to retain listed Buildings), and consultation with relevant heritage bodies.

HES's Policy Statement requires at paragraph 3.42 (duplicated in paragraph 3.48) that four criteria should be applied. The first three require that the building not be of special architectural or historic interest; or that it is incapable of repair; or that its demolition is essential to delivering overriding economic or community benefits. In this case, the building is of recognised interest; it is not physically incapable of repair; and, though there would be environmental and social benefits in removing a derelict building and redeveloping the site, these are not, in themselves, overriding.

Therefore, the principal criterion that needs to be satisfied is that the "the repair of the building is not economically viable and that it has been marketed at a price reflecting its location and condition to potential restoring purchasers for a reasonable period." These matters are considered below. However, it need first be noted that the demolition of the hall has already been approved. The principle of demolishing the hall is not, therefore, required to be reassessed here. The considerations below apply to whether the church building itself should be demolished:

<u>The repair of the building is not economically viable</u>

The application is supported by surveys of the building which estimate that the building is beyond the point of economic repair. These date from February and March 2016. Though these are two years old, there is no dispute amongst consultees that the building is in considerable need of substantial repair in order to render it suitable for conversion for any new use. How it arrived at this point is not relevant as to what needs to be done to render it structurally suitable and safe for a new use in the future.

As regards costs of conversion, the application initially included a detailed breakdown of construction costs for the approved development (14/00750/FUL and 14/00751/LBC) from June 2016. This results in total costs of £3 million against a possible sales return of between £2.5 and £2.57million (2014 valuation). However, these costs and values were subsequently revised to account for current 2018 values and all known costs, including finance and marketing costs. When all costs are considered at 2018 rates, and even when accounting for a speculative £500,000 in grant aid, the approved development would still lead to a net loss of between £638-713,000. This represents the applicant's development, however, not a

generic scheme though it does represent a very significant shortfall in funding. It also did not consider a more invasive scheme that may involve retention of the façade, tower and spire.

The applicant, therefore, submitted further information which suggests that the cost of retaining the façade for the same 16 unit scheme would be more than a conversion. The speculative scheme would potentially result in a loss of between £969,000 to over £1million, even with a £500,000 grant. This is presumably down to the additional costs for supporting walls etc that would not be required if the main structure of the church were retained completely under a conversion. Though VAT would be applied to the façade retention, at £40,000 this is a relatively small element of the scheme.

Rather than solely focus on the consented development, the applicants have also produced figures to demonstrate what level of development would be required to result in a profitable scheme. Albeit the alternative scenarios use their own template of unit sizes and construction costs, they do represent useful comparisons. Their assessments conclude that, to make a profit of up to £67,000 (assuming best prices for property sales), 29 units would be required on the site. This would comprise 24 flats behind the church façade, with 5 townhouses on the site of the hall, compared with the consented scheme for 11 converted flats and 5 townhouses. This would also include obligations towards affordable housing and development contributions, but include a £500,000 repairs grant. The applicants have also explored a fourth scenario where, if most standard development contributions were deleted (excepting play area contributions), and the scheme is instead delivered as a privately funded affordable housing scheme, a 29 unit development would still not make a profit, even at best prices.

The scheme that was withdrawn under 08/01209/FUL comprised 15 new-build flats and 11 converted flats. That was certainly on the margins of acceptability. While a 29 unit scheme may not appear a significant increase above that, it would push the very limits of an already constrained site. Factors that would need accounted for would include the fact that the position of the façade being retained would limit the potential for development behind it; that at least 29 car parking spaces would be required; as well as bin and cycle storage. The visual impact of the development would also have to be suited to the townscape and the façade itself, as well as maintain a reasonable relationship with neighbouring residential properties in terms of light, outlook and privacy. Albeit some of the costs associated with these hypothetical developments, such as the costs for sales/marketing, could be scrutinised further, the information does suggest in simple terms that, to retain the façade and return a profitable private development, a very high density of development would be required, much greater than the consented 16 unit scheme.

The applicants have also advised that contact has been made with Registered Social Landlords regarding delivering a publicly funded affordable housing scheme while retaining the façade, but it is understood that the liability of doing so would discourage RSLs from developing the site in this manner.

Ultimately, the submissions on behalf of the applicants do not explore all possible options for developing the site in a way which retains the facade, including trying different unit sizes and exploring possible layouts and massing possibilities across the entire church and hall site. The construction cost information supporting the facadism developments is also provided in simple terms, albeit this is derived from the detailed calculations used for the original conversion scheme. Ultimately, though, it is reasonable to conclude that the applicants have demonstrated that, to produce a development on this site which has a realistic prospect of being economically viable would require that the church be demolished with the exception of its façade, tower and spire, and that a substantial (and likely inappropriate) level of development will be required behind it and on the site of the hall. There will also be the resulting burden on prospective buyers/tenants to ensure that the façade, tower and spire

are maintained in the long term. While their retention may well add to the appeal of the site, their long term upkeep will also need factored into the saleability of any residential development on the site. It is considered that this element of the criterion has been satisfied.

It has been marketed at a price reflecting its location and condition to potential restoring purchasers for a reasonable period

The site was marketed between August 2017 and February 2018 for offers in the region of £80,000. This included direct marketing to developers and agents and on various websites. The application submission includes a brochure from the selling agents. Fifteen enquiries were apparently received, and several viewings resulted, but no serious interest. The general feedback was apparently that buyers were put off by the cost to maintain a Listed Building of this scale given its current condition. There is no evidence that the cost to purchase put prospective buyers off and, indeed, the purchase cost is relatively small when compared with costs to repair the building.

The extent of marketing has been generally accepted by HES and our Heritage and Design Officer. It represents a six month period of attempting to sell the church and church hall (rather than separately, since that could result in the hall being sold separately, further constraining the church's potential for future redevelopment). Our HDO also notes that the building was placed on the landing page of the website for the Buildings and Risk Register, and that he tried his own contacts to attempt to generate interest in the building. While criticism of the marketing from consultees is noted, it is not possible to establish whether the prospective buyers had fully established the potential costs and benefits of developing the site, whether by means of conversion or other, more invasive development, nor whether they had investigated sources of grant aid or other funding sources.

What has transpired, however, is that the property was marketed for sale in an open, transparent manner (as HES notes), and this led to no serious interest being generated from other parties for any type of use, whether residential or any other form of use that might have required less costs to achieve. It is, therefore, concluded that this element of the criterion has been satisfied.

Ecology

Though considerations in this Listed Building Consent application are limited to matters related to the special architectural and historic interest of the Listed Building, the Council has an obligation under habitat regulations to ensure that the potential effect of the development on European Protected Species, (including bats and breeding birds) has been accounted for. In this case, the application is supported by a bat and bird survey which identifies that no signs were found to show any use of the building by bats, albeit there is bat activity in the area. No active bird nests were found. As our Ecology Officer notes, a bat derogation license is not required, though a precautionary condition for birds is recommended (as the survey makes no reference to historic nesting signs). A condition and informative note can cover these issues.

Amenity and traffic

The proposed demolition does not require Planning Permission, just Listed Building Consent. Therefore, the above assessment is limited to matters related to the special architectural and historic interest of the Listed Building and associated ecological implications. Amenity impacts, including noise and dust, are significant issues but are matters for the developers and their contractors to ensure are managed in compliance with relevant guidance separately. Nuisance arising from such works can be regulated by the Council's Environmental Health Service where necessary. The management of traffic on the

public road will also be for the developers and their contractors to address, and this is regulated by the Council as Roads Authority. These matters can be drawn to the applicant's attention in Informative notes.

Retention of features

War memorials are understood to remain within the building. A condition can secure their retention (and that of any other internal displays of architectural or historic interest) and that a scheme is delivered which ensures they are provided to an appropriate organisation capable of suitably displaying them. Boundary walls on the site alongside the church are not identified for demolition, albeit they may require alteration/removal depending on the detail of any redevelopment. A condition can, however, secure their retention at this stage. A condition can also secure a general salvage scheme of other materials, with the aim of ensuring that any new development maximises the incorporation of materials from the demolished building. As HES note, the applicants are required to notify them of the proposed demolition to give them the opportunity to record the building. That notwithstanding, it is considered reasonable for a condition to require that the applicants also carry out basic recording of the building.

CONCLUSION

The demolition of the hall has already been approved under a previous consent, so a further case to justify its demolition is not necessary. The former church building is, however, a significant structure, which has local historic value and is of significant townscape value to this part of the town. Its special architectural and historic interest is not in question. However, its condition has deteriorated in recent years to the extent that substantial intervention will be required to provide it with a future use and, at best, that is likely to be limited to retention of its façade, tower and spire. However, accounting for the costs involved, and the value that could be accrued from development of the site, including that of the hall, the development would appear likely to be unviable. While the case is not conclusively proven against the prospect of any development on this site not being physically and financially possible, all the evidence to date suggests that, to render a residential development economically viable, would require a substantial amount of development, potentially more than the site can comfortably accommodate. Furthermore, the applicants have marketed the property to a sufficient extent and yielded no serious interest from prospective purchasers. It is, therefore, considered reasonable to conclude that, having accounted for policy guidance and the input of consultees, the demolition of the former church should be approved.

RECOMMENDATION BY CHIEF PLANNING OFFICER:

I recommend the application is approved subject to the following conditions and informatives

1. The development hereby permitted shall be begun before the expiry of three years from the date of this permission.
   Reason: To comply with the provisions of section 16 of the Town and Country Planning (Listed Buildings and Conservation Areas)(Scotland) Act 1997, as amended.

2. The approved demolition is limited to the church and church hall buildings identified in red on both the approved site plan and elevation drawings, and does not include the demolition of boundary walls not identified in red on both plan and drawings, unless already consented for removal under 14/00751/LBC
   Reason: To safeguard features of special architectural and historic interest

3. No demolition shall commence until a scheme for the disposal of the materials from the demolition, including stone, slate and glazing (including painted glass) and internal fabric and fittings (including but not limited to pews) has been submitted for the approval of the Planning Authority. The scheme shall include specifications for a quantity of stone to be retained for incorporation into the street frontage of the redevelopment of the site. The demolition shall only proceed in accordance with the approved scheme
   Reason: To safeguard features of special architectural and historic interest

4. No demolition shall commence until a scheme for the disposal of internal monuments/plaques/war memorials (including means of removal and off-site display) has been submitted for the approval of the Planning Authority. The demolition shall only proceed in accordance with the approved scheme
   Reason: To safeguard features of special architectural and historic interest

5. No demolition shall commence until the applicant has secured and implemented an approved Written Scheme of Investigation (method statement) outlining a Historic Building Photographic Survey. The requirements of this are:
   i) The Written Scheme of Investigation shall be submitted to the Planning Authority for approval prior to commencement of the survey.
   ii) Initial survey results shall be submitted to the Planning Authority for approval.
   iii) The final results shall be submitted in the form of a Historic Building Photographic Survey Report within one month following completion of all on-site survey works
   iv) The report, including any documentation, plans, elevations, sketches and photographs shall be submitted in a .pdf format. The digital photographic archive shall be included on a CD.
   v) Once approved the archive and report shall also be reported to the National Record of the Historic Environment (NRHE) hosted by Historic Environment Scotland (HES) and the Planning Authority's Historic Environment Record (HER) within three months of on-site survey completion.
   Reason: To preserve by record a building of architectural and historical interest.

6. No demolition shall be undertaken during the breeding bird season (March to September), unless in strict compliance with a Species Protection Plan for breeding birds, that shall be submitted to the Planning Authority for approval, prior to commencement of demolition.
   Reason: To limit the potential for adverse impacts on breeding birds

Informatives

1. It is the responsibility of the developers and their contractors to ensure that appropriate traffic management measures are in place for the public road during demolition. Liaison with the Council's road network officer is recommended.

2. In order to limit the effects of the demolition works on the amenity of neighbouring properties, the developers and their contractors should ensure that all works are carried out in accordance with BS5228.

3. In the event that bats are discovered following the commencement of works, works should stop immediately and the developer must contact SNH (tel: 01896-756652) for further guidance. Works can only recommence by following any guidance given by SNH. The developer and all contractors to be made aware of accepted standard procedures of working with bats at www.bats.org.uk. Further information and articles available at:

http://www.bats.org.uk/pages/bats_and_buildings.html
http://www.bats.org.uk/pages/existing_buildings.html
http://www.bats.org.uk/publications_download.php/1404/Bats_Trees.pdf

4. There is a separate requirement through section 7 of the Planning (Listed Buildings and Conservation Areas)(Scotland) Act 1997 (as amended) to allow Historic Environment Scotland the opportunity to carry out recording of the building. To avoid any unnecessary delay in the case of consent being granted, applicants are strongly encouraged to complete and return the Consent Application Referral Form found at www.historicenvironment.scot/about-us/what-we-do/survey-and-recording/threatened-buildings-survey-programme.

DRAWING NUMBERS

Location plan 9254.2.12
Site plan 9154.2.10
Elevations 9154.2.11

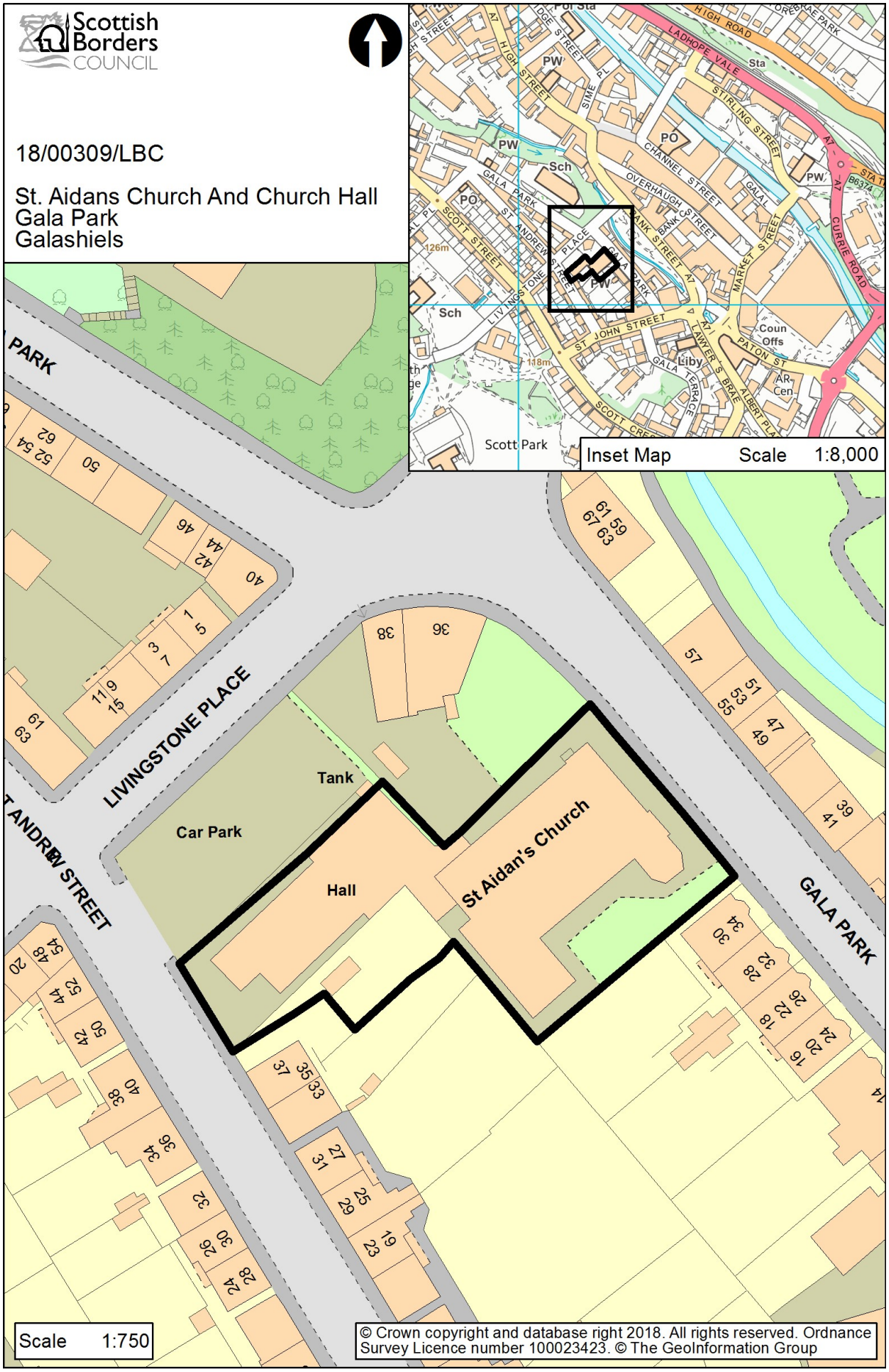
Approved by

Name	Designation	Signature
Ian Aikman	Chief Planning Officer	

The original version of this report has been signed by the Chief Planning Officer and the signed copy has been retained by the Council.

Author(s)

Name	Designation
Carlos Clarke	Team Leader Development Management


Scottish Borders COUNCIL
18/00309/LBC
St. Aidans Church And Church Hall
Gala Park
Galashiels
Inset Map
Scale 1:8,000
Scale 1:750
LIVINGSTONE PLACE
ST ANDREW STREET
GALA PARK
Tank
Car Park
Hall
St Aidan's Church
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SCOTTISH BORDERS COUNCIL

PLANNING AND BUILDING STANDARDS COMMITTEE

3 SEPTEMBER 2018

APPLICATION FOR APPROVAL OF MATTERS SPECIFIED IN CONDITIONS

ITEM:	**REFERENCE NUMBER**: 18/00642/AMC
OFFICER:	Paul Duncan
WARD:	East Berwickshire
PROPOSAL:	Erection of dwellinghouse (approval of matters specified in conditions 15/00743/PPP)
SITE:	Land West of Lamberton Lodge, Lamberton, Scottish Borders
APPLICANT:	Mrs Lynn Craig
AGENT:	Kevin White

SITE DESCRIPTION

The proposed site is located at the Lamberton (Whale's Jaw) building group in East Berwickshire, which is situated between Burnmouth and the Scotland/England border.

The site is rectangular in shape and represents an obvious infill opportunity between two existing bungalows (Fairview Cottage and 5a Lamberton Holding) on the south side of the minor road serving the building group. A further bungalow known as Border View is located directly opposite the plot, to the north of the minor road. The site slopes down from west to east and from north to south. Land to the south of the site is in agricultural use to the Scotland/England border and beyond.

The ruins of Lamberton old church and the associated churchyard sit a short distance from the site to the north-east and are designated as a Scheduled Monument.

PROPOSED DEVELOPMENT

This application seeks approval of matters referred to in conditions attached to planning consent 15/00743/PPP which granted planning permission in principle (PPP) for the erection of a single dwellinghouse on the proposed site.

This application puts forward detailed proposals for the erection of a single detached dwellinghouse, which would be positioned on the west side of the plot, towards 5a Lamberton Holding. Access would be taken from the minor road at the far west end of the plot. Two parking spaces would be formed between the new house and 5a Lamberton Holding.

A mainly two storey dwellinghouse is proposed. The changes in levels across the site would be exploited to present the house as a single-storey split-level dwelling from the front elevation. A projecting gable elevation would be a focal point for the design. This central element would have a north/south orientation with a pitched slate roof, and would link two side 'wings' to the east and west, when read from the public road. The two side offshoots feature shallower roof pitches with an otherwise local vernacular appearance to the front and side elevations. To the front elevation they would present themselves as single storey extensions. The rear elevation is

essentially 2 storey and more contemporary in design, featuring balconies, large single pane windows, patio and balcony doors, and a further central gable.

PLANNING HISTORY

Proposed site

Application reference 15/00743/PPP granted Planning Permission in Principle (previously known as outline planning permission) for the erection of a single dwellinghouse on 16th September 2015. This was a delegated decision. Development contributions towards the local primary and secondary schools were settled by way of a Section 69 legal agreement prior to the release of consent.

A first application for the approval of the matters specified in the conditions attached to that consent was submitted last year (reference 17/01412/AMC). That application proposed the erection of a dwellinghouse which was significantly larger in footprint than the dwellinghouse now being considered. The house would have featured an attached garage and fourth bedroom which have now been omitted from the proposals. The previous application received objections from 11 members of the public. The Department could not support that application. The scale and design of the proposed house was considered unsuitable for the site in question. The applicant ultimately chose to withdraw that application.

Recent local planning history

- 05/00451/FUL – granted permission for the single storey detached dwellinghouse (5A Lamberton Holding) located on the plot adjacent to the proposed site to the south-west.

- 06/00673/OUT & 08/01894/REM – granted permission for the detached bungalow located to the north-west of the proposed site (Maple Lodge). The accompanying Report of Handling provided the following commentary: "Overall, it is considered that the design and siting of the dwellinghouse is acceptable. Whilst a natural slate roof would have been preferred, it is not considered that this could be insisted upon as the neighbouring dwellinghouses have tiled roofs. The design of the dwellinghouse is in keeping with the character of the existing properties."

- 10/01333/FUL – granted permission for the erection of the detached bungalow located to the north-east of the proposed site (Fairview Cottage). The accompanying Report of Handling provided the following commentary: "The proposed dwelling would be a modest 3-bedroom single storey bungalow similar in style, scale, mass and external materials to the dwellings opposite. It would be a modern dwelling with little in the way of any architectural interest but it would be consistent with the recent residential development at this location."

REPRESENTATION SUMMARY

In response to this application, representations on behalf of 6 members of the public were received. All are available to view on *Public Access*, though the comments made can be summarised as follows:

- Proposed house is out of keeping with the surrounding houses

- The proposals are not modest in size and design
- Detrimental effect on the character of this small building group
- Will look like a 2 storey house with balcony from Scotland/England border where it will be very visible
- Suburban design appearance
- Inappropriate materials
- Underbuilding goes against current guidelines
- No surrounding properties feature a balcony
- Why should this house be allowed two stories when no others in the group are
- Permission was granted for a modest dwellinghouse
- The garage omitted from the previous scheme could be applied for again in the future
- Proposal would dominate Border View
- Loss of view from Border View [*not a material planning consideration*]
- Privacy impacts on Border View
- Loss of light and overshadowing effects on Border View
- Impact on quality of life of elderly neighbour
- Very little has changed since the previous withdrawn application
- Contrary to new housing in countryside policy
- Extra traffic
- No information on future boundary of the property
- Impact on Village Hall and Lamberton Kirk/ graveyard
- The building would be obvious from the A1 and could attract crime.

APPLICANT'S SUPPORTING INFORMATION

The application was accompanied by a supporting statement which can be viewed in full on *Public Access.* Street scene section/elevation drawings have been provided on request and are also available to view on Public Access ('Section Drawings' 20 July 2018).

CONSULTATION RESPONSES:

Scottish Borders Council Consultees

Roads Planning Service: No objection, provided conditions are included in any consent to control parking, turning and access.

Archaeology: No objection. There are no archaeological implications. Previous archaeological conditions have been dealt with.

Environmental Health: No objection, provided conditions and informatives are included in any consent to cover drainage and water supply arrangements and the use of wood burning stoves. Further information was requested regarding an identified plant room.

Statutory Consultees

Foulden, Mordington and Lamberton Community Council: Planning permission in principle was given under application 15/00743/PPP. The approval in principle was for a modest dwelling which complies with policy D2 of the Scottish Borders Consolidated Plan 2011 as the site is well related to an existing building group. The

approval notification goes on to state - “Appropriate siting and design would ensure that the proposal would not affect the residential amenities of occupants of neighbouring properties or the visual amenities of the area”. The planning officers report states - “The proposed plot is of an adequate size to accommodate a modest dwelling. Details of design and materials are not provided for at this outline stage, however it is noted that there is a mixture of traditional and modern housing within the group, with recent new build comprising modest bungalows constructed of render and slate. Consideration of siting and fenestration during the detailed application stage should take account of any issues with regard to neighbouring amenity.”

FMLCC do not consider that these conditions have been met in the detail design proposals being put forward under application 18/00642/AMC for the following reasons: -

This proposal has a large two-storey element combined with a single storey element which occupies a significant proportion of width of the site. The neighbouring properties are true bungalows of a modest and appropriate size for the location. The existing properties are generally in keeping with the established local vernacular in scale and finish – this is not the case with these proposals.

This design will mean that the amenity currently enjoyed by the property opposite the northside of the site of open aspect and privacy will be severely compromised. A design for a modest dwelling may be able to preserve this amenity.

The design character of the proposal is not in keeping with the surrounding properties and will set a precedent for two-storey development which has previously been discouraged by the planning authority.

Despite the statements in the applicant’s design statement the [Community] Council does not consider that sufficient care has been given to ensure that this proposal is appropriate to its siting in terms of overall size, height, materials and design character. Previous new build properties along this road are all single storey and this principle should be maintained.

Drainage and septic tank issues of this site do not appear to have been adequately addressed.

DEVELOPMENT PLAN POLICIES:

Scottish Borders Local Development Plan 2016

PMD1 Sustainability
PMD2 Quality Standards
HD2 Housing in the Countryside
HD3 Protection of Residential Amenity
EP8 Archaeology
IS7 Parking Provision and Standards
IS9 Waste Water Treatment Standards and Sustainable Urban Drainage

OTHER PLANNING CONSIDERATIONS:

Scottish Planning Policy 2014
SPG Guidance on Householder Developments 2006
SPG New Housing in the Borders Countryside 2008
SPG Placemaking and Design 2010

KEY PLANNING ISSUES:

The key issue is whether the proposed development will satisfy conditions attached to consent reference 15/00743/PPP, particularly with respect to the layout, design, appearance and siting of the development, including landscaping and the means of access. Regard should principally be had to the Development Plan when determining the application, but other material considerations will require to be accounted for.

ASSESSMENT OF APPLICATION:

PRINCIPLE

Planning permission in principle has previously been granted for the erection of a dwellinghouse on the proposed site (ref 15/00743/PPP). This permission remains valid. The principle of erecting a dwellinghouse at this site is therefore clearly established.

CONDITION 1 - Layout, siting, design, appearance and landscaping

Condition 1 requires the agreement of the layout, siting, design and external materials of the proposed dwellinghouse, the means of access and landscaping.

Placemaking and design

The Council's standards for placemaking and design for new rural housing are established by Local Development Plan policy PMD2 (Quality Standards). This policy seeks to ensure all new development is of a high quality and respects the environment in which it is contained. Development should be based on a clear understanding of context, designed in sympathy with the Scottish Borders architectural style. It should be of a scale, massing and height appropriate to its surroundings, finished externally in materials and colours which complement the highest quality of architecture in the locality. Policy PMD2 is supplemented by the Placemaking and Design Supplementary Planning Guidance document which sets out in detail the Council's expectations for the design of new development. This outlines general concepts such as the rules of proportion, but also goes into specifics. For example, the SPG lists the materials which the Council considers appropriate for new rural development. The Council's New Housing in the Borders Countryside Supplementary Planning Guidance is also relevant.

Before considering the proposals for this dwellinghouse, the existing context at this building group should firstly be acknowledged. The nearest existing dwellinghouses have a very clear design style. These houses are bungalows with mainly shallow pitched, concrete tiled roofs. The use of dry dash render is evident and the massing and detailing (for example the fenestration pattern) of the houses generally results in a horizontal emphasis and a suburban character. This is not reflective of traditional Borders design, or the form of rural architecture or design standard the Planning Authority aspires to today, which is outlined in the Placemaking and Design Supplementary Planning Guidance document.

The proposed site therefore presents an immediate challenge in that whilst there is a clear existing design character evident, that context does not reflect traditional rural Borders architecture. In these circumstances, a further bungalow similar to those existing would be acceptable. The Planning Authority would have limited scope to demand an alternative design approach. In this instance however, the applicant has

come forward with an alternative approach, which partially reflects the guidance contained with the Placemaking and Design SPG but which provides a significant contrast with the scale and massing of the neighbouring houses. Objectors have noted that at the time of the PPP approval for the proposed site, the accompanying Report of Handling stated that the site would be capable of accommodating a modest dwelling. It should be noted that this was commentary rather than a condition of the consent or a requirement of the approval. The proposed dwellinghouse is not modest in scale but must be assessed on its merits. A key consideration is whether other placemaking considerations outweigh the contrast in scale and design between the proposed dwellinghouse and the existing houses nearby.

The proposed site slopes down from west to east, and from north to south. The proposed dwellinghouse utilises the change in levels on the site to achieve what is largely a two-storey building but which reads mainly as a single storey building from the front elevation. A front gable projects forward and would be faced in natural stone, providing an attractive focal point for the dwelling. The front elevation would echo the appearance of traditional Borders farm steading buildings.

The section drawing provided ('Section Drawings' 20 July 2018) shows the ridge of the proposed dwellinghouse sitting below that of 5a Lamberton Holding. The drawing shows the highest ridge across each of the buildings on the south side of the road gradually stepping up to 5a Lamberton Holding, although perhaps surprisingly, the drawing shows the ridge of the east offshoot of the proposed house sitting below that of Fairview Cottage to the east. The section drawings show the height of the proposed house would not dominate the neighbouring properties.

The split-level design helps break up the massing and bulk of the dwellinghouse and helps integrate it into the landform. This does however require underbuilding, which would not normally be welcomed in the design of new rural housing. The underbuilding required is mainly focused to the rear of the plot, but it will be visible from the minor road. It should be noted that a standard bungalow on the plot would itself require earthworks to create a flat site.

The dwellinghouse will read clearly as a two storey dwellinghouse from the south of the site. Visibility from the south will mainly be restricted to the A1 and the A1 layby at the border. At such distances the prominence of the proposed house, and the effect of reading a two-storey house against surrounding bungalows will be minimal. Balconies are not evident at neighbouring dwellings but at such distances will not be prominent. The section drawings submitted with the application show that the new house will remain below the ridge of the neighbouring dwellinghouse. The proposed dwelling may break the skyline when viewed from the border lay-by, however neighbouring dwellinghouses already do so. Other properties at Lamberton vary in scale and massing and the house would be seen in that context. It should also be acknowledged that a large two storey dwellinghouse has been approved by the Local Review Body to the north of the building group on land north east of the old church (planning reference 16/00947/FUL).

This application follows earlier proposals (reference 17/01412/AMC) for a dwellinghouse on the plot which was significantly larger in scale, measuring some 31m across the front elevation. That proposal was considered unacceptable, and the applicant agreed to withdraw the application prior to determination. Whilst a complete rethink for the plot would have been preferable, the original plans were amended to remove the integral garage and fourth bedroom. This has reduced the width of the front elevation to 21m which in turn has reduced the overall scale of the proposed dwelling to acceptable levels.

The concerns raised by third parties in relation to the scale of the proposed dwelling are noted and have been taken into consideration. However, the submitted plans show a dwelling with a significantly reduced footprint (when compared to the earlier withdrawn application) with a predominantly single storey elevation to the road side. This is consistent with existing dwellings locally and considered to be an improvement over the earlier iteration.

The proposed materials are to be welcomed. The central gabled element would be of natural sandstone construction to the front, sides and rear. Other front and side elevation walls would mainly have a smooth render finish to the front and side elevations, whilst modern timber style boarding finished in forest grey would clad the rear elevation. This would partially wrap around the east offshoot. Roofs would be covered with natural slate. Aluminium or timber windows and doors would visually recede with a slate grey finish. Either aluminium or timber would be acceptable at this site given the character of neighbouring dwellings. This could be decided upon at a later date and controlled by an appropriately worded condition. The proposed materials are significantly more appropriate in a rural setting than those prevalent in this part of the building group, although the old village hall building benefits from a traditional stone and slate construction. Overall, the materials proposed for this house are appropriate for such a rural location and represent a significant betterment to those prevalent within the immediate vicinity and which could in such circumstances be demand by the Planning Authority.

The preceding paragraphs set out a range of conflicting considerations. Pulling these together, it is felt that the benefits of this proposal outweigh the concerns about the scale of the development. The Heritage and Design officer has been informally consulted on these proposals and concurs with the view that the design is acceptable and in compliance with placemaking and design objectives.

Various options for altering the design have been considered, for example lowering the eaves on the western offshoot or reducing the step down to the eastern offshoot. Whilst such changes may have produced a moderately improved visual appearance this would have been at a significant cost to the very finely balanced internal arrangements of the proposed house.

In conclusion, and on balance, taking account of the context of the site in question, it is considered that proposed development should be supported in placemaking and design terms.

Residential amenity impacts

Members will be familiar with Local Development Plan policy HD3 (Protection of Residential Amenity), which is supplemented by the Guidance on Householder Developments SPG (also known as the Privacy and Sunlight SPG). These set out the Council's standards for residential amenity and provide a framework for the assessment of these considerations.

Objectors have raised concerns regarding potential adverse impacts to the amenity presently enjoyed by the property known as Border View, to the north of the proposed site. In terms of overlooking, it is inevitable that a degree of impact will occur when this site is developed given the proximity to Border View. This would be the case were a standard bungalow to be erected on the site. A standard bungalow design would likely feature principal rooms overlooking Border View. In the proposals being considered, the windows on the front (north) elevation are to a corridor, a store, and a laundry room, rather than principal rooms. The impact of

overlooking resulting from such internal spaces would be far less significant than from principal rooms. The proposals also feature a mezzanine space at first floor. At this short distance to Border View, given the window would look down on Border View, it would be appropriate to require this window to utilise obscured glazing. Subject to compliance with such a condition, the proposed house would avoid unacceptable adverse impacts on the level of privacy amenity afforded to the property known as Border View.
Objectors have also raised concerns with regards to loss of light, loss of sunlight and overshadowing. There will be a degree of impact in this regard. A section drawing has been provided which shows the Council's standards for loss of light will be met.

There would be no significant effects on other properties within the building group. The side elevations of the proposed dwellinghouse feature just one single en-suite window on the east elevation. This faces a blank gable on Fairview Cottage which will ensure no adverse privacy or loss of light impacts will arise on that property. No impacts will arise from the proposed balcony areas.

The Environmental Health section queried the plant room/ store identified on floorplan drawings and sought confirmation that this room would not contain noise generating equipment. This has been clarified by the agent to the satisfaction of Environmental Health. The room will contain a standard oil-fired boiler and hot water cylinder(s) as well as the incoming utility connections.

Other considerations

The proposals would be considered to have a neutral effect on the setting of the ruins of Lamberton old church and the associated churchyard which are designated as a Scheduled Monument.

No details have been provided for boundary treatments but this matter can be controlled by a suitably worded planning condition.

CONDITIONS 2 and 3 – Standard conditions

Condition 2 and 3 relate to the timing of agreeing the details required by the PPP consent, the commencement of the development and the implementation in accordance with the agreed details thereafter. These conditions remain relevant and will not be addressed or discharged by this application. The applicant can be advised of this by means of an informative.

CONDITION 4 – Foul drainage

Local Development Plan policy IS9 (Waste Water Treatment Standards and Sustainable Urban Drainage) sets out the Council's preferred methods for dealing with waste water associated with new development. In areas not served by a mains sewer, private sewerage treatment arrangements may be acceptable. Condition 4 of 15/00743/PPP requires the agreement of arrangements for the disposal of sewage and their implementation on the site thereafter, prior to the occupation of the dwellinghouse. This application now sets out the proposed arrangements which would see foul drainage directed to a septic tank within the plot, which would then discharge to an existing cundydrain within the adjacent field to the south-east of the plot. These proposals are suitable both in principle and for the purposes of this condition. Detailed assessment of the arrangements would be carried out at the Building Warrant stage. The implementation of these arrangements prior to occupation will remain a condition of the consent. An informative is recommended to

remind the applicants that such conditions remain valid and will need to be satisfied when the development is carried out. Finally, the Environmental Health section has recommended a planning condition relating to the maintenance of the private drainage system.

CONDITIONS 5 & 6 – Parking & turning, access

Local Development Plan policy PMD2 (Quality Standards) seeks to ensure new development within the Scottish Borders has no adverse impact on road safety. Planning condition 5 of the existing PPP approval requires two parking spaces (excluding garaging) and a turning area to be provided within the curtilage of the site before the dwellinghouse is occupied, and for these to be retained in perpetuity thereafter. Condition 6 requires a new vehicular access to the site to be constructed to DC-3 specification prior to the occupation of the dwellinghouse.

The original proposals for planning permission in principle did not set out arrangements for access or for parking and turning. The detailed proposals now under consideration show access to and from the minor road will be taken via a new service layby access at the far west of the plot. Parking for two cars is shown with a turning head to the north of the proposed dwellinghouse. The proposals have been assessed by the Roads Planning section who has no objection to the proposed arrangement. New conditions relating to parking, turning and the formation of the access have been requested but the existing conditions on the PPP consent remain valid and will adequately control these matters.

CONDITION 7 – Water supply

Condition 7 related to the proposed water supply. A connection to the mains water supply is now proposed. Environmental Health have requested planning conditions to ensure that supply is achievable and delivered. These conditions are duly recommended.

CONDITION 8 - Archaeology

At the time of the PPP application, potential archaeological implications were identified at the proposed site. In order to satisfy Local Development Plan policy EP8 (Archaeology) it was felt that mitigation would be required. Planning condition 8 of the PPP consent (15/00743/PPP) required a watching brief to be undertaken in accordance with a Written Scheme of Investigation. This has since been carried out and the findings have been reported to the Council. The Archaeology Officer has accepted the findings which have addressed his concerns. This condition is therefore satisfied.

CONCLUSION

The development is considered compliant with the Local Development Plan 2016 and relevant supplementary planning guidance and its merits in these regards are not outweighed by other material considerations. The development will, subject to compliance with the schedule of conditions, satisfy conditions attached to consent reference 15/00743/PPP and will not conflict with other conditions on the same consent. On balance, and taking into consideration the points discussed above, it is considered that the proposed dwellinghouse is acceptable in terms of its siting, design, scale and material. The proposals are considered to represent a significant improvement over the earlier application consistent with placemaking and design principles.

RECOMMENDATION BY CHIEF PLANNING OFFICER:

I recommend the application is approved subject to the following conditions and informative notes:

Conditions

1. The development hereby permitted shall not be carried out otherwise than in complete accordance with the plans and specifications approved by the Planning Authority.
   Reason: To ensure that the development is carried out in accordance with the approved details.

2. Prior to the commencement of development, sample panels of the external materials hereby approved for use in the development (as shown on the approved plans) shall be prepared on site for the prior approval by the Planning Authority. The development shall be carried out wholly in accordance with the approved materials thereafter.
   Reason: The materials to be used require further consideration to ensure a satisfactory form of development, which contributes appropriately to its setting.

3. Prior to the commencement of development, details of the material and finish of the doors and windows on the dwellinghouse hereby approved shall be submitted for the approval of the Planning Authority. Thereafter, the development shall be carried out wholly in accordance with the approved details.
   Reason: to provide satisfactory control over the appearance of the windows and doors on the dwellinghouse hereby approved, in the interests of visual amenity.

4. The mezzanine window on the front (north) elevation shown on the drawing number kw-158-GMC 103 hereby approved shall be glazed with obscure glass in accordance with a scheme of details (including precise details of the opaqueness of the proposed glazing) that shall first be submitted to, and agreed in writing by the Planning Authority in advance of the installation of the window. Upon installation the window shall be permanently fixed shut. Thereafter the window shall be so retained unless otherwise agreed in writing by the Planning Authority.
   Reason: To safeguard the privacy of the occupiers of the adjoining property.

5. No development is to commence until a report has been submitted to and approved in writing by the Planning Authority that the public mains water supply is available and can be provided for the development. Prior to the occupation of the building(s), written confirmation shall be provided to the approval of the Planning Authority that the development has been connected to the public mains water supply.
   Reason: To ensure that the Development is adequately serviced with a sufficient supply of wholesome water and there are no unacceptable impacts upon the amenity of any neighbouring properties.

6. No water supply, other that the public mains shall be used to supply the Development without the written agreement of the Planning Authority.
   Reason: To ensure that the Development is adequately serviced with a sufficient supply of wholesome water and there are no unacceptable impacts upon the amenity of any neighbouring properties.

7. No development shall commence until details of boundary treatment have been submitted for the approval of the Planning Authority. Thereafter the development shall be carried out wholly in accordance with the approved details.
   Reason: to ensure the appropriate integration of the development hereby approved into the surrounding landscape, in the interests of visual amenity.

8. No development shall commence until the applicant has provided evidence that arrangements are in place to ensure that the private drainage system will be maintained in a serviceable condition
   Reason: To ensure that the development does not have a detrimental effect on amenity and public health.

Informatives

1. It should be borne in mind that only contractors first approved by the Council may work within the public road boundary.

2. The applicant is advised that conditions 2, 3, 4, 5 and 6 of planning consent 15/00743/PPP remain valid and should be satisfied in accordance with their respective requirements.

3. With regard to the obscure glazing required by condition 5, please note that the Planning Authority wishes the details required to demonstrate the adequacy of the opaqueness of the proposed glazing. Accordingly it is not details of the specific design or pattern that is required, but a measure of the proposed glazing's actual opaqueness. In order to be supported, this should be the maximum opaqueness within the supplier's range.

4. Private drainage systems often impact on amenity and cause other problems when no clear responsibility or access rights exist for maintaining the system in a working condition. Problems can also arise when new properties connect into an existing system and the rights and duties have not been set down in law. To discharge the Condition relating to the private drainage arrangements, the Applicant should produce documentary evidence that the maintenance duties on each dwelling served by the system have been clearly established by way of a binding legal agreement. Access rights should also be specified.

5. Stoves and Use of Solid Fuel – These installations can cause smoke and odour complaints and any Building and Planning Consents for the installation do not indemnify the applicant in respect of Nuisance action. In the event of nuisance action being taken there is no guarantee that remedial work will be granted building/planning permission. Accordingly this advice can assist you to avoid future problems. The location of the flue should take into account other properties that may be downwind. The discharge point for the flue should be located as high as possible to allow for maximum dispersion of the flue gases. The flue should be terminated with a cap that encourages a high gas efflux velocity. The flue and appliance should be checked and serviced at regular intervals to ensure that they continue to operate efficiently and cleanly. The appliance should only burn fuel of a type and grade that is recommended by the manufacturer.

If you live in a Smoke Control Area you must only use an Exempt Appliance http://smokecontrol.defra.gov.uk/appliances.php?country=s and the fuel that is Approved for use in it http://smokecontrol.defra.gov.uk/fuels.php?country=s .

In wood burning stoves you should only burn dry, seasoned timber. Guidance is available at: http://www.forestry.gov.uk/pdf/eng-woodfuel-woodasfuelguide.pdf/$FILE/eng-woodfuel-woodasfuelguide.pdf

Treated timber, waste wood, manufactured timber and laminates etc. should not be used as fuel. Paper and kindling can be used for lighting, but purpose made firelighters can cause fewer odour problems.

DRAWING NUMBERS

Reference	Plan Type
Floorplan	kw-158-GMC 100
Floorplan	kw-158-GMC 101
Roofplan	kw-158-GMC 102
Elevations	kw-158-GMC 103
Elevations	kw-158-GMC 104
Sections	kw-158-GMC 105
Site plan	kw-158-GMC 108A
Sections	kw-158-GMC 109A
Location plan	kw-158-GMC 110
Other	kw-158-GMC Materials

Approved by

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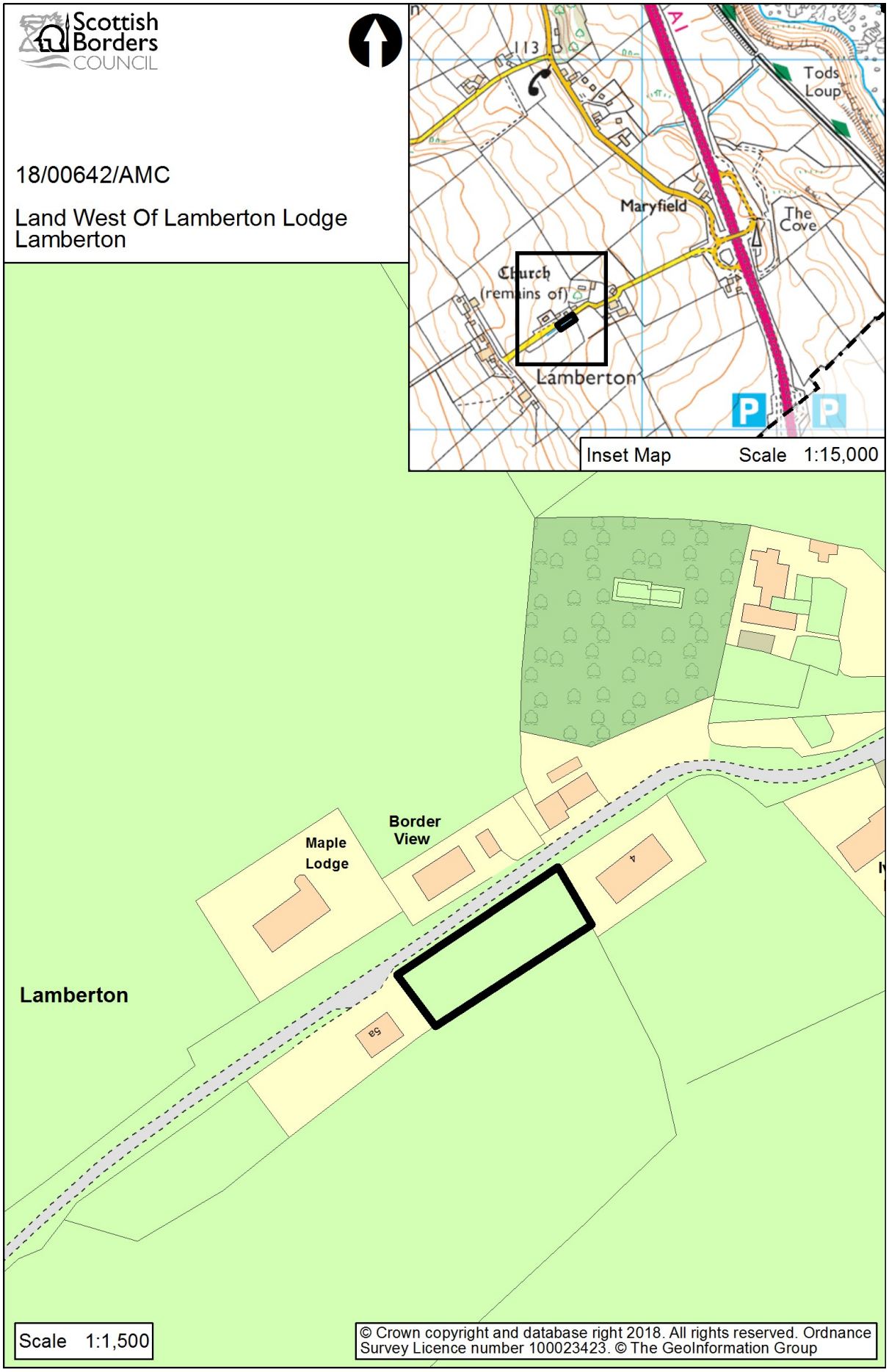
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Inset Map
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LOCAL BIODIVERSITY ACTION PLAN

Report by Service Director Regulatory Services

PLANNING AND BUILDING STANDARDS COMMITTEE

3 September 2018

1 PURPOSE AND SUMMARY

1.1 **This report proposes that Council approves an updated Local Biodiversity Action Plan.**

1.2 The Local Biodiversity Action Plan (LBAP) was originally approved by the Council in 2001, with further detail under the plan being provided by a series of Habitat Action Plans produced between 2003-2010. The LBAP forms one of the key elements of the Council's Biodiversity duty under the Nature Conservation (Scotland) Act 2004 which provides a framework of actions for the Council and its partners to further the conservation of biodiversity in Scottish Borders. The Scottish Biodiversity Strategy was originally published in 2004, and was updated in 2013 adopting an ecosystem approach. The Council's regional pilot land use framework, produced under the Land Use Strategy pilot (2013-2015) tested an ecosystem approach and is applied to the refresh of the LBAP.

1.3 The LBAP is identified as proposed Supplementary Guidance in the Local Development Plan. The LBAP informs the Council's Supplementary Guidance for biodiversity and Policy EP3 Local Biodiversity. The purpose of the updated LBAP is to protect and enhance biodiversity in Scottish Borders, taking into account changes in national policy and is set out in **Appendix A.**

2 RECOMMENDATIONS

2.1 **I recommend that the Planning & Building Standards Committee:-**

(a) approves the updated Supplementary Guidance set out in the Local Biodiversity Action Plan as a basis for public consultation

(b) notes the Environment Report as set out in Appendix B.

(c) Agrees that the paper may subsequently be adopted as Supplementary Guidance provided no substantive objections are received during the consultation period

(d) Agrees that in the event of substantive objections being received a further report is made to the Planning & Building Standards Committee detailing the terms of those objections and setting out any amendments that are considered appropriate.

3 UPDATING THE LOCAL BIODIVERSITY ACTION PLAN

Background

3.1 The Council adopted the Local Biodiversity Action Plan (LBAP) in 2001. This linked to the national UK Biodiversity Action Plan (UKBAP) with a focus on actions for species and habitats. It was produced by a partnership of organisations with an interest in natural heritage and land management within Scottish Borders. The vision of the original LBAP was healthy landscapes with enhanced natural resources to benefit future generations. A series of 14 Habitat Action Plans was produced between 2003-2010 for woodland, wetland, upland, lowland farming, coastal and urban habitats. A key objective was to enhance local habitat networks, joining up formerly fragmented areas of habitat across the landscape.

3.2 The LBAP partnership has made good progress under the earlier LBAP with significant areas of new native woodland created, peatland and wetland habitats restored, river and flood plain restoration and species monitoring with local biological recorders.

3.3 There have been some key changes in national biodiversity policy including the amendment to the Scottish Biodiversity Strategy (SBS) in 2013 (2020 Challenge for Scotland's biodiversity) and the Land Use Strategy produced under the Climate Change (Scotland) Act 2009.

3.4 The amended Scottish Biodiversity Strategy (SBS) was produced in response to both the UN Convention of Biological Diversity refreshed targets, known as the Aichi targets set in 2010 to halt biodiversity loss and restore the natural environment to health and the EU Biodiversity Strategy for 2020. This helped refocus action towards an ecosystem approach. The SBS recognises the need for local action to align with and contribute towards both national and international agendas.

3.5 The updated LBAP is organised around the priority themes of the SBS, and linked by extension to the Aichi Targets. The SBS themes are captured in a *Routemap* which outlines six big steps for nature to achieve the 2020 Challenge:

- *Ecosystem Restoration,*
- *Investment in Natural capital,*
- *Quality Greenspace for health and education benefits,*
- *Conserving wildlife in Scotland,*
- *Sustainable management of land and freshwater,* and
- *Sustainable management of marine and coastal ecosystems*.

This also includes protection of the priority habitats and species of the Scottish Borders by seeking to address the pressures on them.

3.6 The national Land Use Strategy published in 2011 has a vision of "*A Scotland where we fully recognise, understand and value the importance of our land resources, and where our plans and decisions about land use deliver improved and enduring benefits, enhancing the wellbeing of our nation*." The LUS has three interlinked objectives for land use across Scotland:

- Land-based businesses working with nature to contribute more to Scotland's prosperity.
- Responsible stewardship of Scotland's natural resources delivering more benefits to Scotland's people; and
- Urban and rural communities better connected to the land, with more people enjoying the land and positively influencing land use.

3.7 The national Strategy was updated in 2016 (2016-2021) following two successful pilot projects including one led by the Council, the other being led by Aberdeenshire Council. The pilot produced a pilot Regional Land use framework to identify opportunities to deliver multiple benefits from different land use options. At the same time, it aims to identify where potential conflicts may arise between alternative land uses and suggest how these might be explored and trade-offs identified between competing policy priorities. It reflects on the possible impacts of climate change on different options for land use. Climate change impacts are likely to arise from increased flooding, increased disruption from severe weather events including drought, reductions in water availability in summer, increased risks to agriculture and forestry from pest and disease, and loss of species and habitats. The Framework looks to identify the implications of existing and potential new policy directions that influence land use and might be followed in adapting to climate change

3.8 A high quality natural environment is also '*a key piece of the economic jigsaw*', and this contributes to fulfilling the Scottish Government's Purpose to create 'a more successful country, with opportunities for all of Scotland to flourish through increasing sustainable economic growth'. The Scottish Borders Economic Strategy 2023 also outlines opportunities to drive economic growth through local industries such as tourism and food and drink, and by capitalising on the location of the Scottish Borders, which is recognised as a high-quality environment

3.9 The Council's Corporate Plan 2018-2023 *"Our Plan and Your Part in it"* has a commitment to support *Empowered, vibrant communities* including engagement through Area Partnerships and targeting the use of the Localities Bid Fund. The administrations vision, *Connected Borders* recognises the importance of the natural environment, which is the basis of the region's outstanding beauty. The Community Plan has key outcomes for *Our Economy, Skills & learning*, *Our Heath*, *Care & Wellbeing*, *Our Quality of Life* and *Our Place*. The LBAP provides a framework to help guide the Council and its partners and local communities to enhance our natural environment to help achieve these objectives.

Updated LBAP

3.10 The updated LBAP takes account of the challenge of climate change which may disrupt our ecosystems and their ability to provide beneficial services such as water flow regulation to reduce flooding, improvement to water quality, sequestration of carbon on peatlands and woodlands and pollinating services to help food production. The LBAP seeks to help address the key pressures identified in the SBS: Pollution, land use intensification and modification, spread of invasive species and wildlife

disease, lack of recognition of the value of nature, disconnection with nature and marine exploitation. The ecosystem approach upon which is based has three steps i) taking account of how ecosystems function ii) taking account of ecosystem services and iii) involving people who manage or benefit from ecosystem services in decision making. This approach promotes the protection of biodiversity based on an awareness of the intrinsic value of biodiversity and also its value as natural capital, which deliver multiple benefits to society through ecosystem services. The stocks of natural capital can deliver a range of services including:

- Provisioning services, (food, timber, biomass, fuel, freshwater, medicines, renewable energy)
- Regulating services (air+ water quality, climate, water runoff, erosion, pollination, carbon storage)
- Cultural services (recreation, field sports, ecotourism, a sense of place, ethical values)
- Supporting services (nutrient cycling, water cycling, soil formation, photosynthesis and biodiversity).

3.11 A set of actions has been developed with the help of the Council's partner organisations under the LBAP, focussed around six themes set out in para 4.5. This proportionate set of actions recognises priorities for action but also that times have changed and resources are scarce. Delivery of multiple benefits to society through biodiversity conservation is proposed, as an effective means of making best use of scarce resources to achieve our wider objectives. The timescale for delivery is 2018-2028 with some actions prioritised for delivery within 5 years.

3.12 By updating the LBAP, the Council can demonstrate that it is seeking to put in place good practice, working with its partners, to enable the Council to meet its duties in relation to its Biodiversity duty and Climate Change Act responsibilities in particular. The Framework will help deliver good practice in relation to development of planning policy and in relation to the Council's duties for flood protection and as a responsible authority under River Basin Management Plans. The LBAP can help meet Corporate Plan, Community Plan and *Connected Borders* priorities to help protect and enhance our high quality environment and help achieve the Council's ambitions for the Borders, including empowering our vibrant communities.

3.13 The updated LBAP will be instrumental in informing Local Development Plan Policy EP3 *Local Biodiversity*, decision making under this policy will be guided by the LBAP and SPG for biodiversity. The refreshed LBAP will provide up to date and relevant guidance. It will provide a platform to consider how ecosystem services can be valued and assessed as part of policy development under the LDP, in line with good practice.

3.14 The Committee is asked to note that a Strategic Environmental Assessment (SEA) has been carried out. As the producers of the LBAP the local authority is the 'Responsible Authority' for the Strategic Environmental Assessment (SEA) and therefore has responsibility for undertaking the SEA under the terms of the Environmental Assessment (Scotland) Act 2005. The SEA has been through screening and scoping stages through the SEA Gateway and the SEA consultation authorities have been consulted on the full Environmental Report. The

Environmental Report has been prepared alongside the draft Supplementary Guidance and will be advertised in accordance with the relevant legislation. A copy of the Environmental Report of the SEA is attached to this report in **Appendix B**.

Next Steps

3.15 It is proposed to submit the LBAP for a 12 week period of public consultation as Supplementary Guidance to enable stakeholders, communities and members of the public to give their views.

4 IMPLICATIONS

4.1 Financial

The proposed actions included within the action plan are for the whole LBAP Partnership to deliver and would be subject to funding availability or are otherwise actions that can be carried out as part of ongoing work programmes within the Council.

4.2 Risk and Mitigations

4.2.1 By developing the LBAP and moving forward in a proportionate way, the Council is in an advanced position compared to other local authorities and will be well placed to continue to meet its obligations under the Biodiversity duty and Climate Change Act responsibilities.

4.2.2 The revised LBAP will also bring our Planning policies up to date. By not moving forward with the pilot Framework the Council may lose that advantage and the Planning process may be dependent on out of date guidance.

4.2.3 The Council may be at the forefront in terms of assessing impacts on ecosystem services and biodiversity but this may be perceived as further complicating the Planning process. The roll out can be managed on a proportionate basis to ensure that it is sufficiently in line with good practice.

4.3 Equalities

An Equalities Impact Assessment has been carried out on this proposal and it is anticipated that there are no adverse equality implications for the protected characteristics with mitigation proposed under the communications strategy for the public consultation. The LBAP may have a positive impact on communities.

An Equalities Impact Assessment has been carried out on this proposal and it is anticipated that there are no adverse equality implications.

4.4 Acting Sustainably

By adopting an ecosystem approach the LBAP should improve local business environmental awareness and help make links between local production with local consumption. Social effects have included involving communities in forthcoming consultation in developing the LBAP and raising awareness to

encourage local action and decision making. Environmental effects include encouraging sustainable land use, identifying potential measures to reduce diffuse pollution, measures that could contribute to carbon reduction targets (peatland management, woodland expansion), measures that may lead to increased or enhanced semi-natural habitats and increased biodiversity. The LBAP is based on an integrated approach combining social, economic and environmental issues into integrated solutions and seeks to use local talent and resources where possible.

4.5 **Carbon Management**

Whilst not directly affecting the Council's carbon emissions, measures facilitated under the Framework may lead to greater carbon capture and storage e.g. through woodland expansion, peatland management and may lead to reduced outputs of climate changes gasses e.g. through less intensive greenspace management.

4.6 **Rural Proofing**

It is anticipated that there will be no adverse impact on the rural area from the proposals contained in this report. The ecosystem approach seeks to inform decision making to balance economic, social and environmental needs leading to more integrated solutions

4.7 **Changes to Scheme of Administration or Scheme of Delegation**

There will be no changes required to either the Scheme of Administration or the Scheme of Delegation as a result of the proposals in the Framework.

5 CONSULTATION

5.1 The Chief Financial Officer, the Monitoring Officer, the Chief Legal Officer, the Chief Officer Audit and Risk, the Service Director HR and the Clerk to the Council have been consulted and any comments received have been incorporated into the final report.

5.2 The Executive Director, Service Director Assets & Infrastructure, the Service Director Children & Young People and the Services Director Customer & Communities have been incorporated into the final report.

Approved by

Brian Frater
Service Director Regulatory Services **Signature .....**

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Background Papers: None
Previous Minute Reference:

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REGULATORY SERVICES
PLACE

Draft Supplementary Guidance

Scottish Borders Local Biodiversity Action Plan

2018-2028

Scottish Borders COUNCIL

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INTRODUCTION: BIODIVERSITY IN THE SCOTTISH BORDERS

The Scottish Borders stretches over 4,700 square kilometres from the wetter landscapes of the west to the drier eastern coastline. Over half the land lies above 300 metres. The region's varying climate and rainfall, soil types and land uses have produced a great variety of semi-natural features and wildlife, including many different habitat types.

MARINE AND COASTAL HABITATS

Our seas are a coalescence of cold northern and warm southern waters that wash over a varied geology, resulting in a rich mixture of marine life. Under the waves, sea caves are filled with coralline seaweeds, sea squirts and sponges, whilst reefs are home to the northern wolf fish and cup corals. Our marine environment also hosts internationally important populations of breeding seabirds and marine mammals; the breeding grey seal population is part of a larger colony centred around Fast Castle, thought to be the fourth largest in the UK and the fifth largest in the world.

On the shore are small dunes and flushes, and, high above the seas, some of our least modified habitats –soaring cliffs with internationally important seabird populations of shag, kittiwake, razorbill, herring gull and guillemot. Rare ferns like sea spleenwort, mosses, orchids and autumn gentian are also found in a mosaic of coastal habitats including coastal deans (steep-sided valleys) such as base-rich grassland, ancient woodland, maritime heath and scrub.


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LOWLAND AND UPLAND HABITATS

The Scottish Borders is rich in landscapes that have long historical and cultural significance as part of a working countryside. From the coast to upland valleys, fertile soils provide rich nutrients for grazing and arable farming. With sensitive management, farmland habitats such as grasslands, woodlands and wetlands can be rich in biodiversity. Around 20% of the species-rich hedgerows in Scotland are found in the Scottish Borders.[1] Grasslands rich in wildflowers, birds and butterflies are still found in steep-sided valleys and rocky ridges, with important remaining areas in Berwickshire and central Borders.

The uplands of the Scottish Borders are typically rounded, with steep, river-cut valleys, but soar to mountainous levels (840m above sea level) in the Broad Law massif. Montane species found here include dotterel on passage, raven, ring ouzel and mountain hare, downy willow, black alpine sedge, alpine foxtail as well as nationally scarce mosses and lichens.


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WOODLANDS

Woodland accounts for around 18.5% of land cover in the Scottish Borders. Most are found within upland coniferous plantations of fast-growing, non-native species dominated by Sitka spruce.[1] Whilst not a native habitat, the biodiversity value of plantations can rise as they mature and are re-structured, increasing age diversity and by including more broadleaf species that provide opportunities for species such as goshawk, red squirrel, roe deer, and juniper.

Around 1.4% of the land area is covered by native woodland, and less than 1% of trees are remnant native ancient woodland.[2] Although fragmented, these woodlands have high numbers of rare plants, invertebrates and other species, making them exceptional value for biodiversity. Mixed policy woodlands, dating from the 17th and 18th century estate improvements, form the main element of lowland woodland structure. Planted broadleaves also provide a small market for local broad-leaved timber. Woodlands from wet 'carr' to upland scrub have huge potential to store carbon and also play a role in natural flood management.

WETLANDS AND AQUATIC HABITATS

Wetlands in the Scottish Borders include internationally recognised 'fens' with communities of scarce plants and insects that are found nowhere else in the UK. Bogs, mires and wet heathlands are also nutrient and wildlife rich. Our wetlands also act as carbon 'sinks,' locking up carbon dioxide from the atmosphere. They also have potential to store water and help alleviate flooding around our towns.

The River Tweed runs through the region along a 160km central spine, from which tributaries and streams fissure out to form a bowl-shaped catchment. The river is internationally protected for its plant communities and populations of wild salmon, trout, lamprey and otter. Scarce and rare invertebrate species are also present, giving the river a rich variety of biodiversity. The Liddel Water catchment runs to the Solway, with a fine collection of fossil beds. The Eye Water flows to the east of the region.

URBAN HABITATS

We can all support and help biodiversity to thrive on our doorsteps and in greenspaces around our towns. With creative and thoughtful management, derelict land, road verges, gardens and golf courses can all provide opportunities for wildlife. Regeneration schemes can support enhanced river corridors; mineral workings can provide locally rare cliff-face habitats. Even within our homes and buildings, wildlife-friendly management and green infrastructure can help biodiversity flourish.

The pay-off is not only a rich diversity of species and habitats, but health, wellbeing and recreational benefits that enrich our lives, provide inspiration for art, music and literature and bring economic benefits such as increased tourist visitor numbers.


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WHY DO WE NEED A LOCAL BIODIVERSITY ACTION PLAN?

Our local biodiversity is valuable for the sheer variety of habitats and wildlife it contains. Together with complex local geology, it enhances the varied local landscapes of the Scottish Borders, which are valued by visitors to the region and attractive to current and potential new residents.

In this way, biodiversity is not only inherently valuable, but key to enhanced local landscapes that can support and bolster our local economy. It is also recognised that access to a flourishing natural environment supports physical and mental wellbeing.[3]

However, we may lose these multiple benefits as local biodiversity declines in the face of steadily-increasing pressures, which apply not just in our region, but at a national and global scale, such as intensification of land management, use of agrichemicals and artificial fertilisers, inappropriate grazing and burning, afforestation, urban development, invasive non-native species (INNS).

Problems resulting from these pressures can include pollution and nutrient enrichment of rivers and watercourses, habitat loss and fragmentation, disturbance or injury to wildlife and overall loss of the nature on our doorsteps. The Local Biodiversity Action Plan seeks to reduce the pressure on biodiversity locally, and to create opportunities to enhance biodiversity.

The first Local Biodiversity Action Plan (LBAP) identified many of these pressures and work has been ongoing to address them, through the committed efforts of partners and land managers. Good progress and improvements have been made, however more local action is required.

Undertaking new actions for biodiversity is challenging in the face of uncertain economic times and a warmer and more unpredictable climate that will require increasingly adaptive management.

This new LBAP for 2018 to 2028 aims to build on successful work to date, and adopt an ecosystem approach to deliver targeted, collaborative action that will support the rich, unique and valuable biodiversity of the Scottish Borders, helping to secure its potential multiple benefits for our region.


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1. BACKGROUND TO THE LOCAL BIODIVERSITY ACTION PLAN

In 2001, Scottish Borders Council (SBC; the Council) adopted a Local Biodiversity Action Plan (LBAP)[4] for key habitats in the Scottish Borders, linked to the UK Biodiversity Action Plan (UKBAP). It was jointly produced by a partnership of local organisations interested in land management and natural heritage in the Scottish Borders. The LBAP subsequently included 14 Habitat Action Plans aimed at improving habitat networks, enhancing biodiversity and setting out the priorities for action in the Scottish Borders. Essential information about these habitats, their conservation importance and the pressure upon them is provided in Appendix E. The original Habitat Action Plans are still available to download as PDFs at: https://www.scotborders.gov.uk/downloads/download/423/habitat_action_plans.

The vision of the original LBAP was healthy landscapes in the Scottish Borders and a legacy of natural resources that future generations would inherit. The partnership has been working with other stakeholders, land managers, developers and the public to try to achieve this vision and has met annually to monitor progress. Examples of actions undertaken by partners include:

- Native woodland management and creation of new native woodlands
- Peatland and wetland habitat restoration
- River and floodplain restoration
- Species monitoring
- Site condition monitoring of protected areas
- Assessment and survey of potential Local Biodiversity Sites
- Development of biodiversity offset schemes in relation to windfarm and major developments
- Advice on land management that strikes a balance between conservation of natural heritage resources and other land uses (such as farming, forestry, fishing, recreation and development).

Examples of good practice for biodiversity that have recently been undertaken in the Scottish Borders feature throughout this publication.


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The LBAP for 2018 to 2028 provides a framework for new, collaborative action. It promotes joint partnership action for biodiversity at a local landscape scale, with new emphasis on achieving multiple benefits through effective land use, management and stewardship. This is an area in which the Council and local partners have already begun pioneering work (see Section 2.2).

The new LBAP takes account of the real and growing challenge of climate change in relation to biodiversity. The impacts of climate change are highly unpredictable, yet threaten to disrupt the beneficial living systems (termed 'ecosystems') that are intrinsic to our landscapes. Examples of ecosystems include river systems that regulate and cleanse water flows; peatlands and woodlands that lock up atmospheric carbon; rich soils; a wealth of pollinating insects that help produce food crops, and coastal waters teeming with biodiversity.

In addition to the impacts of climate change, the LBAP seeks to address other pressures on biodiversity in Scotland, as outlined by the Scottish Government,[5] including:

- Pollution
- Land use intensification and modification
- Spread of invasive species and wildlife disease
- Lack of recognition of the value of nature
- Disconnection with nature
- Marine exploitation

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The Scottish Government has highlighted the need to adopt an ecosystems approach in addressing these pressures.[5] An ecosystems approach has been adopted in this update and an explanation of the ecosystems approach is outlined in Section 3.

This is a time when funding for biodiversity action is harder to find. There is also uncertainty about what policies and resources will be available to protect the environment in the context of a new UK-EU relationship. The updated LBAP aims to promote cost-effective, targeted, coordinated action for biodiversity that will raise awareness of and help our natural assets in the Scottish Borders to flourish.

It is proposed that the updated LBAP will have a "working life" of 10 years from 2018 to 2028, with provision for a 5-year review in 2023.

2. POLICY CONTEXT

Production of the LBAP is part of the Council's biodiversity duty, under the Nature Conservation (Scotland) Act (2004).[6] The LBAP will inform updates to the Scottish Borders Local Development Plan and will continue to form part of the Council's Supplementary Guidance for Biodiversity.[7]

In updating the LBAP, we are aiming to align local actions and policies with international and national strategic policies. Relevant policies are referenced throughout this text. A summary is found in Appendix A.

Two key policies relate to biodiversity and land use: The Scottish Biodiversity Strategy (SBS) and the Scottish Government's Land Use Strategy (LUS). The updated LBAP also maintains awareness of achieving the Scottish Government's *Purpose*.[8] The relevance of these three policy areas is outlined more fully below.

2.1 SCOTTISH BIODIVERSITY STRATEGY

The Scottish Biodiversity Strategy (SBS) encompasses *Scotland's Biodiversity*: *It's in Your Hands* (2004)[9] and the subsequent 2020 *Challenge for Scotland's Biodiversity* (2013),[10] (the strategy for the conservation and enhancement of biodiversity in Scotland). The SBS reflects the aims of key international strategies: The UN Convention on Biological Diversity, which set the *Aichi Targets* (2010)[11] to halt biodiversity loss and restore the natural environment to health, and the European Union's *Biodiversity Strategy for 2020* (2011).[12] In response to the International Convention on Biological Diversity, the EU committed to achieve 6 ambitious targets and 20 actions to halt the loss of biodiversity and ecosystem services by 2020.

The SBS recognises the need for local action to align with and contribute towards both national and international agendas. Therefore, whilst not losing sight of the priority habitats and species of the Scottish Borders that still need protection from the pressures outlined in Section 1 above, the updated LBAP is organised around the priority themes of the SBS, and linked by extension to the Aichi Targets. The SBS themes are captured in a *Routemap*,[5] which outlines *Six big steps for nature* to achieve the 2020 *Challenge.*

In centring new LBAP actions around the SBS, our aims are to encourage local biodiversity action that:

- Protects and restores biodiversity in the land and sea
- Supports healthy ecosystems
- Connects people with nature and promotes health and wellbeing
- Involves people in decisions about the environment
- Maximises benefits for Scotland in terms of biodiversity and ecosystem services

2.2 SCOTLAND'S LAND USE STRATEGY

There are complex drivers for land use in Scotland, including land managers' priorities, market influences, local capacity, incentives and regulations. The Scottish Government's Land Use Strategy (LUS) (2011, 2016),[13] outlines an integrated, strategic approach to land use and aims to ensure land is used sustainably now, and in the future by promoting coordinated action at a landscape scale.

The LUS highlights how land management decisions can play a crucial role in addressing pressures on our ecosystems, (including climate change), recognising the multiple benefits that ecosystems provide. These benefits, termed 'ecosystem services', include both tangible goods and services, like timber or water purification, and less tangible benefits, such as space for recreation, relaxation and creative inspiration.

The LUS highlights the importance of managing our ecosystems as valuable assets, ('natural capital') that deliver beneficial ecosystem services, thereby enhancing Scotland's wellbeing as a nation. This links to the Scottish Government's Purpose and Economic Strategy (2015).[14]

In response to the LUS, a pioneering Land Use Strategy Pilot (2016),[15] (LUS Pilot) was developed by the Council and partner organisations, which informed updates to the national LUS in 2016. The LUS Pilot reviewed the ecosystems, or 'natural capital' of the Scottish Borders and mapped the services they provide. Stakeholders from land-based businesses and communities reviewed the maps of ecosystem services and considered their future management to ensure sustainable land use for the continued vitality and viability of local communities, the local environment and economy.

The updated LBAP integrates the LUS policy drivers with action planning alongside SBS thematic priorities and adopts an ecosystems approach, building on the follow-up actions of the LUS Pilot.

2.3 THE SCOTTISH GOVERNMENT'S PURPOSE

The biodiversity and ecosystems of the natural world are vital to human wellbeing and prosperity, but are consistently undervalued in conventional economic analyses and decision-making.[16] Whilst the role of economic valuations of nature in protecting biodiversity are contested, it is acknowledged that a high quality natural environment is 'a key piece of the economic jigsaw',[17] and this contributes to fulfilling the Scottish Government's *Purpose* to create 'a more successful country, with opportunities for all of Scotland to flourish through increasing sustainable economic growth'.

In *Connected Borders,* the Council's Administration sets out a vision for 2017 to 2022 that includes in its opening sentence a recognition of the importance of our natural environment, which is the basis of the area's outstanding beauty.[18] Our natural environment helps attract people and businesses to live and work in the Scottish Borders and drives economic sectors that base their branding on Scotland's natural assets. Some of Scotland's most successful industry sectors are food and drink, and tourism,[14] which trade on a reputation for environmental quality, and on perceptions of Scotland as a 'wild, exciting destination'.[19] The *Scottish Borders Economic Strategy 2023*[17] also outlines opportunities to drive economic growth through local industries such as tourism and food and drink, and by capitalising on the location of the Scottish Borders, which is seen as a high-quality environment. In the Corporate Plan 2018-2023 "*Our Plan and Your Part in it*"[20] includes a commitment to build community capacity in localities including to improve health and well-being and develop greenspace to enhance our towns, villages and more remote rural areas and the Scottish Borders Community Plan seeks to protect and improve our quality of life and develop and improve our place.[29]

It is increasingly acknowledged that nature and greenspace enhance health, wellbeing and quality of life,[17] which are primary market drivers for the rural economy. The LBAP includes actions that will help to ensure a high quality natural environment in the Scottish Borders, helping deliver socioeconomic, as well as biodiversity benefits in fulfilment of the Scottish Government's *Purpose*.

3. AN ECOSYSTEMS APPROACH

Biodiversity encompasses the entire variety of life on earth, including humans, and the way in which life, in all its myriad forms, interacts with the environment in living ecosystems. Current thinking about protecting biodiversity has moved from a focus on individual habitats and species, to consideration of ecosystems at a landscape and catchment scale. The LBAP aligns with the SBS, which also puts an ecosystems approach at the heart of new thinking about biodiversity.

This thinking aims to promote protection of biodiversity based on an awareness, not just of its intrinsic value, but also its value as natural capital, which delivers multiple benefits to humans, through ecosystem services, as well as the cost of failing to look after these services. An ecosystems approach aims to help consider the value of ecosystem services in decision-making. For example, the value of the services provided by just some of the pollinating insects in Scotland was estimated at £43million annually, based on indicative costs of restoring or replacing the ecosystem service if it could not effectively function.[16]

There are three key steps in an ecosystems approach[10]:

1) Taking account of how ecosystems work and recognising that:

- Nature connects across both broad and local landscapes
- Ecosystems are dynamic, so change is inevitable and adaptive management may be required
- Ecosystems are not an infinite resource and cannot repeatedly absorb damaging impacts


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2) Taking account of ecosystem services, recognising that:

- Food, fuel, water, climate regulation, contributions to quality of life, culture and well-being are just some of the benefits we freely receive from ecosystem services
- Not maintaining ecosystem services is financially costly for society, when we lose these benefits or have to offset or mitigate negative effects on them

3) Involving people who manage or benefit from ecosystem services in decision-making by:

- Valuing their knowledge
- Supporting them to participate in decision-making
- Encouraging them to take responsibility for their actions

In adopting an ecosystems approach in this new LBAP, we will promote actions that help maintain awareness of the intrinsic value of biodiversity and the less tangible value it holds in our lives, in terms of inspiring art, enabling recreation and supporting mental and physical health and wellbeing. The LBAP will also include actions for key habitats and species within ecosystems in the Scottish Borders.

With an ecosystems approach, the LBAP aims to build on the work of the LUS Pilot. The LUS Pilot produced maps outlining ecosystems and the services they provide across the Scottish Borders, as a means of guiding decisions on how to use land optimally and to help resolve conflicting priorities (for example the use of land for food production, versus its use for natural flood management).[22]
It identified important stocks of natural capital within the Scottish Borders as delivering:

- Provisioning services, (food, timber, biomass, fuel, freshwater, renewable energy)
- Regulating services (air+ water quality, climate, water runoff, erosion, pollination, carbon storage)
- Cultural services (recreation, field sports, ecotourism, a sense of place, ethical values)
- Supporting services (nutrient cycling, water cycling, soil formation, photosynthesis, biodiversity)

Protection and enhancement of these ecosystem services at a landscape scale, as well as marine and coastal ecosystem services, (out of scope for the LUS Pilot), drives action-planning for this LBAP.

Local community integration is another key driver, recognising that people are also part of ecosystems and need to be involved in decision-making, action and review, as part of an ecosystems approach. A series of consultation workshops with LBAP partners followed the initial review of the old LBAP actions and formal public consultation could assist in informing decisions to be taken at a local level about priority actions for biodiversity. The LBAP also provides a framework to help people and communities to take decisions and action for their local environment.

A Strategic Environmental Assessment undertaken in parallel with the consultation process contributes to the ecosystems approach and considers the likely significant environmental effects of the LBAP, in the context of other strategic plans and policies.

4. ACTION FOR BIODIVERSITY: 2020 AND BEYOND

We depend on the benefits biodiversity provides for our economic prosperity and our wellbeing, but some of the ways we use the land, water and seas have had a negative impact on biodiversity. The six steps of the SBS 'Routemap to 2020' are intended to help address these negative impacts and to maintain and enhance the state of nature.[5]

The LBAP adopts these steps as key drivers for action alongside the LUS policy drivers. The LBAP also looks beyond 2020, since it is clear that we will need to continue to adapt to the impacts of climate change on biodiversity in the long-term. Our relationship with the EU is also set to change, but we will still need to contribute to global efforts to halt biodiversity loss, and to protect and enhance ecosystems.

The six big steps for nature that the LBAP actions are set within are based around practical, collaborative action for:

1. Ecosystem Restoration
2. Investment in Natural Capital
3. Quality greenspace for health and education benefits
4. Conserving wildlife in Scotland
5. Sustainable management of land and freshwater
6. Sustainable management of marine and coastal ecosystems


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Each of these steps for nature is discussed below in the context of the Scottish Borders. A summary of proposed objectives and actions is outlined. A more detailed summary of all LBAP actions is provided in Section 5, below.

Progress in undertaking the LBAP actions as outlined will be assessed at a local level via annual meetings of the LBAP partnership, in order to inform ongoing local biodiversity action planning, and to share good practice, lessons learned and results. Outcomes from annual meetings of the LBAP partnership can be shared with the public via the Council's website.

4.1 RESTORATION OF HEALTHY ECOSYSTEMS

Restored, healthy ecosystems will help support the complex interactions between species and their movement throughout the environment. This will help to increase their resilience to climate change and to the additional pressures that result from the demands of an increasing human population. It will also help secure and enhance the multiple benefits we derive from ecosystem services.

By restoring and enhancing the health of our ecosystems, we can work towards a national ecological network that is bigger, better and more joined up,[23] in line with the Scottish Government's commitments in *Scotland's Biodiversity – A Routemap to 2020*[5], and as outlined by Scottish Environment Link[24].

The LBAP actions for ecosystem restoration reflect the need to:

- Reduce pressures on ecosystems in the Scottish Borders
- Make space for natural processes
- Improve connectivity and habitat availability
- Improve habitat management and support species diversity
- Improve general water and river catchment management and avoid nutrient enrichment in priority catchments
- Increase resilience to climate change, (employing adaptive management and planning for unavoidable changes such as sea level rise)

Work has been ongoing in the Scottish Borders by members of the LBAP partnership to reverse the degradation and fragmentation of habitats and protected places. The new LBAP actions build on earlier work, for example, woodland restoration projects that have included native tree planting and exclusion and management of deer and livestock to reduce grazing pressure. The LUS Pilot project also encouraged land managers to maintain awareness of the land's overall capacity and to nurture ecosystem services at a landscape scale and outcomes from this project have been in corporated into the new LBAP actions.

Restoring native woodland in the Scottish Borders

Borders Forest Trust (BFT) is leading a project to help regenerate native woodland at a 1823ha site at Talla and Gameshope, a former upland sheep farm, devoid of woodland. BFT's project is restoring native woodland tree species and montane scrub rich in heather and blaeberry. Following survey, planning and restoration, the area will eventually become self-sustaining, with hillsides and valleys returned to a natural, wild state, that people can walk through and enjoy.

BFT has already undertaken a large restoration project on the southern border of this site at Carrifran Wildwood, so together the two woodlands contribute to a more resilient ecological network.


© Jim Knight

New actions to restore and enhance woodland in the Scottish Borders will be undertaken with consideration of the range of demands on how land is used, particularly in the uplands where other activities and interests include livestock grazing, renewable energy, peatland restoration, field sports and recreation.

The LUS Pilot maps will again be crucial in informing where woodland creation takes place and the type of native woodland that should be restored. For example, in some montane areas, there is an opportunity to enhance stocks of native juniper. In other areas, woodland restoration may be at the expense of other biodiversity, therefore the overall approach will be to consider how best to support fully functioning ecosystems and enhance natural capital to enable the greatest benefit from ecosystem services.

New LBAP actions will seek opportunities to reward land managers and farmers for restoring habitats and reducing runoff from nutrients and agricultural waste, encouraging creation of buffer strips, hedgerows, woodlands and wetlands to help reduce diffuse pollution, and bring added benefits for biodiversity.

LBAP actions will support the work of the Tweed Forum and the Scottish Environmental Protection Agency (SEPA) to restore aquatic habitats by tackling rural diffuse pollution, for example by raising awareness of what constitutes pollution and encouraging reporting of incidents by the public. The LUS Pilot outputs will assist in identifying priority areas for restoration.

River Champion 2017: Best practice in land and water managerment

The Tweed Forum awarded Jim Sinclair of Crookston Farm near Stow the 2017 River Champion award in recognition of his efforts to integrate farming, forestry and conservation and for his enthusiasm for land and water management education.

Mr Sinclair and his son Graeme are tenants of Lord Borthwick and their farm is on the Armet Water, a tributary of the Gala water. They have used natural flood management techniques to slow the flow of surface water and cut the risk of downstream flooding after heavy rainfall to Galashiels and Stow, planting over 52 hectares of native woodland on the flood plain and hill slopes of the Gala water to reduce water run-off rates. Four ponds have been created, 2,200m of fencing erected and a mix of wetlands and woodlands has resulted, providing ideal habitat for otter, brown trout, lamprey, reed bunting and great crested newt.

The work, part-funded by Scottish Borders Council's biodiversity offset project, also safeguards streams vital to maintaining salmon populations in the Scottish Borders, a natural resource that is worth £24 million per year to the local economy, as well as 500 jobs.

Priority Objectives & Actions for Ecosystem Restoration		
Objectives & Actions	**Lead Partners**	**Review Date**
ER1 Reduce pollution of aquatic ecosystems:		
ER1.1 Increase awareness amongst farmers, land managers and the public of the Water Framework Directive requirements and benefits, pollution prevention good practice, key problems and when to report an incident particularly in the priority catchments.	SEPA, Tweed Forum (TForum)	2023
ER1.2 Promote the LUS Framework maps for use in targeting pollution prevention measures in priority catchments	SBC, SEPA, TForum	2023
ER2 Restore woodland ecosystems:		
ER2.1 Increase coverage of and improve connectivity between native woodlands to enhance the Forest Habitat Network.	Forestry Commission Scotland (FCS), Borders Forest Trust (BFT), TForum	2023
ER2.2 Develop a strategic approach to restore and create cleuch woodland, juniper and montane / heathland scrub in upland areas.	FCS, BFT, Southern Uplands Partnership (SUP), TForum	2023
ER2.3 Promote integration of aspen into action plans for riparian habitats (and other habitats where appropriate) to help mitigate future loss of ash and enhance the Forest Habitat Network	FCS, BFT, TForum, SBC	2023
ER3 Assess development impacts on ecosystems:		
ER3.1 Develop a methodology to assess impacts from development on ecosystem services, including opportunities for enhancements and offsetting to inform the updated Local Development Plan	SBC, Scottish Natural Heritage (SNH), SEPA	2023
ER4 Enhance the ecological network:		
ER4.1 Use LUS Pilot maps to target management and restoration of habitats to enhance the ecological network within and surrounding protected areas and Local Biodiversity Sites	SBC, TForum, SEPA, SNH, FCS, The Wildlife Information Centre (TWIC)	2023
ER5 Restore farmland habitats:		
ER5.1 Encourage investment in the restoration and appropriate management of species-rich hedgerows, individual tree planting, riparian margins and farm ponds	TForum, FCS, SBC	2023

4.2 INVESTMENT IN NATURAL CAPITAL

Whilst the practice of calculating the value of productive sources of capital such as machinery, or buildings, or human capital is long established, the value of nature is difficult to calculate via financial metrics. Modern economies are built around productivity and growth, therefore efforts to value ecosystem services have focussed on establishing the cost of having to provide for ourselves the multiple benefits that nature provides freely, in order that these can be considered in government and business accounting.

For example, peatlands are a stock of natural capital central to a flourishing low carbon economy in Scotland. Blanket bog and raised bog peatlands are the most important terrestrial carbon store in the UK, and their conservation value is of international importance. Considering their value as natural capital, they store ten times more carbon than all the UK's trees[16] and a loss of just 1% is equivalent to the total annual human emissions in Scotland. Soils in Scotland also store up to 42 billion cubic metres of water, an amount which can be put into perspective by the fact that one cubic metre of water is roughly the amount used daily by six people in a household. From a natural capital perspective, it begins to be possible to calculate the value of Scottish soils and the cost when soil structure (such as deep peat) is damaged or lost.[10]

Investing in the natural capital of the Scottish Borders through peatland restoration:

Peatland restoration has been successfully undertaken by Tweed Forum, through the Peatland Action Fund provided by Scottish Natural Heritage (SNH). Work has included peat-depth surveying, ditch-blocking and re-profiling of peat haggs to counteract erosion, which provides an 'instant fix'.

At least 250ha of eroding peat haggs have so far been re-profiled at Megget Bog and work has also taken place at Whim Bog, with further sites identified in the upper Yarrow, at the SSSIs Threepwood Moss and Din Moss, and at Drone Moss, Coldingham.

Although ecological restoration takes longer, the ecosystem service benefits of peatland restoration can be quickly realised. Investing in further peatland restoration is vital – currently only 0.3% of the world's peatlands are damaged, but they account for 5% of all carbon emissions globally. With the possibility of instantly fixing the problem, more investment in peatland restoration in the Scottish Borders can make a swift contribution to tackling carbon emissions.


© Tweed Forum

The Scottish Government has stated that 'Protecting and enhancing stock[s] of natural capital, which includes our air, land, water, soil and biodiversity and geological resources is fundamental to a healthy and resilient economy'[14]. Natural capital also provides such intangible benefits, supporting a flow of ecosystem services that deliver health and wellbeing, enjoyment through recreation, a sense of place and national identity.

Not only healthy soils, but healthy wildlife is important for these intangible benefits. Insect pollination of food crops is an example of one benefit nature provides freely, giving us food we enjoy, which forms part of the rural economy and which visitors come to the region to sample. Pollinator species are vital to Scotland's biodiversity and natural capital, but are increasingly under threat from land-use changes, land management, pesticides, pollution, invasive non-native species, diseases and climate change.

The updated LBAP will support the *Pollinator Strategy for Scotland (2017)*[25] to address the causes of decline in populations of pollinator species, their diversity and range and help them thrive in the future and will help support landscape-scale mapping initiatives for pollinators in the Scottish Borders, such as Buglife's *B-Lines* project.[26]

By continuing to invest in ecosystems as natural capital, we can help protect biodiversity and support wellbeing and wealth creation in a sustainable way, which will benefit future generations.

2 Priority Objectives & Actions for Natural Capital		
Objectives & Actions	**Lead Partners**	**Review Date**
NC1 Enhance peatland ecosystems as carbon stores:		
NC1.1 Develop a Peatland Action Plan for the Scottish Borders, making use of the LUS pilot maps, incorporating enhancements for biodiversity and wildlife	TForum, SNH, SBC, SEPA	2023
NC1.2 Adopt the Peatland Code and utilise the carbon market to restore peatland sites	TForum, SNH, SBC, SEPA	2028
NC1.3 Establish long-term monitoring projects in both previously restored and existing degraded peatland sites	SEPA, TForum	2028
NC2 Invest in natural flood management (NFM):		
NC2.1 Use LUS Pilot maps to prioritise areas for NFM at a catchment level including tree planting in areas where multiple benefits may be delivered for biodiversity, water quality and recreation.	SEPA, TForum, SBC, BFT, FCS	2023
NC2.2 Raise awareness of NFM opportunities amongst key stakeholders/land managers in priority catchments	SEPA, TForum, SBC	2023
NC3 Increase diversity of trees to enhance woodland ecosystems:		
NC3.1 Promote productive broadleaves; selective retention of mature conifers; increased planting/retention of non-spruce conifers for biodiversity as viable components of new forests	FCS, SBC, BFT	2023
NC3.2 Promote better integration between different woodland types and other land uses to deliver multiple benefits adopting the principles of the Land Use Strategy.	FCS, SBC, BFT, TForum	2023
NC4 Invest in habitat for pollinators:		
NC4.1 Encourage mechanisms to increase grassland margin, roadside verges and hedgerow habitat and improve their management for pollinators	Butterfly Conservation Scotland (BCS), Buglife, Bumblebee Conservation Trust (BBCT)	2023
NC4.2 Establish long-term monitoring projects for pollinators across habitats to encourage good practice in habitat management	BCS, TWIC, Buglife, BBCT	2028

4.3 QUALITY GREENSPACE FOR HEALTH AND EDUCATION BENEFITS

The Scottish Government has committed to creating a wealthier, fairer, smarter, healthier, safer, stronger, and greener Scotland. *Good Places, Better Health (2008)*[3] recognises the need for a greater connection with the physical environment to influence health and emphasises the importance of shaping places that can nurture positive wellbeing and resilience. The Chief Medical Officer has stated that, 'how people feel about their physical surroundings, can impact on not just mental health and wellbeing, but also physical disease'.[27]

The Scottish Government's regeneration strategy envisages 'a Scotland where our most disadvantaged communities are supported and where all places are sustainable and promote wellbeing'.[27] The updated LBAP aims to help create and enhance 'places which engender good physical and mental health'.[28]

Investment in greenspace, nature and landscapes will help to improve the health and quality of life of all groups, so everyone, equally, can experience and enjoy nature. Investing in greenspace for health and wellbeing could contribute to addressing key health issues in the Scottish Borders such as obesity, which can lead to Type 2 diabetes, and support improved mental health.[29]

Walking for health and relaxation across the Scottish Borders:

Walking in nature and greenspace helps people to relax and de-stress and gain a sense of well-being. Regular walking helps increase energy and leads to a better night's sleep, as well as offering the opportunity to appreciate nature, from wildflowers and birds to rivers and coastlines.

The Scottish Borders operates the Walk It scheme to encourage sociable walks in local communities that help people lose weight, feel fitter and reap the benefits that walking offers. There are over 1000 walkers registered with Walk It and 27 major walking groups across the Scottish Borders. All Walk It walks are listed on a new interactive map on the Paths for All website,[30] which was developed with the help of the Peebles Walk It group.

With hundreds of miles of paths across the Scottish Borders, and many low-intensity and Walk It guided walks and groups, as well as online resources and maps, there are many opportunities for people to get out walking and gain direct experiences of nature, which leads to improved health and wellbeing.

© Paths for All

The public consultation on the LBAP will help to refine local actions to improve greenspace for health and wellbeing in the Scottish Borders, for example, through discussing management of greenspace with local communities to improve the local environment, enhance biodiversity and support enjoyment of recreational activities.

Experiences of nature and greenspace that support improved health and wellbeing also bring financial benefits, in terms of helping to reduce the amount of time people take off from work with illness, or reduced health service costs. In addition, outdoor recreation provides direct revenue; in 2012, recreation visits to the outdoors generated about £2.6 billion of expenditure in Scotland, with people contributing directly to local economies through spending money on food, fuel, trip and accommodation.[31] As outlined in the Scottish Borders Economic Strategy, encouraging visitors to make repeated visits to the outdoors and recommend locations to their friends is dependent on having a high-quality environment.[17]

Direct experiences of nature are important for biodiversity. Outdoor learning, linked to the Curriculum for Excellence policy of Learning for Sustainability, and harnessing 'citizen science' can help increase understanding of the environment, as well as contribute to science through increased gathering of biological records – outcomes that will support biodiversity in the long term. The updated LBAP includes actions aimed at encouraging conservation volunteers and recreational countryside users to record biodiversity and submit data, helping to improve the picture of the state of Scotland's nature.

Awareness of the importance of following the Scottish Outdoor Access Code and of the needs of local biodiversity also needs to be raised as part of encouraging people to enjoy spending time in greenspaces. This is important as recreational activities can sometimes have an adverse environmental impact, especially in popular destinations, through littering, wildlife disturbance such as via dogs running off leads, and erosion of sensitive sites.

Other ongoing actions include encouraging investment in green infrastructure in line with Scottish Planning Policy[32], the National Planning Framework[33], and the Scottish Borders Local Development Plan[34] for the benefit of biodiversity and well-functioning ecosystems. Infrastructure such as Sustainable Drainage Systems (SUDS) and living roofs or walls provide opportunities to support biodiversity as well as benefits such as clean water and air and contribute to providing an attractive, high-quality environment. Evidence that more green infrastructure and interaction with the outdoors helps improve physical and mental wellbeing is shown in NHS Scotland's efforts to 'green' parts of their estate through the NHS Greenspace Demonstration Project.[35]

3 Priority Actions for Greenspace		
Objectives & Actions	**Lead Partners**	**Review Date**
GR1 Enhance greenspace and green infrastructure in towns:		
GR1.1 Raise awareness and promote establishment of infrastucture including green roofs and living walls under the Planning system	SBC	2023
GR1.2 Promote sustainable management of greenspace and green networks including appropriate planting and protection of pollinator habitats, including wild flower planting in amenity areas	SBC, BCS	2023
GR1.3 Increase awareness of SUDS potential for biodiversity and promote the creation of high quality SUDS for biodiversity, supported by additional training resources	SBC, SEPA, Amphibian and Reptile Conservation Trust (ARC Trust), Scottish Water (SW)	2023
GR1.4 Develop business and biodiversity initiatives for green spaces and urban habitats	SBC	2028
GR1.5 Develop a new strategy for the management and enhancement of road verges and similar areas for the benefit of pollinators and other insects, including appropriate mowing regimes and improving plant diversity.	SBC, BCS, Buglife, BBCT	2028
GR2 Enhance and improve green networks around towns:		
GR2.1 Restore local green networks and enable permeation of landscape barriers (e.g. roads), for the benefit of wildlife, linking to Local Biodiversity Sites and Protected Areas and contributing to the development of a National Ecological Network for Scotland	SBC	2028
GR3 Improve communal land, including community woodlands and urban tree resource:		
GR3.1 Establish a protocol for native tree species selection and management in community woodlands, streets and settlements	SBC, BFT, FCS	2028
GR3.2 Building on SBC's localities work, pilot a biodiversity project to manage communal land, opening it up for more innovative approaches to enhancing communities in the Scottish Borders	SBC	2028
GR4 Explore links with recreation, learning and greenspace:		
GR4.1 Set up a River Tweed walk to support tourism, recreation and increased biodiversity awareness, including on INNS and pollinators	TForum, SBC, Tweed Foundation (TFn), SNH	2028
GR4.2 Expand on Historic Land Use Value Project and explore links with recreation and greenspace and historic/contemporary land use to support health and wellbeing	SBC	2028
GR4.3 Promote nature based tourism opportunities to raise awareness and help protect biodiversity.	SBC, TForum, FCS	2028
GR4.4 Encourage use of Global Footprint Network www.footprintnetwork.org and calculator, promoting individual action to help the environment	SBC, SEPA, TForum	2023
GR5 Information-sharing:		
GR5.1 Enable improved data gathering and sharing in relation to development applications.	SBC, TWIC	2028

4.4 CONSERVING WILDLIFE, HABITATS AND PROTECTED PLACES

In the Scottish Borders, internationally important protected areas include six Special Protection Areas (SPA) for birds, three of which are also Ramsar sites for wetlands and nine Special Areas of Conservation (SAC) for threatened habitats and species. There are also two National Scenic Areas (NSA), one National Nature Reserve (NNR) at St Abb's Head and 95 protected Sites of Special Scientific Interest (SSSI). The Council has also worked with local partners and landowners to identify potential new Local Biodiversity Sites. The Scottish Borders Notable Species List contains local species, including those considered as representing some of the key issues for wildlife conservation and land management in the Scottish Borders.

Maintaining and restoring protected habitats to good condition and improving their connectivity will help support ecosystem health, protect natural capital and underpin vital ecosystem services. Enhancing and extending important local habitats may contribute to creation of a national ecological network, support biodiversity and improve access to greenspace, with additional public benefits in terms of physical and mental wellbeing. Bigger, better and more joined up protected sites and habitats would contribute to a high-quality local environment, helping support the local economy by building on Scotland's reputation as a top destination for wildlife and outdoor activity.

Actions from the original LBAP included ongoing monitoring of site condition and key species, which will be ongoing in the new LBAP for 2018 to 2028 and encouraged through citizen science actions. Biological records within the Scottish Borders are collated by The Wildlife and Information Centre (TWIC) and are a vital source for informing decisions on land management practices, restoration projects and planning applications for development.

Conserving Notable Species – The Small Blue Butterfly:

Butterfly Conservation Scotland (BCS) has been monitoring the small blue butterfly, a UKBAP species with a thinly-scattered distribution outside of southern Britain. Having been thought extinct in the Borders, it was rediscovered at a site on the Berwickshire coast in 2007. Intensive survey work by local volunteers followed, along the coast and inland. Five breeding colonies of the small blue butterfly have been discovered and are monitored annually, with the committed and active support of the local community.

© Iain Cowe

Other key actions include addressing the threat to native wildlife from the spread of Invasive Non-Native Species (INNS) and supporting research into the possible benefits and challenges of native species re-introductions, such as beaver.

The protection of species and habitats is challenging in the context of balancing land-use demands. However, as outlined above, helping nature will also support our prosperity, health and wellbeing.

Protecting the black grouse population in southern Scotland:

Black grouse are an iconic Scottish species. Lekking males with their bubbling call and bobbing black and white-feathered display for potential mates are a charismatic sight and sound of Scottish moorlands. Numbers have fallen dramatically from an estimated 25,000 males across Britain in the early 1990s to just 5,100 in 2005. Two-thirds of the remaining birds are found in Scotland and numbers in south-eastern Scotland have since declined by almost 70% due to loss, degradation or fragmentation of moorland habitat through agricultural intensification and commercial afforestation. Only an estimated 257 males now remain in south-east Scotland.[36]

The Game & Wildlife Conservation Trust (GWCT), SNH and the Southern Uplands Partnership (SUP) undertook a desk-top survey project in 2013/14 which concluded that a landscape-scale strategic approach to conserving black grouse was required, and a plan to conserve black grouse was set-up in 2016 by GWCT, SNH, SUP, SBC, FCS, RSPB Scotland, and the Lammermuirs Moorland group.

The objectives of the new plan are to secure and protect core populations of black grouse that are associated with larger moorland areas, then instigate measures to increase population size and connectivity with other moorland in the landscape. Implementing this plan will help to conserve and enhance a charismatic Scottish species that is currently red-listed as a species of conservation concern and help ensure our wild landscapes retain the special character for the enjoyment of both local communities and visitors to the region.

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4. Priority Objectives & for Wildlife and Habitats		
Objectives & Actions	**Lead Partners**	**Review Date**
WH1 Improve habitats and ecological connectivity across the landscape:		
WH1.1 Identify and adopt Local Biodiversity Sites (LBS) and develop a communications plan to promote their protection and enhancement	SBC, TWIC	2023
WH2 Support the recovery of native species in the Scottish Borders:		
WH2.1 Explore potential for a water vole recovery project to increase recording and improve habitat, identifying areas for possible translocation, linking with the National Water Vole Monitoring Programme and building on research from the Tweed Water Vole Initiative (Tweed Forum).	Lothian and Borders Mammal Group	2028
WH2.2 Develop a programme to deliver the priority actions of the south Scotland black grouse conservation strategy	SUP, FCS, BFT, SNH, GWCT, RSPB, SBC	2023
WH2.3 Conduct a survey of the Northern Brown Argus butterfly (UKBAP species) across the Scottish Borders to identify sites or landscape areas for focussing conservation action	BCS	2023
WH2.4 Support the South of Scotland Golden Eagle recovery project through promotion and public awareness raising	SUP	2023
WH2.5 Consider setting up a beaver working group to prepare for beavers naturally moving into the catchment and enable positive benefits such as creation of standing open water in the River Tweed's upper catchment	TForum, SWT, Lothian and Borders Mammal Group, TFn	2028
WH3 Improve monitoring of species and habitats across the Scottish Borders:		
WH3.1 Develop a programme of citizen science projects to raise awareness and understanding of biodiversity and how to look after it	TWIC	2028
WH3.2 Establish a project to record road kill on strategic routes, to aid identification of suitable locations for improving green networks linking with work done by national initiatives	TWIC	2028
WH3.3 Set up community monitoring projects for wildlife through Conservation Area Regeneration Schemes – e.g. Jedburgh CARS swifts monitoring	SBC, TWIC	2023
WH3.4 Establish and maintain a Borders Wader Initiative to address declines in breeding waders in the region.	SBC, TForum, RSPB	2023
WH3.5 Continue to monitor great crested newt populations via traditional methods and eDNA sampling at known and potential sites	SBC, SWT, TWIC, TForum, ARC Trust	2023
WH3.6 Establish a follow-up project based on the outcomes of the Southern Scotland Bat Survey (2016), to assess the status of edge of range and locally rare species in the Scottish Borders	SBC, TWIC, SWT	2023
WH4 Raise awareness of actions for wildlife and habitats across the Scottish Borders:		
WH4.1 Disseminate information to partner organisations, developers, land managers and the public regarding biodiversity projects and good practice including via e-newsletters	SBC	2023

4.5 LAND AND FRESHWATER MANAGEMENT

In the Scottish Borders, the catchment of the River Tweed is central to most land and freshwater management and is an internationally protected habitat. However, rural diffuse pollution, together with modification of freshwater bodies for a variety of land uses and INNS are the biggest threats to this freshwater ecosystem and achieving 'Good Ecological Status'[37] throughout the catchment.

The Scottish Government sees River Basin Management Planning as a priority for integrating land and water management and dealing with pressures such as diffuse pollution, flood risk, soil protection, peatland and woodland restoration. The *Solway-Tweed River Basin Management Plan 2015-2027*[37] along with the *Tweed Catchment Management Plan*[38] will continue to inform the updated LBAP to help tackle these issues. LBAP partners will also continue to work with land managers to access SRDP funding up to 2020, based around priorities for water management, management of soils and support for a low carbon economy.

The Eddleston Water Project:

Flooding and habitat degradation can be devastating for communities and wildlife. The Eddleston Water is a tributary of the River Tweed and was severely straightened at the start of the 19th century. Combined with agricultural intensification, building of a railway embankment, afforestation and other land changes this has resulted in increased flood risk downstream and habitat loss/degradation.

The Eddleston Water Project[39] is led by the Tweed Forum, with the Scottish Government, SEPA and University of Dundee. Other key partners include British Geological Survey, SBC, SNH, the Forestry Commission, National Farmers Union of Scotland, the Tweed Foundation, Forest Carbon and the Woodland Trust. Landowners and the local community also contribute ideas and support to help reduce flood risk and restore the Eddleston Water through natural flood management, for the benefit of people and wildlife.

Practical re-meandering has been undertaken throughout the Eddlestone catchment in order to restore the river and valley and the project is exploring how land management changes may help reduce flood risk for communities downstream. So far over 2km of river has been re-meandered working with around 20 farmers. In addition, some 200,000 native trees have been planted, 22 ponds created as well as 101 log structures. The project is also on track to help restore the river from Bad to Good Ecological Status, in line with the requirements of the Water Framework Directive.[40]

© Tweed Forum

The Scottish Forestry Strategy aims to plant 100,000 ha of new woodland by 2022, with 50% native trees. The updated LBAP will support national targets and build on successful work already undertaken since the original LBAP was published. Actions relate to delivery of the Scottish Borders Woodland Strategy, which aims to achieve 25% woodland cover as a total of the land area by 2050, with an emphasis on integrating planting with other land uses, reducing fragmentation and linking riparian woodland habitat. This will support biodiversity and help support forestry related businesses, which in the Scottish Borders, contribute £24million to the local rural economy through harvesting, processing, haulage and tourism.[1]

In Scotland, 98% of land mass is classed as rural and 85% of this land is considered to be in a 'less favoured area', where, owing to soils and vegetation, crop or food production is more difficult. Farmers and land managers also face the challenge of producing tangible, profitable commodities, without damaging the less tangible, non-marketable benefits provided by ecosystem services. Stocks of valuable natural capital such as clean water, carbon storage, flood protection and fertile soil have been depleted in the past, in order to maximise production of marketable goods from farming or other land management activities, such as those relating to arable crops, livestock and timber.

In relation to farmed land, the LBAP proposes actions to help protect deep peat and soils from erosion, and to support sensitive soils and plant habitats by raising awareness of how to combat air pollution through nitrogen deposition. This will support the Scottish Government and Scotland's Rural College initiative, *Farming for a Better Climate.*[41]

New actions for creating individual farm and estate land use plans are proposed, to support better management of both land and water. The LUS Pilot maps will assist in identifying priority areas for improved management. The aim will be to work towards High Nature Value farming and forestry by providing advice on best practice to farmers and land managers. Adaptive land management will also be increasingly required up to 2020 and beyond, in order to respond to the unpredictable challenges that climate change may present to well-functioning ecosystems.

Grazing for diverse grasslands:

In order to protect a mosaic of grasslands at St Abb's Head and meet the original LBAP target of maintaining and enhancing 40km of cliff-top habitats, a flexible approach to grazing has been adopted at the National Nature Reserve. By purchasing 50ha of nearby grazing land with no conservation interest, farmers have been able to graze that area, and to graze at St Abb's Head in accordance with the management prescriptions set by Reserve staff. This helps not only helps support diverse grassland species such as wild thyme and rockrose, but also maintain conditions for important populations of northern brown argus butterflies, which feed and lay eggs on these plants.

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5. Priority Objectives & Actions for Sustainable Land and Freshwater Management		
Objectives & Actions	**Lead Partners**	**Review Date**
LF1 Promote woodland ecosystem management improvements:		
LF1.1 Promote effective herbivore management and tree-thinning to encourage natural regeneration, Continuous Cover Forestry (CCF) and species and age structure diversity	FCS, BFT, TForum	2023
LF1.2 Raise awareness of and promote better integration between different woodland types and other land uses to deliver multiple benefits amongst foresters, farmers and land managers	FCS, BFT, TForum, SBC	2023
LF1.3 Work with partners to ensure effective screening of proposed tree-planting areas to avoid damaging important grassland, heathland and wetland sites.	FCS, SBC, TWIC	2023
LF2 Promote improved farmland management:		
LF2.1 Use the LUS Pilot maps to develop individual farm and estate land use plans, and raise awareness of and incorporate ecosystem services into farm accounting	SBC, TForum	2023
LF2.2 Use the LUS Pilot maps to identify priority areas for targeted, local, sustainable land management projects	SBC, TForum, SUP, BFT	2023
LF3 Encourage creative land and freshwater management projects:		
LF3.1 Consider a regional Strategic Woodland Creation project, integrating large-scale forestry with other land uses to deliver multiple benefits	SBC, FCS	2028
LF3.2 Develop a series of community-led local plans for sustainable land use in and around settlements	SBC	2028
LF3.3 Continue local participation in the National Stream Temperature monitoring programme organised by Marine Scotland Science (MSS), who will provide map-based information on where riparian tree planting will be most effective in controlling water temperatures	TFn	2023
LF4 Manage INNS		
LF4.1 Maintain the Tweed Biosecurity Plan to monitor and manage INNS, focussing on giant hogweed and Himalayan balsam	SEPA, TForum, SNH, SBC, TFn	2023

4.6 MARINE AND COASTAL ECOSYSTEMS

Marine and coastal areas in the Scottish Borders have international importance. St Abb's to Fast Castle SPA is designated for regularly supporting a population of almost 80,000 seabirds, including nationally important populations of razorbill, common guillemot, black-legged kittiwake; herring gull and European shag. The eponymous SAC is designated for the special vegetation of the sea cliffs. Within the coastal waters, the sea caves and cold-water coral reefs, which are home to northern wolf fish and cup corals are designated as part of the Berwickshire Coast and Northumerland SAC, as are the populations of grey seal. Other important coastal species include Atlantic salmon and harbour porpoise.

In addition to their importance for biodiversity, the species and ecosystems found in our seas and on our coasts underpin the fishing industry. The blue spaces and natural environments of marine and coastal areas also support the economy and jobs by offering opportunities for recreation and tourism, which lead to beneficial impacts on mental and physical health and wellbeing, as demonstrated in projects like *Blue Gym* (2009).[42]

Marine research at St Abb's Head

The National Trust for Scotland (NTS), have been working in partnership with Edinburgh Napier University to study possible effects of human disturbance on the breeding seabirds at St Abb's Head. The research is to ascertain the extent to which large number of visitors to the area, who are active on both land and sea, have an impact upon the breeding success of the internationally important seabird colony at St Abb's Head.

Marine ecosystems face pressures including pollution from sewage and nitrate discharges, overfishing, recreational disturbance, dredging, dumping and trawling. Increasingly, INNS and offshore windfarms pose a threat, along with climate change.

On the coastal strip, issues facing coastal ecosystems include intensification of land use through higher grazing levels, and, conversely, the abandonment of land, leading to scrub encroachment, which can impact important plant and butterfly species. Development pressure is also a threat to coastal habitats and features in some locations.

Beautiful Beaches

Coldingham Bay has held the Seaside Award from Keep Scotland Beautiful for 11 consecutive years. The award is a benchmark for quality, celebrating clean, well-managed sustainable beaches that demonstrate excellent environmental best practice. The beach is within the St Abbs and Eyemouth Voluntary Marine Reserve, renowned for an abundance and diversity of wildlife. On the shore, there are rock-pools, sand dunes and coastal grasslands with flowers such as restharrow and butterflies including the small copper. It is managed by the Council and, in addition to its beach award, has been recommended by the Marine Conservation Society due to its high standards.


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The new LBAP will contribute to efforts to protect Scottish strongholds for marine life and ensure marine resources are used sustainably. The LBAP aims to promote integrated and adaptive marine and coastal zone management, and to raise awareness of the importance of Marine Protected Areas. An ecosystems approach to management of marine and coastal ecosystems also means ensuring all stakeholders are involved in decision-making. Cross-border work as part of the Berwickshire and Northumberland Marine Nature Partnership will continue to protect both marine and coastal ecosystems in our region.

Ongoing actions include improving the co-ordination of terrestrial and marine planning, through linking local management plans for flood risk, river basins and shorelines. The LBAP will include new actions to raise awareness of the varied biodiversity of marine and coastal ecosystems and encourage people to both protect and record it. Addressing threats to these ecosystems and encouraging compliance with codes of conduct aimed at protecting the marine environment are also key and vital to this work are partners such as the National Trust for Scotland, the St Abbs and Eyemouth Voluntary Marine Reserve and the Berwickshire and Northumberland Marine Nature Partnership.

6. Priority Objectives & Actions for Marine and Coastal Ecosystems		
Objectives & Actions	**Lead Partners**	**Review Date**
MC1 Support for Marine Protected Areas:		
MC1.1 Ensure Marine Protected Areas form effective protection by reviewing and where necessary establishing codes of conduct (in addition to ongoing enforcement of legislative requirements)	BNMNP, St Abbs & Eyemouth Voluntary Marine Reserve (VMR), NTS	2023
MC2 Promote research in marine and coastal areas:		
MC2.1 Enhance links with universities by developing and publicising a list of themes / potential research topics for Masters and PhD students	BNMNP, NTS	2023
MC3 Raise awareness of marine and coastal ecosystems:		
MC3.1 Raise awareness of the marine and coastal environment, specifically, why and how to gather and submit wildlife records to ensure a wide range of users are engaged with monitoring and recording in marine and coastal habitats	BNMNP, TWIC, NTS	2023
MC3.2 Raise awareness of factors that pressurise the biodiversity of the marine and coastal environment, specifically diffuse pollution, plastic waste, and invasive non-native species, with clear advice on action to be taken	BNMNP, NTS	2028
MC4 Marine and coastal direct action and monitoring:		
MC4.1 Continue to monitor the seabird populations on the Berwickshire Coast, contributing to records for the National Seabird Count.	NTS	2023
MC4.2 Promote The Great Nurdle Hunt and support public participation in the initiative (www.nurdlehunt.org.uk)	BNMNP, RSPB, SWT, NTS	2023
MC4.3 Undertake a series of beach litter surveys and beach cleans in Berwickshire	BNMNP, SBC, NTS	2023
MC4.4 Establish a marine biosecurity project to tackle INNS	BNMNP, NTS	2028

5. SUMMARY OF ACTIONS

The table below organises LBAP objectives and actions under each of the six broad themes and shows the key LUS policy driver per action. Priority areas for action link to the Landscape Character Areas for the Scottish Borders (see map overview in Appendix C).[43]

SBS Theme	Objectives & Actions	Key Partners	Priority Action Areas (Landscape Character Areas)						Key LUS Policy Driver	Review Date
			Midland Valley	Tweed Lowlands	Lammermuir & Moorfoot Hills	Central Southern Uplands	Cheviot Hills	Coast		
Ecosystem Restoration	**ER1 Reduce pollution of aquatic ecosystems:**									
	ER1.1 Increase awareness amongst farmers, land managers and the public of the Water Framework Directive requirements and benefits, pollution prevention good practice, key problems and when to report an incident particularly in the priority catchments.	SEPA, TForum		✓	✓			✓	Diffuse Pollution Control	2023
	ER1.2 Promote the LUS Framework maps for use in targeting pollution prevention measures in priority catchments	SBC, SEPA, TForum		✓				✓	Diffuse Pollution Control	2023
	ER2 Restore woodland ecosystems:									
	ER2.1 Increase coverage of and improve connectivity between native woodlands to enhance the Forest Habitat Network.	FCS, BFT, TForum	✓	✓	✓	✓	✓	✓	Timber & Woodland	2023
	ER2.2 Develop a strategic approach to restore and create cleuch woodland, juniper and montane / heathland scrub in upland areas.	FCS, BFT, SUP, TForum			✓	✓	✓		Biodiversity	2023

SBS Theme	**ER2.3** Promote integration of aspen into action plans for riparian habitats (and other habitats where appropriate) to help mitigate future loss of ash and enhance the Forest Habitat Network	FCS, BFT, TForum SBC	✓	✓	✓	✓	✓	✓	Biodiversity	2023
Ecosystem Restoration	**ER3 Assess development impacts on ecosystems:**									
	ER3.1 Develop a methodology to assess impacts from development on ecosystem services, including opportunities for enhancements and offsetting to inform the updated Local Development Plan	SBC, SNH, SEPA	✓	✓	✓	✓	✓	✓	Development/ Renewables	2023
	ER4 Enhance the ecological network:									
	ER4.1 Use LUS Pilot maps to target management and restoration of habitats to enhance the ecological network within and surrounding protected areas and Local Biodiversity Sites	SBC, TForum, SEPA, SNH, FCS, TWIC	✓	✓	✓	✓	✓	✓	Biodiversity	2023
	ER5 Restore farmland habitats:									
	ER5.1 Encourage investment in restoration and appropriate management of species-rich hedgerows, individual tree planting, riparian margins and farm ponds	TForum, FCS, SBC	✓	✓	✓	✓	✓	✓	Biodiversity	2023
Natural Capital	**NC1.1 Enhance peatland habitats as carbon stores**									
	NC1.1 Develop a Peatland Action Plan for the Scottish Borders, making use of the LUS pilot maps, incorporating enhancements for biodiversity and wildlife	TForum, SNH, SBC, SEPA	✓	✓	✓	✓	✓	✓	Carbon Storage	2023

Natural Capital	**NC1.2** Adopt the Peatland Code and utilise the carbon market to restore peatland sites	TForum, SNH, SBC, SEPA	✓	✓	✓	✓	✓	✓	Carbon Storage	2028
	NC1.3 Establish long-term monitoring projects in both previously restored and existing degraded peatland sites	SEPA, TForum	✓	✓	✓	✓	✓	✓	Carbon Storage	2028
	NC2 Invest in natural flood management (NFM):									
	NC2.1 Use LUS Pilot maps to prioritise areas for NFM at a catchment level including tree planting in areas where multiple benefits may be delivered for biodiversity, water quality and recreation.	SEPA, TForum, SBC, BFT, FCS	✓	✓	✓	✓	✓		Natural Flood Management	2023
	NC2.2 Raise awareness of NFM opportunities amongst key stakeholders/land managers in priority catchments	SEPA, TForum, SBC	✓	✓	✓	✓	✓		Natural Flood Management	2023
	NC3 Increase diversity of trees to enhance woodland ecosystems:									
	NC3.1 Promote productive broadleaves; selective retention of mature conifers; increased planting/ retention of non-spruce conifers for biodiversity as viable components of new forests	FCS, SBC, BFT	✓	✓	✓	✓	✓		Timber and Woodland	2023
	NC3.2 Promote better integration between different woodland types and other land uses to deliver multiple benefits adopting the principles of the Land Use Strategy.	FCS, SBC, BFT, TForum	✓	✓	✓	✓	✓		Timber and Woodland	2023

Natural Capital	**NC4 Invest in habitat for pollinators**									
	NC4.1 Encourage mechanisms to increase grassland margin, roadside verges and hedgerow habitat and improve their management for pollinators	BCS, Buglife, BBCT	✓	✓	✓	✓	✓	✓	Biodiversity	2023
	NC4.2 Establish long-term monitoring projects for pollinators across habitats to encourage good practice in habitat management	BCS, Buglife, BBCT	✓	✓	✓	✓	✓	✓	Biodiversity	2028
Greenspace	**GR1 Enhance greenspace and green infrastructure in towns**									
	GR1.1 Raise awareness and promote establishment of infrastructure including green roofs and living walls under the Planning system	SBC	✓	✓	✓	✓	✓	✓	Development/ Renewables	2023
	GR1.2 Promote sustainable management of greenspace and green networks including appropriate planting and protection of pollinator habitats, including wild flower planting in amenity areas	SBC, BCS	✓	✓	✓	✓	✓	✓	Local Community Integration	2023
	GR1.3 Increase awareness of SUDS potential for biodiversity and promote the creation of high quality SUDS for biodiversity, supported by additional training resources	SBC, BCS, ArcTrust,	✓	✓	✓	✓	✓	✓	Biodiversity	2023
	GR1.4 Develop business and biodiversity initiatives for green spaces and urban habitats	SBC	✓	✓	✓	✓	✓	✓	Local Community Integration	2027

Greenspace	**GR1.5** Develop a new strategy for the management and enhancement of road verges and similar areas for the benefit of pollinators and other insects, including appropriate mowing regimes and improving plant diversity.	SBC, BCS, Buglife, BBCT	✓	✓	✓	✓	✓	✓	Biodiversity	2028
	GR2 Enhance and improve green networks around towns:									
	GR2.1 Restore local green networks and enable permeation of landscape barriers (e.g. roads), for the benefit of wildlife, linking to Local Biodiversity Sites and Protected Areas and contributing to the development of a National Ecological Network for Scotland	SBC	✓	✓	✓	✓	✓	✓	Development/ Renewables	2028
	GR3 Improve community woodlands and urban tree resource:									
	GR3.1 Establish a protocol for native tree species selection and management in community woodlands, streets and settlements	SBC, BFT, FCS	✓	✓	✓	✓	✓	✓	Timber & Woodland	2028
	GR3.2 Building on SBC's localities work pilot a biodiversity project to manage communal land, opening it up for more innovative approaches to enhancing communities in the Scottish Borders	SBC	✓	✓	✓	✓	✓	✓	Local Community Integration	2023
	GR4 Explore links with recreation, learning and greenspace:									
	GR4.1 Set up a River Tweed walk to support tourism, recreation and increased biodiversity awareness, including on INNS and pollinators	TForum, SBC, Visit Scotland, TFn, SNH	✓	✓	✓	✓	✓	✓	Recreation	2028

Greenspace	**GR4.2** Expand on Historic Land Use Value Project and explore links with recreation and greenspace and historic/contemporary land use to support health and wellbeing	SBC	✓	✓	✓	✓	✓	✓	Recreation	2028
	GR4.3 Promote nature based tourism opportunities to raise awareness and help protect biodiversity	SBC, TForum, FCS	✓	✓	✓	✓	✓	✓	Biodiversity	2028
	GR4.4 Encourage use of Global Footprint Network www.footprintnetwork.org and calculator to promote individual action to help the environment	SBC, TForum, SEPA	✓	✓	✓	✓	✓	✓	Local Community Integration	2023
	GR5 Information sharing:									
	GR5.1 Enable improved data gathering and sharing in relation to development applications	SBC, TWIC	✓	✓	✓	✓	✓	✓	Development/ Renewables	2028
Wildlife & Habitats	**WH1 Improve habitats and ecological connectivity across the landscape:**									
	WH1.1 Identify and adopt Local Biodiversity Sites (LBS) and develop a communications plan to promote their protection and enhancement	SBC, TWIC	✓	✓	✓	✓	✓	✓	Biodiversity	2023
	WH2 Support the recovery of native species in the Scottish Borders:									
	WH2.1 Explore potential for a water vole recovery project to increase recording and improve habitat, identifying areas for possible translocation, linking with the National Water Vole Monitoring Programme and building on research from the Tweed Water Initiative	LBMG	✓	✓					Biodiversity	2028

Wildlife & Habitats	**WH2.2** Develop a programme to deliver the priority actions of the south Scotland black grouse conservation strategy	SUP, FCS, BFT, SNH, GWCT, RSPB, SBC			✓	✓			Biodiversity	2023
	WH2.3 Conduct a survey of the Northern Brown Argus butterfly (UKBAP species) across the Scottish Borders to indicate sites or landscape areas for focussing conservation action	BCS	✓	✓	✓	✓	✓	✓	Biodiversity	2023
	WH2.4 Support the South of Scotland Golden Eagle recovery project through promotion and public awareness raising	SUP			✓	✓			Biodiversity	2023
	WH2.5 Consider setting up a beaver working group to prepare for beavers naturally moving into the catchment and enable positive benefits such as creation of standing open water in the River Tweed's upper catchment	TForum, SWT, LBMG, TFn			✓	✓			Natural Flood Management	2028
	WH3 Support the recovery of native species in the Scottish Borders:									
	WH3.1 Develop a programme of citizen science projects to raise awareness and understanding of biodiversity and how to look after it	TWIC	✓	✓	✓	✓	✓	✓	Local Community Integration	2028
	WH3.2 Establish a project to record road kill on strategic routes, to aid identification of suitable locations for improving green networks linking with work done by national initiatives	TWIC	✓	✓	✓	✓	✓	✓	Local Community Integration	2028

Wildlife & Habitats	**WH3.3** Set up community monitoring projects for wildlife through Conservation Area Regeneration Schemes (CARS) – e.g. Jedburgh CARS swifts monitoring	TWIC	✓	✓	✓	✓	✓	✓	Local Community Integration	
	WH3.4 Establish and maintain a Borders Wader Initiative to address declines in breeding waders in the region.	SBC, TForum, RSPB	✓	✓	✓	✓	✓	✓	Biodiversity	2023
	WH3.5 Continue to monitor great crested newt populations via traditional methods and eDNA sampling at known and potential sites	SBC, SWT, TWIC, TForum	✓	✓	✓	✓	✓	✓	Biodiversity	2023
	WH3.6 Establish a follow-up project based on the outcomes of the Southern Scotland Bat Survey (2016) to assess the status of edge of range/ locally rare species in the Borders	SBC, TWIC, SWT	✓	✓	✓	✓	✓	✓	Biodiversity	2023
	WH4 Raise awareness of actions for wildlife and habitats across the Scottish Borders:									
	WH4.1 Disseminate information to partner organisations, developers, land managers and the public regarding biodiversity projects and good practice including via e-newsletters	SBC	✓	✓	✓	✓	✓	✓	Local Community Integration	2023
Land & Freshwater Management	**LF1 Promote woodland habitat management improvements:**									
	LF1.1 Promote effective herbivore management and tree-thinning to encourage natural regeneration, CCF, species/age structure diversity	FCS, BFT, TForum	✓	✓	✓	✓	✓	✓	Timber & Woodland	2023

Land & Freshwater Management	**LF1.2** Raise awareness of an promote better integration between different woodland types and other land uses to deliver multiple benefits amongst foresters, farmers and land managers	FCS, BFT, TForum SBC	✓	✓	✓	✓	✓	✓	Timber & Woodland	2023
	LF1.3 Work with partners to ensure effective screening of proposed tree-planting areas to avoid damaging important grassland, heathland and wetland sites.	FCS, SBC, TWIC	✓	✓	✓	✓	✓	✓	Timber & Woodland	2023
	LF2 Promote improved farmland management:									
	LF2.1 Use the LUS Pilot maps to develop individual farm and estate land use plans, and raise awareness of and incorporate ecosystem services into farm accounting	SBC, TForum	✓	✓	✓	✓	✓	✓	Food Production	2023
	LF2.2 Use the LUS Pilot maps to identify priority areas for targeted, local, sustainable land management projects	SBC, TForum, SUP, BFT	✓	✓	✓	✓	✓	✓	Local Community Integration	2023
	LF3 Encourage creative land and freshwater management projects:									
	LF3.1 Consider a regional Strategic Woodland Creation project, integrating large-scale forestry with other land uses to deliver multiple benefits	SBC	✓	✓	✓	✓	✓	✓	Local Community Integration	2028
	LF3.2 Develop a series of community-led local plans for sustainable land use in and around settlements	SBC	✓	✓	✓	✓	✓	✓	Local Community Integration	2028

Land & Freshwater Management	**LF3.3** Continue local participation in the National Stream Temperature monitoring programme organised by Marine Scotland Science (MSS), that will provide map-based information on where riparian tree planting will most effectively help control water temperatures	TFn	✓	✓	✓	✓	✓	✓	Carbon Storage	2023
	LF4 Manage INNS:									
	LF4.1 Maintain the Tweed Biosecurity Plan to monitor and manage INNS, focussing on giant hogweed and Himalayan balsam	SEPA, TForum, SNH, SBC, TFn	✓	✓	✓	✓	✓		Biodiversity	2023
Marine & Coastal Ecosystems	**MC1 Support Marine Protected Areas:**									
	MC1.1 Ensure Marine Protected Areas form effective protection by reviewing and where necessary establishing codes of conduct (in addition to ongoing enforcement of legislative requirements)	BNMNP, NTS						✓	Biodiversity	2023
	MC2 Promote research in marine and coastal areas:									
	MC2.1 Enhance links with universities by developing and publicising a list of themes / potential research topics for Masters and PhD students	BNMNP, NTS						✓	Local Community Integration	2023
	MC3 Raise awareness of marine and coastal ecosystems:									
	MC3.1 Raise awareness of the marine and coastal environment, specifically, why and how to gather and submit wildlife records to ensure a wide range of users are engaged with monitoring and recording in marine and coastal habitats	BNMNP, TWIC, NTS						✓	Local Community Integration	2023

Marine & Coastal Ecosystems	**MC3.2** Raise awareness of factors that pressurise the biodiversity of the marine and coastal environment, specifically diffuse pollution, plastic waste, and invasive non-native species, with clear advice on action to be taken	BNMNP, NTS						✓	Biodiversity	2028
	MC4 Marine and coastal direct action and monitoring:									
	MC4.1 Continue to monitor the seabird populations on the Berwickshire Coast, contributing to records for the National Seabird Count	NTS						✓	Biodiversity	2023
	MC4.2 Promote The Great Nurdle Hunt and support public participation in the initiative (www.nurdlehunt.org.uk)	BNMNP, RSPB, SWT, NTS						✓	Local Community Integration	2023
	MC4.3 Undertake a series of beach litter surveys and beach cleans in Berwickshire	BNMNP, SBC, NTS						✓	Local Community Integration	2023
	MC4.4 Establish a marine biosecurity project to tackle INNS	BNMNP, NTS						✓	Local Community Integration	2028

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[40] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.
Available at: http://eur-lex.europa.eu/eli/dir/2000/60/oj.

[41] Available at: http://www.gov.scot/Topics/farmingrural/Agriculture/Environment/climatechange/Advice

[42] Depledge M.H. and Bird W.J. (2009) *The Blue Gym: health and wellbeing from our coasts.* Marine Pollution Bulletin 58, 947–948.

[43] ASH Consulting Group (1998). *The Borders landscape assessment. Scottish Natural Heritage Review No 112.* Scottish Natural Heritage, Perth.

APPENDIX A: KEY POLICIES

Plan, programme or strategy	Links to the LBAP
Rio Declaration (1992)	The LBAP will play a vital role in ensuring that the goals and targets of strategic international plans relating to biodiversity are delivered, taking into account their priorities at a level specific to the Scottish Borders.
Convention on Biological Diversity (1992)	
Kyoto Protocol (1997)	
Strategic Plan for Biodiversity 2011-2020	
Aichi Biodiversity Targets	
EU 2020 Biodiversity Strategy	
Scottish Biodiversity Strategy (including Scotland's Biodiversity: It's In Your Hands 2004 and The 2020 Challenge for Scotland's Biodiversity 2013)	The strategy is key to the development of the LBAP, which will deliver the Strategy's aims at a level specific to the Scottish Borders and support the targets set within The 2020 Challenge for Scotland's Biodiversity.
Nature Conservation (Scotland) Act 2004	Through the production of the LBAP, Scottish Borders Council will contribute to the requirements of the Act, including that the Council, as a public body, will show its commitment to the biodiversity duty.
Wildlife and Countryside Act (1981) (as amended)	The objectives of the LBAP are to be compliant with the Act as they will contribute to its requirements
Wildlife and Natural Environment (Scotland) Act 2011	The Act amends the above Act in relation to legislation concerning non-native species, enabling Scotland to adopt a 3-stage approach to dealing with INNS, which the LBAP will seek to support.
Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora	These directives and convention set out the legal protection of designated sites that are found in the Scottish Borders, specifically Ramsar sites, Special Areas of Conservation and Special Protection Areas. The LBAP will support protection of these sites.
Directive 79/409/EEC on the conservation of wild birds	
Convention on Wetlands of International Importance 1971 (amended 1982 and 1987) (Ramsar Convention)	
Conservation (Natural Habitats &c.) Regulations 1994 (as amended)	This legislation transposes the above Habitats Directive into specific legal obligations for the UK, with which the LBAP and its related actions will accord.
The Scottish Forestry Strategy (2006) (and associated SEA)	The LBAP will contribute towards the aims of the strategy in helping to achieve a "high quality, robust and adaptable environment".
Scottish Borders Woodland Strategy (2005)	The LBAP will help contribute towards the aims of the strategy that "Trees, woodlands and forests will achieve their full potential as a natural resource, creating the environment that gives greatest benefit to the life and work of the Borders people"
The Scottish Government National Outcomes	The LBAP aims to contribute to each of the National Outcomes, for example in terms of: longer, healthier lives, successful learners, tackling inequality, sustainable places, supportive and resilient communities, valuing the built and natural environment, reducing local and global environmental impacts.

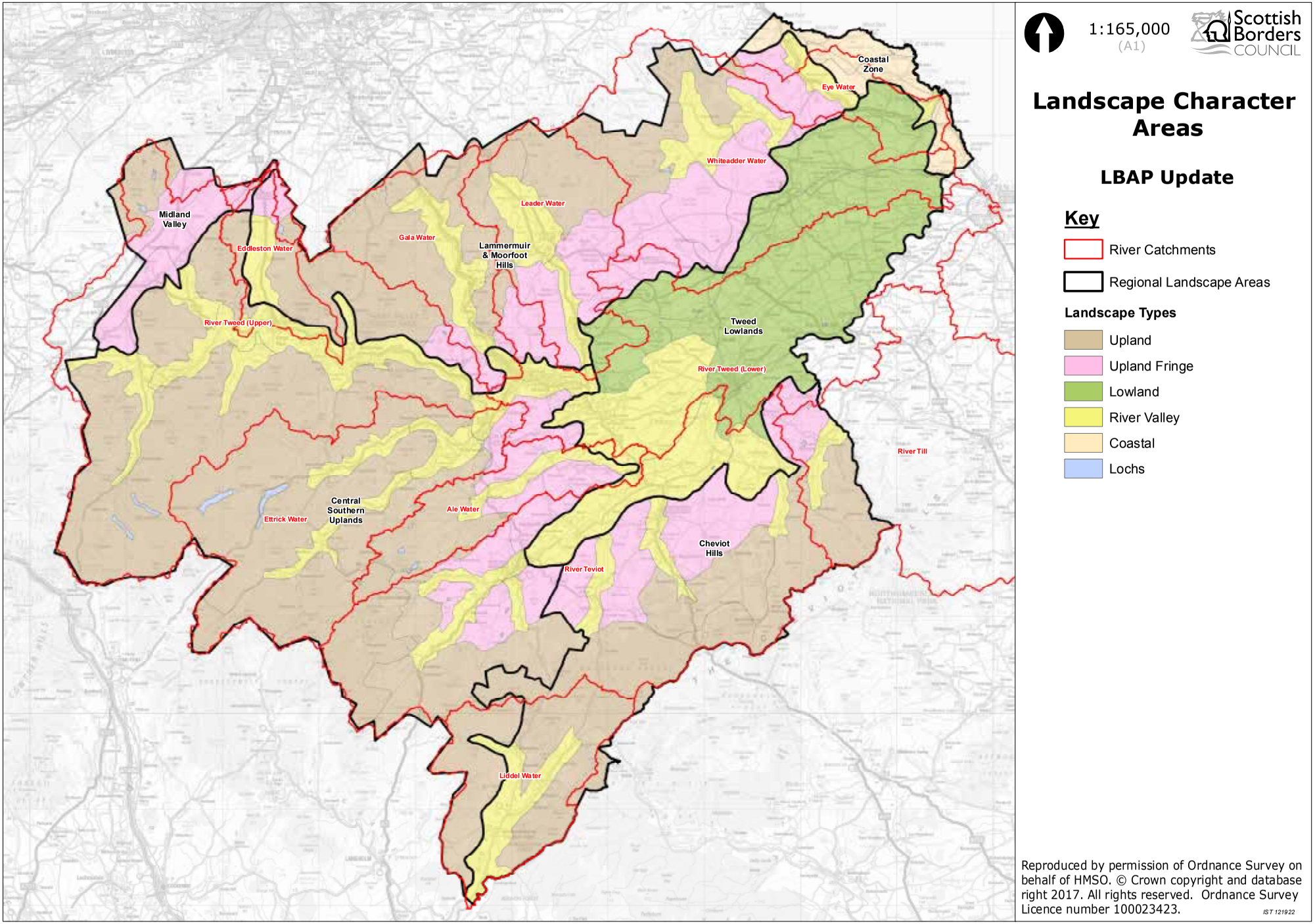
Plan, programme or strategy	Links to the LBAP
Scottish Soils Framework	The purpose of the framework is to ensure more sustainable management of the soil resource. It identifies 13 outcomes of threats to the soil resource and provides action to tackle these outcomes. The LBAP aims to be aware of these threats and assist in tackling them in line with the actions where appropriate.
Water Environment and Water Services (Scotland) Act 2003 (Designation of Scotland River Basin District) Order 2003	The documents are the Scottish distillation of the European Water Framework Directive. They give Ministers regulatory powers over water activities in order to protect, improve and promote sustainable use of Scotland's water environment.
The Water Environment (Controlled Activities) (Scotland) Regulations 2005 (as amended)	
Scotland River Basin Management Plan and Solway Tweed River Basin Management Plan (RBMP)	The two RBMPs are the documents that state the targets and aims for the protection and improvement of Scotland's water environment. The key target is to improve the proportion of water courses in good condition. In the Scottish Borders the Tweed is subject to a separate RBMP to the rest of Scotland and thus the LBAP aims to take account of the objectives of both documents.
Flood Risk Management (Scotland) Bill 2008	The bill sets national policy and actions undertaken in relation to the LBAP will be required to take flood risk into account.
Scottish Water, Water Resource Plan (2008)	Sets Scottish Water's plan to ensure a safe supply of drinking water to 2032. One of the key challenges is to adapt to pressures on water resources due to climate change and environmental constraints. The LBAP aims to support the work intended to meet this challenge.
National Marine Plan 2010	The LBAP aims to support the vision of this document for the marine environment: "clean, healthy, safe, productive and biologically diverse oceans and seas, managed to meet the long term needs of nature & people"
Tweed Catchment Management Plan	The Plan has a series of strategic aims with regards to water quality, water resources, habitats and species, river works and flood management. The LBAP aims to assist in work towards these aims
Tweed Wetland Strategy 2010	The strategy has broad aims related to protection, enhancement of wetland habitats; promotion of habitat connectivity; identification of threats; and supporting sustainable land use. The LBAP will aim to assist in achieving the strategy.
Low Carbon Scotland – Meeting the Emissions Reduction Targets 2010-202	The LBAP aims to contribute to the targets of Low Carbon Scotland by highlighting the role of biodiversity in carbon sequestration and as a natural resource. The LBAP aims to play a role in achieving targets set at a local level and reflecting the benefits of biodiversity for low carbon communities.
NPPG5 Archaeology and Planning (1998)	Sets national policy on archaeology and the historic environment, which actions in the LBAP will need to take account of as appropriate.
NPPG18 Planning and the Historic	

Plan, programme or strategy	Links to the LBAP
Historic Environment Scotland Policy Statement (2016)	The LBAP should impact as little as possible on the historic environment and seek to promote the HESPS vision.
Climate Change (Scotland) Act 2009	The Act sets target for carbon emissions reductions (against a baseline) by 2050. It also informs the national Land Use Strategy, which has led to the Pilot Land Use Strategy in the Scottish Borders, which in turn informs key objectives of the LBAP.
Scottish Climate Change Adaptation Programme (2014)	The document has a vision to which the LBAP aims relate: "To increase the resilience of Scotland's people, environment and economy to the impacts of a changing climate". Within this there are objectives to support a healthy and diverse natural environment with capacity to adapt and to sustain and enhance the benefits, goods and services that the natural environment provides".
Biomass Action Plan for Scotland (2007)	The aim of the Plan is to set out a coordinated programme for development of the biomass sector in Scotland. It provides actions to supplement a framework to assist further production. The LBAP will maintain awareness of the need for forestry to provide biomass.
NPF 3	The LBAP and NPF3 should be aligned in their commitment to the Scottish Biodiversity Strategy. The LBAP will represent opportunities in the Scottish Borders to ensure the protection of biodiversity.
Scottish Planning Policy	The LBAP will need to consider the requirements of the SPP throughout its development, including the impact of development on biodiversity in the Scottish Borders. The LBAP will contribute to SPP policies in relation to biodiversity and the natural environment.
Planning Advice Note (PAN) 60	The LBAP will put into practice the requirements of PAN 60, and will be a proactive measure for the encouragement and understanding of the natural environment. The proposed outcomes of the LBAP are in line with PAN 60 requirements.
Scottish Borders Local Development Plan	The LBAP will be able to help guide developments to reduce, prevent or offset the effects of development on biodiversity.
Scottish Borders Core Path Plan (2008)	The core paths of the Borders are essential to health, sense of place and vitality of Borders residents and visitors. The LBAP should take cognisance of these and their potential enhancement for biodiversity and people.
European Landscape Convention (2000)	The LBAP will aim to support the convention in its requirement to protect and enhance landscapes.

APPENDIX B: Acronyms

ARC Trust	Amphibian and Reptile Conservation Trust
BCS	Butterfly Conservation Scotland
BCT	Bumblebee Conservation Trust
BFT	Borders Forest Trust
BNMNP	Berwickshire and Northumberland Marine Nature Partnership
FCS	Forestry Commission Scotland
GWCT	Game and Wildlife Conservation Trust
INNS	Invasive Non-Native Species
LBAP	Local Biodiversity Action Plan
LUS	(The Scottish Government's) Land Use Strategy
LUS Pilot	Scottish Borders' Land Use Strategy Pilot Regional Land Use Framework Project
NNR	National Nature Reserve
NSA	National Scenic Area
NTS	National Trust for Scotland
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SBC	Scottish Borders Council
SBS	Scottish Biodiversity Strategy
SEPA	Scottish Environmental Protection Agency
SNH	Scottish Natural Heritage
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SUDS	Sustainable Drainage Systems
SUP	Southern Uplands Partnership
SWT	Scottish Wildlife Trust
TForum	Tweed Forum
TFn	Tweed Foundation
TWIC	The Wildlife Information Centre
UKBAP	UK Biodiversity Action Plan

APPENDIX C: LANDSCAPE CHARACTER AREA MAP



APPENDIX D: The Local Biodiversity Action Plan Partnership

The following organisations have been involved in undertaking and monitoring the impacts of actions relating to the original LBAP (2001) and have contributed to the formation of new actions for the new LBAP (2018):

Berwickshire and Northumberland Marine Nature Partnership
Borders Forest Trust
Butterfly Conservation Scotland
Forest Enterprise Scotland
Forestry Commission Scotland
Game and Wildlife Conservation Trust
LIVE Borders
National Trust for Scotland
RSPB Scotland
Scottish Borders Council
Scottish Environmental Protection Agency
Scottish Land & Estates
Scottish Natural Heritage
Scottish Wildlife Trust
Southern Uplands Partnership
St Abbs and Eyemouth Voluntary Marine Reserve
The Wildlife Information Centre
Tweed Forum
Tweed Foundation

APPENDIX E: Summary of the Important Habitats of the Scottish Borders

This appendix summarises information from existing Habitat Action Plans (HAPs) for priority habitats in the Scottish Borders. It is updated with details of the Scottish Biodiversity List species present in each habitat, and with land cover estimates from the Tweed Aerial Survey Phase 2[i]. Land cover totals include habitats that were mapped as part of the aerial survey, but not originally included in HAPs (e.g. Gorse Scrub under Grassland/Enclosed Farmland). The new LBAP adopts an ecosystems approach and aims to deliver action at a landscape scale; therefore, all habitats in the Scottish Borders have been considered during action planning for biodiversity.
The original HAPs continue to provide useful background information and can be downloaded at: https://www.scotborders.gov.uk/downloads/download/423/habitat_action_plans.

***NVC – National Vegetation Classification** **Species on Scottish Biodiversity List**

WETLAND HABITATS

Fens, marsh, swamp & reedbed (Including Flush & Lowland Fen) (17582ha / 4.73% of Scottish Borders Land Cover)[i]

- These habitats include vegetation that is ground water fed, and occur on permanently, seasonally or periodically waterlogged peat, peaty or mineral soils where grasses do not predominate.
- They also include emergent vegetation or frequently inundated vegetation occurring over peat or mineral soils

Associated NVC* Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
M25 *Molinia caerula-Potentilla erecta*mire S4 *Phragmites australis* swamp and reedbeds S9 *Carex 1quatic1* swamp W1 *Salix cinerea-Galium palustre* woodland Other fen, marsh, swamp and reedbed NVC Communities found in Scottish Borders include: M4, M6, M7, M8, M9, M10, M13, M23, M26, M27, M32, S3, S5, S7, S8, S10, S11, S25, S26, S27, S28, W2, W3, W4, W5	**Mammals:** **Otter *Lutra lutra*** **Birds:** **Reed bunting *Emberiza schoeniclus;* Grasshopper warbler *Locustella naevia*** **Invertebrates:** a **reed beetle *Donacia 1quatic***, and a large number of red data and nationally notable beetles Cranefly, hoverfly and moths **Plants:** Greater tussock sedge *Carex paniculata;* Alpine rush *Juncus alpinus;* Tall bog sedge *Carex magellanica;* Cowbane *Cicuta virosa;* Coralroot orchid *Corallorhiza trifida;* Holygrass *Hierochloe odorata;* Narrow small reed *Calamagrostis stricta*	• Drainage • Nutrient enrichment & diffuse pollution Inappropriate or lack of management • Habitat loss and fragmentation • Grazing and poaching • Natural succession

Blanket Bog (25393ha / 5.36% of Scottish Borders Land Cover)[i]

- Blanket bog applies only to that portion of a blanket 'mire' which is exclusively rain-fed, mainly the watershed summits of upland areas. However, these areas are generally part of a landscape scale complex of peat-based habitat types (blanket mire) fed also by ground waters.
- Areas of blanket bog supporting semi-natural blanket bog vegetation, may be defined as 'active' i.e. still peat forming or exclusively rain-fed.
- Blanket bog occurs over 23% of the land area in Scotland, which represents a significant amount of the European and world resource.
- In addition to supporting biodiversity peatland and blanket bogs perform vital roles within our environment, include flood management, carbon storage, and water supply.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
M18 *Erica tetralix-Sphagnum papillosum* raised and blanket mire M19 *Calluna vulgaris-Eriophorum vaginatum* mire M20 *Eriophorum* mire M25 *Molinia caerulea-Potentilla erecta* mire	**Birds:** **Golden plover *Pluvilais apricaria;* Dunlin *Calidris alpine*** **Plants:** Golden bog-moss *Sphagnum pulchrum;* Rugged collar-moss *Sphagnum vasculosum;* Bog bilberry *Vaccinum uliginosum;* Cloudberry *Rubus chamaemorus;* Slender Green Feather Moss *Hamatocaulis vernicosus* **Invertebrates:** A ground beetle *Carabus nitens;* Marsh oblique-barred *Hypenodes humidialis;* **Swamp lookout spider *Notioscopus sarcinatus***	• Overgrazing • Fragmentation/isolation • Afforestation • Inappropriate burning • Drainage • Erosion • Recreation • Wind farms • Access tracks • Climate change • Peat cutting

Lowland Raised Bog (409ha / 0.09% of Scottish Borders Land Cover)[i]

- These habitats are typically isolated domes of peat in an otherwise non-peat landscape.
- Lowland Raised Bogs occur below an altitude of 300 metres. This differentiates them from blanket bog, which occurs in the uplands.
- Bogs that share characteristics of raised and blanket bogs do occur in the uplands and are termed "intermediate" bogs. They are considered within the blanket bog habitat type.
- The surface of a "natural" lowland raised bog is waterlogged, acidic and low in plant nutrients. This supports a range of specialised plant assemblages dominated by mosses of the genus *Sphagnum* that are able to store large amounts of water. The surface of a healthy bog is a mosaic of pools, hummocks and Sphagnum 'lawns'.
- The wet and acidic conditions slow down the decomposition process and allows peat to accumulate. When a raised bog functions naturally it accumulates peat and is said to be active. If undamaged, it is described as unmodified. If damage has stopped the bog functioning naturally it is said to be inactive and modified.
- Around 94% of the raised bogs in Britain have been destroyed since the beginning of the 19th century. Of those remaining only a small percentage are active and unmodified
- The main threats to the remaining lowland raised bogs in Scottish Borders are internal and peripheral drainage and tree colonisation.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
M1 *Sphagnum auriculatum* M2 *Sphagnum cuspidatum / recurvum* M3 *Eriophorum angustifolium* (Bog pool communities) M18 *Erica tetralix – Sphagnum papillosum* raised and blanket mire.	**Fungi:** A lichen ***Absconditella sphagnorum***; **Plants:** Slender cow-horn bog moss *Sphagnum subsecundum;* Coralroot orchid *Corallorhiza trifida;* Cranberry *Vaccinium oxycoccos;* **Invertebrates:** A water-beetle ***Cyphon kongsbergensis***; Dark-bordered beauty ***Epione vespertaria***; Large Heath Butterfly ***Coenonympha tullia*** **Reptiles:** Adder ***Vipera berus***	• Landfill development that utilises bogs where peat extraction has occurred • Afforestation and associated drainage • Drainage for agriculture and water abstraction • Air pollution • Nutrient enrichment from catchment, livestock and game management (draingage, trampling, burning and enrichment from feed/droppings) • Land reclamation for development • Climate Change

Standing Open Water (1576ha / 0.34% of Scottish Borders Land Cover)[i]

- This habitat type includes natural systems and man-made waters such as reservoirs, canals, ponds and gravel pits. It includes the open water zone which may contain submerged, free floating or floating-leaved vegetation, and water fringe vegetation. It also includes adjacent wetland habitats with contiguous water levels that are less than 0.25ha.
- Ponds are defined as standing open water bodies of <2ha size.
- Ditches with open water for at least the majority of the year should also be included in this type.
- Small areas of open water in a predominantly terrestrial habitat such as bog pools or temporary pools on heaths should be included in the appropriate terrestrial broad habitat type
- The Scottish Borders contains a wide variety of standing open waters from the large natural lochs and water supply reservoirs characteristic of the west and south of the area to the networks of small ponds and fishing pools scattered throughout the Borders region.
- These bodies of water have many uses ranging from fire ponds, cattle drinking, potable water, sailing, angling to aesthetic.
- Standing open water is a relatively rare habitat in the Scottish Borders, particularly in the eastern part of the region.
- Many of the larger bodies of water are either completely artificial or have been modified to allow control of water levels.
- Marl lochs are notable in the Scottish Borders, which are base rich through the gradual accumulation of minerals over a long period of time. These include a rare example of a deep, glacially excavated loch in the south of Scotland, and several glacially relict networks of ponds and small pools.
- The habitat is characterised by a large diversity of morphological and trophic types of standing open water, for example:
  - Eutrophic: *High levels of plant nutrients and turbidity caused by high plankton levels. Coarse fish are generally dominant. In a natural state high levels of biodiversity are supported. Often important wildfowl sites. (Scottish Borders examples include Yetholm Loch SSSI, Hoselaw Loch SSSI/RAMSAR, Coldingham Loch).*
  - Mesotrophic: *High biodiversity, characteristic ecology, intermediate nutrient status. Can become important marl lochs important in a local/national context, where geology provides a source of basic chemicals (e.g. lime). (Scottish Borders examples include Faldonside Loch, Megget and Talla reservoirs, Branxholme Easter and Wester Lochs, St Mary's Loch/Loch of the Lowes).*
  - Oligotrophic: *Low levels of plant nutrients, clear water, sparse plankton. Salmonid fish generally dominant. (Scottish Borders examples include Cauldshiels Loch, Portmore Loch, Stantling Craig reservoir)*
  - Dystrophic: *Highly acidic, brown-stained water due to peat drainage, low productivity. (In the Scottish Borders, includes Gameshope Loch)*

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
Not applicable	**Plants:** Several Stonewort species: *Chara spp.; Nitella spp.;* Clustered Stonewort *Tolypella glomerata* Several Pincerwort species: ***Cephalozia spp.*** **Fragile frillwort *Fossombronia fimbriata*** Slender Smoothcap *Atrichum tenellum* Several moss species: *Ephemerum serratum serratum; Cinclidium stygium; Pseudobryum cinclidioides; Drepanocladus vernicosus;* Northern Yellow-cress *Rorippa islandica sens. Str.* Cowbane *Cicuta virosa* Pondweed species: **Potamogeton spp.** **Amphibians:** *Rana temporaria;* ***Triturus cristatus****; Triturus vulgaris; Triturus helveticus; Bufo bufo* **Invertebrates:** including mud beetles, rove beetles, weevils, cranefly, hoverfly **Fish: Arctic Charr *Salvelinus alpinus*; Eel *Anguilla Anguilla*** **Birds: Slavonian grebe *Podiceps auritus;* Black-necked grebe *Podiceps nigricollis***	• Hydrological alteration • Diffuse pollution • Invasive Non-Native Species (INNS) • Introduced (native) fish • Climate change • Habitat fragmentation

Rivers and Burns **(1950ha / 0.42% of Scottish Borders Land Cover)[i]**

- Rivers and burns are by nature dynamic systems. Associated features include shingle beds and sand bars as well as marginal and bankside vegetation.
- The River Tweed is classed as a "Lowland Eutrophic" or nutrient rich river and is a rare example of this type. It shows the full characteristic range of flow patterns from relatively turbulent sections to more sluggish, meandering sections and reaches of alternating deep pools and shallow riffles. This, coupled with a range of water chemistry, offers a wide diversity of river habitats for wildlife.
- Under the Habitats Directive, the Tweed and a number of its tributaries have been designated a Special Area of Conservation (SAC) in recognition of their importance for Atlantic salmon, brook, river and sea lamprey, otter and water crowfoot (*Ranunculus*) populations.
- As a result of its distinctive water chemistry, the Tweed system is notable for its diversity of invertebrate species. A number of the invertebrate species found in the area are rare both in European and Scottish terms, For example, IUCN (World Conservation Union) red-list dipteran fly and beetle populations occur in exposed sediments throughout the catchment and in the upper catchment, the Northhope Burn supports a population of rare aquatic beetles.
- The distinctive water chemistry of the Tweed system also produces a range of plant communities different from that found in other larger rivers in Eastern Scotland and North eastern England. The area also represents the edge of UK distribution for a number of plants including species of Water Crowfoots and Horned Pond Weed.
- The Tweed system now represents approximately 15% of all the spawning water available to salmon in Scotland with the Ettrick Water being an important spawning area for spring salmon. The Eden in its upper reaches supports a naturally isolated trout population while in its lower reaches it has notable eel and lamprey populations.
- Otters have a healthy and expanding population on the lower and middle Tweed and their presence is the subject of ongoing research into their distribution and breeding habits

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
A17 *Ranunculus penicillatus spp. Pseudofluitans*	**Fungi: River Jelly Lichen *Collema dichotomum*; Ear-lobed Dog-lichen *Peltigera leucophlebia;*** Water Rock-bristle *Seligeria carniolica* **Plants: Yellowish Fork-moss *Dichodontium flavescens***; Beck Pocket-moss *Fissidens rufulus;* Short Pottia *Hennediella macrophylla;* **Water Grimmia *Schistidium agassizii;* Spruce's Bristle-moss *Orthotrichum sprucei;* Twist-tip Feather-moss *Eurhynchium schleicheri;*** Kelso Water-Crowfoot *Ranunculus x kelchoensis;* Globe-Flower *Trollius europaeus;* Great Water-Parsnip *Sium latifolium;* Lesser Water-Parsnip *Berula erecta;* Green Figwort *Scrophularia umbrosa;* Northern Spike-Rush *Eleocharis austriaca* **Fish: Sea Lamprey *Petromyzon marinus;* River Lamprey *Lampetra fluviatilis;* Brook Lamprey *Lampetra planeri;* Allis Shad *Alosa alosa;* Atlantic Salmon *Salmo salar;* Sea Trout *Salmo trutta;*** Grayling *Thymallus thymallus* **Birds**: Oystercatcher *Haematopus ostralegus;* Redshank *Tringa tetanus;* Kingfisher *Alcedo atthis;* Sand Martin *Riparia riparia;* Dipper *Cinclus cinclus;* Reed Bunting *Emberiza schoeniclus* **Mammals:** Water Vole *Arvicola terrestris*; **Otter *Lutra lutra;*** Daubenton's bat *Myotis daubentonii* **Invertebrates:** An extensive list, including important river and shingle beetles and flies, notable caddis fly / mayfly species.	• Diffuse pollution • Engineering and drainage operations • INNS • Climate change • Bankside management • Development • Abstraction • Genetic integrity

WOODLAND HABITATS

Productive Woodland (Including Coniferous & Broadleaved Plantation; Felled Woodland; Mixed Woodland) **(67530ha / 14.14% of Scottish Borders Land Cover)**[i]

- This type of woodland includes all coniferous stands where broadleaved trees make up less than 20% cover with the exception of yew woodlands.
- Areas of recently felled coniferous woodland are also included in this type, along with other integral features of woodland such as glades and rides.
- Coniferous woodland also includes shelter belts and small farm woodland plots. A large proportion of coniferous woodlands are located in the uplands in the south west of the Borders.
- The priority areas for red squirrel in Scottish Borders are all large scale coniferous plantations in the south-west of the region.
- Areas of important wetlands, grasslands and upland heath remain within some of the coniferous plantations.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
Not applicable	**Mammals:** **Red squirrel *Sciurus vulgaris*; Pine marten *Martes martes*** **Birds:** Goshawk *Accipiter gentilis;* Goldcrest *Regulus regulus;* **Tree pipit *Anthus trivialis;*** Redpoll *Carduelis flammea* **Plants:** **Twinflower *Linnaea borealis;* Creeping ladies tresses *Goodyera repens*** **Invertebrates:** Several nationally notable beetles; a red data pyralid moth; a nationally notable hoverfly; a money spider.	• Ongoing forestry management • Lack of investment • Siting of wind farms • Herbivore control (deer & grey squirrel) • Lack of certification / sustainable management in private forestry • Priority areas for red squirrel and control of greys • Management and ownership of FCS estate • Restoration of priority wetland habitats within forests • Management for black grouse • Restructuring • Grazing by goats

Native Woodland (including Native Wet Woodland) **(1111ha / 0.24% of Scottish Borders Land Cover)**[i]

- Native woodlands are defined as 'woodlands composed wholly or largely of the tree species which occur naturally in the Scottish Borders; including both woodlands with a continuous history of natural regeneration and those where either the current or a previous generation of trees has been planted within their natural range'.
- Throughout Great Britain there has been a gradual decline in the remaining native woodland, with a reduction of approximately 30 - 40% over the last 60 years. The issues causing decline are outlined below. Declines extend to ground flora and fauna, as well as the ability to regenerate young trees.
- The Scottish Borders possesses one of the lowest percentages of native woodland compared to total land area of any Scottish region. However, there are opportunities for improved management of the existing native woodlands, and for native woodland expansion.
- Native woodlands have been classified into several categories: Ancient Woodland (present on maps pre-1750); Long-established woodland (present on maps pre 1850); Semi-natural woodland (established through self-seeding).
- Semi-natural woodland in the Borders is sparse and totals approximately 6,790ha. Berwickshire contains the largest hectarage of ancient and semi-natural woodland with 298ha (0.4% of land area), Ettrick and Lauderdale contain 225ha (0.2% of land area), Roxburgh has 180ha (0.1%of land area) and Tweeddale has only 35ha (<0.1% of land area) (Walker & Badenoch 1988, 1989 and 1991).
- The Planted Ancient Woodland Site (PAWS) component consists of 0.3% (1,355ha) of the land area. The broader definition of the native woodland framework which includes ancient, long established and semi-natural and high native component of the Scottish Semi-Natural Woodland Inventory (SSNWI) covers 1.4% of the land area (6,790ha) (Ray et al. 2003).
- The Borders has many small remnant woodlands, many of which have been visited by woodland surveyors and a few of which are safeguarded by Scottish Natural Heritage as Sites of Special Scientific Interest (SSSI) and registered as Scottish Wildlife Trust Wildlife Sites.
- The UK Biodiversity Action Plan (UKBAP) details six different native woodland types as priority habitats, five of which are represented in the Borders. These are: upland oakwoods; upland ashwoods; wet woodlands; upland birchwoods; lowland mixed deciduous woodland.
- However, few remnants of Borders native woodland can be 'fitted' in to a particular native woodland type; either because the woodlands have been heavily grazed and only the tree species remain, or because remnant ground flora remains beneath an overstorey of trees containing non-native species, such as beech and sycamore.
- Much of the native woodland of the Borders woodland is characterised by its small size and fragmented nature, with few significant ancient semi-natural woodlands and with large

distances between the woodland fragments. The majority of these woodlands are long and thin, and as a result of exposure to the influence of 'drying' winds, are not as humid and shady as less linear native woodlands. This lack of woodland conditions e.g. humidity and shade, means that the range of woodland plant and animal diversity in many Borders native woods is low.

- Although scattered, small and often poor in numbers of plants and animals, native woodlands in the Borders are significant in nature conservation value. The most apparent features of this conservation value can often be seen in the ground flora.
- Some of our native woods are rich in dead wood and associated fauna and flora - a few are known to have internationally important populations of fungi and invertebrates that make a living from feeding on dead wood.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
W7 *Alnus glutinosa- Fraxinus excelsior-Lysimachia nemorum,* W9 *Fraxinus excelsior –Sorbus aucuparia- Oxalis acetosella* woodland W11 *Quercus petraea –Betula pubescens- Oxalis acetosella*	**Lichens:** a lichen *Cyphelium inquinans* **Bryophytes:** **Fragile frillwort *Fossombronia fimbriata*** **Plants:** Ash *Fraxinus excelsior;* Hard Shield Fern *Polystichum aculeatum;* Yellow Star-of-Bethlehem *Gagea lutea;* Rock Whitebeam *Sorbus rupicola;* Lesser Hairy-brome *Bromopsis benekenii;* Sessile oak *Quercus petraea;* Common cow-wheat *Melampyrum pratense;* Common figwort *Scrophularia nodosa;* False brome *Brachypodium sylvaticum;* Alder *Alnus glutinosa;* Bay willow *Salix pentandra;* Wood stitchwort *Stellaria nemorum;* Coral-root Orchid *Corallorhiza trifida;* Greater Tussock-sedge *Carex paniculata*; **Chickweed wintergreen *Urocystis trientalis;*** Green figwort *Scrophularia umbrosa;* Herb Paris *Paris quadrifolia;* **Juniper *Juniperus communis;* Twinflower *Linnaea borealis***; Tea-leaved willow *Salix phylicifolia;* Downy birch *Betula pubescens;* Silver birch *Betula pendula;* Rowan *Sorbus aucuparia;* Wood anemone *anemone nemorosa;* Slender St John's-wort *Hypericum pulchrum;* Greater stitchwort *Stellaria holostea;* Pendunculate oak *Quercus robur;* Primrose *Primula vulgaris;* Tufted hair-grass *Seschampsia cespitosa;* Wavy hair-grass *Deschampsia flexuosa* **Mammals:** **Invertebrates:** **Dark bordered beauty *Epione paralellaria;*** a sawfly *Nematus monticola* **Birds:** Redstart *Phoenicurus phoenicurus; Pied flycatcher Ficedula hypoleuca* **Black grouse *Tetrao tetrix***; Jay *Garrullus glandarius;* **Wood warbler *Phylloscopus sibilatrix;* Spotted flycatcher *Muscicapa striata;* Tree sparrow *Passer montanus;* Bullfinch *Pyrrhula pyrrhula;* Kingfisher *Alcedo atthis*; Willow Tit *Poecile montanus;*** Redpoll *Carduelis flammea*	• Historical loss of woodlands • Loss of traditional management • "Coniferisation" • Overgrazing • Inappropriate burning • Agricultural intensification • Habitat fragmentation • Invasive non-native species • Climate change

Upland Cleuch and Scrub Woodland **(126ha / 0.03% of Scottish Borders Land Cover)**[i]

- This habitat includes juniper scrub, upland montane dwarf-shrub communities (Krummholz) and upland birchwoods.
- This latter community may be dominated by stands of downy birch, and/or silver birch with consitutents such as rowan, willow, juniper and aspen.
- On more acidic soils, rowan is a prominent component. It includes areas of hill marginal ground containing hawthorn, blackthorn or gorse stands.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
W7 *Alnus glutinosa-Fraxinus excelsior-Lysimachia* woodland W9 *Fraxinus excelsior-Sorbus aucuparia-Mercurialis perennis* woodland W11 *Quercus petraea-Betula pubescens-Oxalis acetosella* woodland W17 *Quercus petraea-Betula pubescens-Dicranum majus* woodland W19 *Juniperus communis-Oxalis acetosella* woodland W20 *Salix lapponum-Luzula sylvatica* scrub W23 *Ulex europeaus-Rubus fruticosus* scrub	**Birds:** **Ring ouzel *Turdus torquatus*** **Plants:** **Juniper *Juniperus communis;*** a lady's mantle *Alchemilla wichurae;* Globeflower *Trollius europaeus;* Pale forget-me-not *Mysotis brevifolia;* **Chickweed wintergreen *Urocystis trientalis*;** Mountain melic *Melica nutans;* Green spleenwort *Asplenium viridis;* Hairy stonecrop *sedum villosum;* Wilson's filmy-fern *Hymenophyllum wilsonii*; Saxifrages; nationally scarce mosses	• Over/undergrazing • Scrub clearance • Excessive burning • Inappropriate planting including afforestation • Lack of information • Illegal collecting of rare plants • Inappropriate bracken spraying

Wood Pasture and Parkland **(1812ha / 0.39% of Scottish Borders Land Cover)**[i]

- Lowland wood-pastures and parkland are the products of historic land management systems and represent a vegetation structure rather than being a particular plant community.
- Typically this structure consists of large, open-grown or high forest trees (often pollards) at various densities, in a matrix of grazed grassland, heathland and/ or woodland floras.
- Veteran trees may be a feature of this habitat and may date from medieval forests and parks and old commons.
- Policy woodlands and designed landscapes are included in this habitat.
- The Borders holds some important wood pasture sites that can be identified as existing at the time of the 1st edition Ordnance Survey maps (1850).

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
W10 *Quercus robur-Pteridium aquilinim- Rubus fruticosus* woodland W16 *Quercus spp-Betula spp-Deschampsia flexuosa* woodland.	**Mammals:** **Common pipistrelle *Pipistrellus pipistrellus;* Brown long-eared bat *Plecotus auritus*** **Birds:** **Song thrush *Turdos philomelos;* Spotted flycatcher *Muscicapa striata*; Tree sparrow *Passer montanus;*** Green woodpecker *Picus viridis* **Plants: Northern hawk's-beard *Crepis mollis*** **Invertebrates:** Several nationally scarce and UKBAP priority beetles – e.g. lesser stag and rhinoceros beetles **Fungi:** lichens e.g. *Calaplaca luteoalba;* **Sap-groove Lichen *Bacidia incompta***	• Loss of and lack of protection for veteran trees • Lack of pollarding • Fragmentation of habitat • Over/undergrazing • Agricultural improvements • Removal of deadwood • Lack of long-term replacement • Importance as a landscape feature.

UPLAND AND LOWLAND HABITATS

Upland Heathland (including Mosaic Habitats with Upland Heath) **(54620ha / 11.53% of Scottish Borders Land Cover)**[i]

- Heathland vegetation occurs widely on mineral soils and thin peats (<0.5 m deep) throughout the uplands and moorlands of the UK.
- It is characterised by the presence of dwarf shrubs at a cover of at least 25%.
- It is typically dominated by a range of dwarf shrubs such as heather *Calluna vulgaris* bilberry *Vaccinium myrtillus*, crowberry *Empetrum nigrum*, and bell heather *Erica cinerea*.
- Blanket bog is distinguished from heathland by its occurrence on deep peat (>0.5 m).

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
H12 *Calluna vulgaris-Vaccinium myrtillis* heath H18 *Vaccinium myrtillus-Deschampsia flexuosa* heath M16 *Erica tetralix-Sphagnum compactum* wet heath And: H4, H8, H9, H10, H15, H16, H21	**Birds:** **Black grouse *Tetrao tetrix;* Hen harrier *Circus cyaneus;* Twite *Carduelis flavirostris*** **Reptiles:** **Adder *Vipera berus*** **Plants:** **Sword-grass *Xylena exsoleta;*** Heath dog-violet *Viola canina*; Bog bilberry *Vaccinium uliginosum;* **Chickweed wintergreen *Urocystis trientalis*** **Invertebrates:** Nationally notable moths and ground beetles; mountain bumblebee *Bombus Monticola*	• Overgrazing • Undergrazing (bracken and purple moor grass) • Inappropriate muirburn • Increased predation • Persecution of key species • Climate change • Agri-environment/forestry schemes

Grasslands and Enclosed Farmland (Including Acid/Calcareous/Neutral Grassland/Semi-Improved Grassland; Arable Field; Arable Field Margin; Purple Moor Grass and Rush Pasture; Scrub/Gorse Scrub; Bracken/Scattered Bracken) **(146221ha / 30.85% of Scottish Borders Land Cover – plus 5377.70km of hedgerow)**[i]

- This is the dominant habitat type of the Scottish Borders. Around 85% of the land is agricultural and a diverse range of habitats exist within this farmed landscape.
- Grasslands of highest biodiversity value tend to be areas of long established pasture, which have been managed traditionally for generations with low levels of input.
- With changing agricultural practices and intensification, up to 95% of the UK's species rich meadows have been lost since World War II. The estimated area of unimproved, species rich grasslands in the Borders, is less than 2,000ha.
- Though it is possible to create wildflower grasslands under agri-environment schemes, these grasslands are not readily recolonised by rarer plants and insects because of habitat isolation and fragmentation. Created grasslands may also pose a threat to the genetic integrity of the remaining natural grasslands as there is no requirement to use seed of local provenance.
- Therefore it is important to retain old unimproved grasslands and to continue their traditional management such as controlled grazing or mowing in late summer.

- Unimproved grasslands occurring in Scottish Borders can be broken down into four broad types; acid grassland, purple moor grass and rush pasture, unimproved neutral grassland and calcareous grassland, which conform to UK Biodiversity Action Plan priority habitat types.
- It is estimated that 10% of the known species-rich hedgerows occur in Scottish Borders. Other grassland boundary features include dykes, grass margins, beetle banks, shelter belts, field corner plantings, and water margins.
- Modern, intensive farming practices, particularly in the arable areas of the east e.g. the Merse, have led to loss of such boundary features and their intrinsic biodiversity value as corridors and networks for wildlife, as well as their ability to act as seed banks.
- Ironically, sympathetic management can positively impact agriculture. For example, beetlebanks provide habitat for predatory insects, reducing the need for pesticides. Game birds can seek cover in grassland margins and corner plantings.
- Much of the acid grassland in Scottish Borders occurs on Silurian siltstones and shales and Devonian sandstones and lavas and on superficial deposits such as sands and gravels – geological features that are generally acid to neutral in composition. Due generally to high levels of rainfall, soils readily leach to form an acidic substrate. Large expanses occur in the uplands.
- Acid grassland is often the result of poor management of other priority habitats such as upland heath and may be of low biological interest. However, locally base rich deposits occur, which give rise to calcareous soils and flushes which are more species rich. It is an important component of birds such as curlew and golden plover.
- Purple moor grass and rush pasture occur in the wettest areas of hill ground, usually on acidic soils on flatter tops and less steep slopes of western hills, in areas of highest rainfall. It is particularly localised around the headwaters of the Yarrow, Ewes Water and Upper Tweed.
- The vegetation types associated with this habitat can form diverse mosaics of wet grasslands, dry grasslands, and, in the Scottish Borders, upland heath.
- The mosaic of vegetation types associated with this habitat and the often very wet nature of the sites provide rich feeding and breeding areas particularly for insects. These insects in turn form the basis of an important food supply for chicks of several of our upland bird species such as black grouse, snipe and curlew.
- Purple moor grass is particularly susceptible to over-grazing. Rush pasture, because it occurs on lower lying slopes and semi-improved enclosed agricultural land, can be at risk from reclamation work such as drainage, ploughing, liming and reseeding.
- Unimproved or species rich grasslands are those that are unaffected by agricultural improvement (extensive fertiliser use and reseeding).
- These grasslands are mainly managed as traditional hay meadows or areas of permanent pasture and occur throughout the Borders on a variety of rock types; from the sea cliffs of Berwickshire, through the basin mires and rocky knolls of the central Borders, to the hill slopes of Tweeddale. Such sites can contain high proportions of native wild flowers and grass species.
- Most neutral grasslands (meadows) survive as isolated habitat fragments often enclosed by linear field margins or woodlands. In the uplands they can be bounded by drystone dykes or occur on the lower slopes of unimproved hill ground. They provide feeding areas for moorland birds in the summer and support woodland edge species.
- Calcareous grasslands occur where underlying rock types are base rich. Most commonly these are found on Silurian greywacke rocks in the uplands. locally however, rocks rich in lime can outcrop almost anywhere and that is where small pockets of this grassland type can be found.
- Calcareous grasslands in the Borders are generally found on steep, south facing slopes with thin soils and basic rocks. Very small areas now remain in the Borders and are of high nature conservation interest.

Associated NVC Communities*	Species of Conservation Concern (SoCC)	Issues / Pressures
U1 *Festuca ovina-Agrostis capillaris-Rumex acetosella* grassland U2 *Deschampsia flexousa* grassland U4 *Festuca ovina-Agrostis capillaris-Galium saxatile* grassland M25 *Molinia caerulea- Potentilla erecta* mire M26 *Molinia caerulea-Crepis paludosa* mire MG1 *Arrhenatherum elatius* grassland *MG3 Anthoxanthum oderatum-Geranium*	**Plants:** Mat grass *Nardus stricta*; Common bent *Agrostis capillaris;* Stiff sedge *Carex bigelowii*; Butterwort *Pinguicula vulgaris*; Purple moor grass *Molinia caerulea;* Wavy hair grass *Deschampsia flexuosa;* Viviparous fescue *Festuca vivipara; J*ointed rush *Juncus articulates;* Soft rush *Juncus effuses*; Bell heather *Erica cinerea;* Crested hair grass *Koeleria macanthra*; Soft brome *Bromus hordeaceus*; **Annual knawel *Scleranthus annus***; Maiden pink *Dianthus deltoids*; Rock rose *Helianthemum chamaecistus*; Kidney vetch *Anthyllis vulneraria;* Autumn gentian *Gentianella amarelle;* Crested dogstail *Cynosurus cristatus*; Quaking grass *Briza media;* Harebell *Campanula rotundifolia;* Thyme *Thymus polytrichus*; Yarrow *Achillea millefolium*; Yellow rattle *Rhinanthus minor;* Meadow cranesbill *Geranium pratense;* Hawthorn *Crataegus monogyna*; Blackthorn *Prunus spinose*; Ash *Fraxinus excelsior;* Purple ramping fumitory *Fumaria purpurea*; **Wild pansy *Viola***	• Inappropriate grazing • Afforestation – including native woodland • Abandonment • Fertilising, ploughing and reseeding • Increased slurry use • Silage (rather than hay) cropping • Agricultural intensification

sylvaticum grassland MG5 *Centaurea nigra- Cynosurus cristatus* grassland. CG2 *Festuca ovina- Avenula pratensis* grassland CG7 *Festuca ovina-Hieracium pilosella- Thymus praecox* grassland CG10 *Festuca ovina-Agrostis capillaris-Thymus polytrichus* grassland.	***tricolor*; Charlock *Sinapis arvensis*.** **Birds: Short eared owl *Asio flammeus;* Golden plover *Pluvialis apricaria;* Curlew *Numenius arquata*;** Snipe *Gallinago gallinago;* **Barn owl *Tyto alba;* Grey partridge *Perdix perdix*; Tree sparrow *Passer montanus*** **Invertebrates:** Common hawker dragonfly *Aeshna juncea;* Emperor moth *Saturnia pavonia*; Northern brown argus *Aricia Artaxerxes*; Common blue butterfly *Polyommatus Icarus;* Yellow meadow ant *Lasius fiavus* **Mammals: Brown hare *Lepus europaeus*** **Montane**	**(141ha / 0.03% of Scottish Borders Land Cover)[i]**

- This habitat lies above the natural tree line (above 600m) and nationally includes montane heath and snow bed communities that are dominated by stiff sedge and three leaved rush, and dwarf forb communities of alpine lady's mantle, moss campion, Sibbaldia and saxifrage species.
- It also includes moss and lichen dominated heaths of mountain summits.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
W20 *Downy willow Salix lapponum-greater woodrush Luzula sylvatica* And: U7, U10, U14, U17, U23, H14, H20, cG12	**Mammals: Mountain hare *Lepus timidus*** **Birds: Golden eagle *Aquila chrysaetos;* Dotterel *Charadrius morinellus*;** Raven *Corvus corax;* **Ring ouzel *Turdus torquatus;* Twite *Carduelis flavirostris*** **Plants: Oblong woodsia *Woodsia ilvensis;* Downy willow *Salix lapponum;*** Pale forget-me-not *Myosotis stolonifera;* Hairy stonecrop *Sedum villosus;* **Mossy saxifrage *Saxifraga hypnoides;*** Sheathed sedge *Carex vaginata;* Black alpine sedge *Carex atrata;* Alpine foxtail *Alopecurus borealis;* nationally scarce mosses **Fungi**: Nationally scarce lichens	• Overgrazing • Fragmentation and isolation • Recreation • Wind farms • Climate change Agri-environment/forestry schemes

MARINE AND COASTAL HABITATS

Maritime Cliff and Slope (Includes Inland and Coastal Rock) **(872ha / 0.19% of Scottish Borders Land Cover)[i]**

- This habitat comprises sloping to vertical faces on the coastline where a break in slope is formed by slippage and/or coastal erosion. It includes cliff tops influenced by salt spray deposition and shore areas above the intertidal zone.
- Around 4,000km of the UK coastline has been classified as cliff of which approximately one half occurs in Scotland. 1% of the UK total (c.40km) lies in Scottish Borders.
- In Scottish Borders, the habitat is mainly made up of hard cliffs. These are formed in rocks that are resistant to weathering and tend to support few higher plants except on ledges. Soft cliffs, which are formed in less resistant rocks, have less steep slopes that are more easily colonised by vegetation. Good examples of soft cliffs occur around Burnmouth.
- Lichens are the predominant vegetation on exposed hard cliffs with plant species such as thrift and sea campion on ledges. Variations occur where there is water seepage or enrichment from seabird guano. Scrub and bracken occur on soft cliffs and there is a small remnant of semi-natural woodland.
- Maritime grasslands have red fescue, thrift, sea and buck's-horn plantain together with species of more inland grassland such as bird's-foot trefoil, common restharrow and various grasses.
- Calcareous grassland communities, with common rock-rose and crested hair-grass occur on thin soils with underlying mineral-rich rock while areas on acidic rocks support maritime heath characterised by ling. Associated with these grassland habitats are invertebrates of nationally restricted distribution such as the northern brown argus butterfly.
- There are colonies of breeding seabirds with nationally important numbers of guillemot and kittiwake. Other breeding species are cormorant, shag, razorbill, fulmar and puffin. There are also breeding peregrine and raven, cliff nesting house martins and an abundance of rock pipits and linnets.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
CG2 *Festuca ovina- Avenula pratensis* grassland CG7 *Festuca ovina-Hieracium pilosella- Thymus praecox* grassland	**Plants:** Common rock-rose *Helianthemum chamaecistus;* Thrift *Armeria maritima;* Scots lovage *Ligustum scoticum;* Roseroot *Sedum rosea;* Carline thistle *Carlina vulgaris;* Bloody cranes-bill *Geranium sanguineum;* Spring squill *Scilla verna;* Sea campion *Silene maritima;* **Purple milk-vetch**	• Inappropriate grazing, cultivation and abandonment • Overgrazing (sheep, cattle, rabbits) • Scrub encroachment • Reduction of natural zonation at cliff edges

CG10 *Festuca ovina-Agrostis capillaris-Thymus polytrichus* grassland.	***Astragalus danicus;*** Kidney vetch *Anthyllis vulneraria;* Buck's-horn plantain *Plantago coronopus;* Crested hair-grass *Koeleria macrantha;* Ling *Calluna vulgaris* **Birds: Peregrine falcon *Falco peregrinus;*** Raven *Corvus corax;* Rock pipit *Anthus petrosus;* House martin *Delichon urbicum*, Atlantic puffin *Fratercula arctica*; Herring gull *Larus argentatus;* Razorbill *Alca torda;* Shag *Phalacrocorax aristotelis;* Kittiwake *Rissa tridactyla;* Guillemot *Uria aalge* **Invertebrates: Northern brown argus *Aricia artaxerxes;*** Common blue butterfly *Polyommatus icarus*	• Local eutrophication • Pesticide applications • Dumping of rubble and rubbish • Recreational impacts in easily accessible places • Development too close to cliff-top ecological communities • Coastal erosion (e.g. Lower Burnmouth, Cove, Hilton Bay) • Local erosion, trampling and disturbance • Introduced species and INNS • Climate change

Marine (Coastal Sea and Shore) **(435ha / 0.19% of Scottish Borders Land Cover)**[i]

- The marine environment did not feature in previous Habitat Action Plans for the Scottish Borders, however actions for marine habitats were undertaken by the Berwickshire and North Northumberland Marine Nature Partnership (now extended to southern coastal areas in Northumberland).
- There are internationally important populations of breeding seabirds and marine mammals; the grey seal population is part of a larger colony centred around Fast Castle, thought to be the fourth largest in the UK, and fifth largest in the world.
- Sea caves, rocky reefs and rich marine life are

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
Not applicable.	**Plants:** Narrow-leaved eelgrass *Zostera angustifolia*; Dwarf eelgrass *Z. noltei* **Crustaceans:** Mussel *Mytilus edulis;* Burrowing heart-urchins *Echinocardium cordatum;* small crustaceans; polychaete worms; bivalve molluscs. **Fish:** Sand-eels *Ammodytes spp.* **Birds**: Herring gull *Larus argentatus;* Razorbill *Alca torda;* Shag *Phalacrocorax aristotelis;* Kittiwake *Rissa tridactyla;* Guillemot *Uria aalge* **Mammals:** Grey seal *Halichoerus grypus;* **Otter *Lutra lutra***	• Pollution • Climate change • Recreational activities • Intensive

OTHER HABITATS

Urban Habitats (Including Amenity Grassland, Gardens, Ruderal Communities, Bare Ground habitats) **(11676ha / 2.49% of Scottish Borders Land Cover)**[i]

- The Scottish Borders has a long history of human settlement, throughout which the urban environment has been developed in response to the needs and well-being of the inhabitants.
- Over 80% of the Borders population live and work in Borders towns and villages and the need for a healthy and green built environment is therefore particularly important.
- The character of the built environment is dynamic, continually changing through the landscaping and management of public and private space, changes or additions to the building stock and the changing demands on land.
- Urban wildlife habitats can be defined as greenspaces and the associated ecological niches found within built up areas. Types of greenspace include public parks and gardens, private gardens and grounds, amenity greenspace, play areas, sports areas, green corridors, natural and semi natural greenspaces (including Common Good Land, Community Woodlands and Designed Landscapes), cemeteries, allotments and public utility land, derelict land and civic space.
- Tree lined avenues between settlements, weirs and river corridors and walkways are often recognised as having aesthetic and wildlife value. Even existing buildings, derelict buildings, old farmsteads and former industrial sites can all have a high biodiversity value.
- Recording urban wildlife and identifying priorities and projects to support biodiversity within urban habitats may help to protect and enhance it, with benefits for human health and wellbeing.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures

Not applicable	**Mammals:** **Otter *Lutra lutra;* Common pipistrelle *Pipistrellus pipistrellus*; Soprano pipistrelle *Pipistrellus pygmaeus;* Brown long eared bat *Plecotus auritus;* Whiskered bat (scarce) *Myotis mystacinus;* Natterer's bat *Myotis nattereri;* Hedgehog *Erinaceus europaeus;*** Mole *Talpa europaea;* Red fox *Vulpes vulpes* **Fish:** **Atlantic salmon *Salmo salar*** **Birds:** **Swift *Apus apus;* House martin *Delichon urbicum;* Linnet *Linaria cannabina*; Spotted flycatcher *Muscicapa striata;* Song thrush *Turdus philomelos;* Peregrine falcon *Falco peregrinus;* House Sparrow *Passer domesticus;* Black-headed gull *Larus ridibundus*** **Amphibians:** Common Frog *Rana temporaria;* Common Toad *Bufo bufo;* Smooth Newts *Lissotriton vulgaris* **Invertebrates:** Large white *Pieris brassicae*; Small Tortoiseshell *Aglais urticae*; Red admiral *Vanessa atalanta*; Peacock butterfly *Aglais io*; Ladybird species *Coccinellidae spp.*	

[i] Scottish Borders Council & Tweed Forum Consortium (2010) *Tweed Aerial Survey Phase 2: Aerial Photography Interpretation Land Cover Classification & Habitat Mapping.* Produced by Environment Systems.

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Scottish Borders COUNCIL

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Strategic Environmental Assessment

Environmental Report

Scottish Borders
Local Biodiversity Action Plan

2018-2028

Non-Technical Summary

Introduction: Scottish Borders Local Biodiversity Action Plan

The consultation on the Scottish Borders Council Local Biodiversity Action Plan (LBAP) 2018 – 2028 updates the original LBAP, produced in 2001 in collaboration with the LBAP partnership (local organisations with an interest in natural heritage and land management) and appended with updated Habitat Action Plans from 2003-2009,

The new LBAP is being produced with the knowledge gained from work undertaken in connection with the original LBAP, and promotes new actions for biodiversity in light of new international and national targets for biodiversity and based on an ecosystems approach.

The ecosystems approach aims to ensure the protection and enhancement of functioning living systems within the landscape, for the benefit of communities, (rather than focussing purely on individual species and habitats).

These living systems are biodiversity in all its forms - all of life, from animals, plants, fungi to micro-organisms - interacting with their environment. These living systems, known as ecosystems, sustain nature, and our survival depends upon them. They provide us with food, water and air that are essential for life, with the minerals and raw materials for our industry and consumption, and they break down wastes. Our wealth and our individual well-being are directly linked to well-functioning ecosystems. Healthy ecosystems provide a high-quality natural environment, where humans can also find recreation, health and solace, and in which our community finds its roots and sense of place.

The LBAP adopts an ecosystems approach to action-planning for biodiversity, taking account of how to protect and enhance ecosystems, with a focus on four particular groups of ecosystem services, which provide multiple benefits for all of biodiversity, including humans. These are:

- Supporting services
- Regulating services
- Provisioning services
- Cultural services

The Strategic Environmental Assessment of the Plan

SEA is a way of making sure that the environmental effects of a plan, (or a programme or strategy) are carefully considered as the plan is developed. It is a legal requirement for public sector bodies to undertake SEA on certain plans they produce, in accordance with The Environmental Assessment (Scotland) Act 2005 (hereafter referred to as “the 2005 Act”). The 2005 Act also requires the production of this Non-Technical Summary outlining the process and findings of the SEA on the plan or strategy under consideration

The purpose of the SEA is to identify and minimise any potential negative effects on the environment and to enhance any likely positive effects. It ensures environmental considerations are part of the Plan’s development and that these are shared with the public and stakeholders for comment, ensuring transparency in decision-making. For the LBAP, the SEA aims to:

- Integrate environmental factors into the preparation of and decision-making for the LBAP
- Improve the LBAP and enhance environmental protection
- Increase public participation in decision making

- Facilitate the openness and transparency of decision-making

The SEA has been carried out concurrently with the development of the LBAP.

It summarises the current state of the environment, focussing on the Scottish Borders, and also reflecting any relevant aspects of the wider national and international environment and it considers how the environment may change if the LBAP is not implemented.

The SEA focuses on the important aspects of the environment that are relevant to the LBAP and need to be considered during the preparation of the LBAP.

The SEA process is structured around topic areas reflecting environmental issues that should be explored through the main Environmental Report. Topics include:

- Biodiversity, flora and fauna
- Population and human health
- Water
- Soil
- Air
- Climatic factors
- Material assets
- Cultural heritage
- Landscape

To complement the ecosystems approach for the LBAP, the SEA process also adopts an ecosystems approach. This approach considers how the LBAP might impact on ecosystems from an environmental as well as social and economic perspective.

In adopting an ecosystems approach, the SEA topics are linked to ecosystem services. For example, the SEA topic of Water leads to consideration of the ecosystem services water provides, such as providing fresh water we can drink, regulating water quality and pollution, and supporting nutrient cycling.

The assessment considers the potential effects on ecosystems services linked to topic areas if the LBAP is implemented, and also demonstrates the interrelationships between SEA topic areas.

The following were key considerations for the assessment:

- What significant effects will the plan have on ecosystem services?
- What are pressures are ecosystem services under and does the Plan address these?
- Does the Plan meet key objectives for each topic?

Relevant related policies and environmental objectives

Because the Plan adopts an integrated ecosystems approach to achieving its objectives and is applicable to a range of landscapes, both rural and semi-urban, across the Scottish Borders, a large number of other plans, programmes and strategies (PPS) have guided its development and are relevant to its delivery. There are, however, some key PPS for the LBAP:

Scottish Biodiversity Strategy
This Plan is rooted in the context of the Scottish Biodiversity Strategy, incorporating the updated 2020 Challenge for Scotland's Biodiversity. However, the Plan looks beyond 2020 to a time when

the UK-EU relationship may have changed and to a period when we are likely to see the pressures of climate change on living systems increasing.

Land Use Strategy
The Plan is also guided by Scotland's Land Use Strategy (2011, 2016) and builds on pioneering work that Scottish Borders Council undertook with partners through the Land Use Strategy Pilot Framework (LUS Pilot). It attempts to secure multiple benefits through effective land use, management and stewardship that takes account of biodiversity.

Scottish Government *Purpose*
The Plan highlights the links between a high quality natural environment, economic prosperity and social well-being, seeking to help fulfil the Scottish Government's *Purpose.*

Connected Borders
The Plan highlights the links between a high quality natural environment, economic prosperity and social well-being, seeking to help support the vision of *Connected Borders* for better connected, enterprising, beautiful, well, caring and empowered communities.

Overall, this Plan seeks to support national and international objectives to enhance biodiversity and arrest its loss, particularly through improved land management and recognises both the need and the opportunity to support the economy and the health and well-being of society in so doing. However, it also takes account of specific local contexts and landscapes, considering these in the development of actions that will achieve higher-level national and international aims.

All relevant PPS and their relationship to this Plan are outlined in Appendix A of the Environmental Report.

The Scottish Borders: Environmental Issues

The table below gives an overview of key aspects of the environment, organised by SEA topic area:

SEA Topic	Current State
Biodiversity, Flora & Fauna	The high quality natural environment of the Scottish Borders on both land and sea is recognised in regional policy documents as one of its principal assets and also brings benefits for health and wellbeing. Living systems in the Scottish Borders face a large number of varied pressures, which may negatively impact related ecosystem services.
Soil	Soils are of key importance in water quality, flood prevention, biodiversity and other soil related functions for natural heritage. Their protection is vital to maintaining natural processes and in turn the quality of our environment as a whole. It will be important, through LBAP actions, to protect soil biodiversity and quality. This is of increasing importance in the light of challenges that climate change may bring. The LBAP will consider the protection of high quality and sensitive soils such as deep peat, in terms of helping to restore and enhance ecosystem services.
Water	The management and control of our land, as well as our water resources have major implications for water quality, biodiversity and human health, which are important considerations within the LBAP. Water quality in the Scottish Borders is in general very good within freshwater and marine areas, although some areas require improvement, which the LBAP will support. Climate change brings risks of greater flood events.
Landscape	The Scottish Borders is considered to have a special, diverse landscape, with variations of upland, lowland, valley and coastal landscapes. Current landscape issues in the Scottish Borders include the cumulative impact of wind turbines, which may also significantly affect habitats and species, and large plantation forestry of monoculture timber crops such as Sitka spruce, which cover hillsides and feature few native species. Incremental change from development is also a concern. By helping to enhance biodiversity and habitat connectivity, the LBAP aims to ensure the continued local distinctiveness of landscapes, as well as contributing positively to setting and improved visual amenity, for example, through reducing fragmentation.

Population & Human Health	People enjoy living in the Scottish Borders because of the people, area and countryside. By supporting the biodiversity that is inherent in the landscape, the LBAP actions will help ensure people continue to enjoy living in the Borders. Certain health issues such as diabetes or mental health are of increasing concern for the Scottish Borders. The LBAP actions can support other PPS in addressing some of these issues. The LBAP aims to support the local economy and tourism and to encourage rural industries to adopt approaches that work with biodiversity and ecosystems, for mutual benefit.
Climatic Factors	Climate change is a major global issue that in the Scottish Borders is likely to affect species distribution and may also bring more flood events or extreme weather. Greenhouse gas emissions reductions of 80% by 2050 are being supported by renewable energy developments. The LBAP aims to encourage appropriate development in terms of impacts on biodiversity and ensure developments avoid adverse impacts on biodiversity. It also aims to promote active travel, rather than reliance on private car which to assist with greenhouse gas emissions reduction.
Material Assets	Timber is important for energy supplies and the Scottish Borders' forestry resource is significant. It is also essential for construction and development purposes. However, poorly managed commercial forestry may have negative impacts on biodiversity, which the LBAP will seek to avoid. The LBAP will aim to support sustainable management of natural resources and promote improvement and use of green networks in support of more active forms of transport, whilst avoiding disturbance to sensitive species and habitats.
Cultural Heritage	The cultural heritage of the region is part of what residents find most appealing about the Borders as a place to live, in terms of people and landscapes. The LBAP seeks to encourage experiences of nature and the outdoors, supporting cultural ecosystem services and appreciation of local cultural, as well as natural heritage.
Air	Traffic volumes are increasing at around 1.5% per annum, which may impact future air quality (and climate change targets). Planting can be beneficial for improving air quality through the removal of pollutants in the soil and in the air. The LBAP aims to promote woodland creation and expansion, which will support clean air in the Scottish Borders and help with carbon capture. The LBAP also promotes actions that support more active travel, including creation of a local walking route and support for existing walking/cycle paths.

What would happen to our environment without the LBAP?

The table below summarises how the local environment may evolve without the LBAP:

SEA Topic	How the environment may evolve without the LBAP
Biodiversity, Flora & Fauna	The LBAP provides a focus and a framework for the work of partners, land managers and the community to support biodiversity. It may be more challenging to harness the joint efforts of partner organisations to adopt collaborative projects that aim to protect and enhance biodiversity without the LBAP. Species may continue to decline and pressures on habitats may not be adequately considered in decisions about land use, which may fail to consider the connectedness of habitats and species at a landscape scale. There is also an opportunity help species to adapt to climate change, by encouraging connected ecological networks that aid migration and by supporting healthy ecosystems that will help alleviate climate change impacts.
Soil	Without the LBAP there would be lost opportunities to encourage effective land management that supports ecosystems, and helps improve and protect soil quality and biodiversity. Without the LBAP pollution may have greater impacts on biodiversity within sensitive habitats than if it were adopted.
Water	The LBAP actions are intended to promote water quality and represent an additional opportunity to improve existing issues through measures such as restoring and improving ecosystems in catchment areas, that will bring benefits for biodiversity in terrestrial and marine environments.
Landscape	The LBAP will contribute to connected habitats that enhance and support biodiversity, in so doing contributing to the preservation of Scottish Borders land and marine habitats,

	which are valued for their distinctiveness by both the community and visitors.
Population & Human Health	The LBAP seeks to increase awareness of and positive action for biodiversity. There may be missed opportunities to work with communities to promote direct nature experiences and enjoyment of natural greenspace as well as marine areas, which would mean a loss of benefits for people in terms of health, well-being, enjoyment and economic prosperity. It may also mean a loss in terms of gathering data records through citizen science and encouraging people to better understand the pressures on our local ecosystems and biodiversity, in order to help address them.
Climatic Factors	Without the LBAP there would be less coordinated effort to enhance ecosystems that can assist with carbon capture and sequestration, such as protection of blanket bog habitats and woodlands, including strategic woodland planting schemes. The LBAP provides a framework for action to support ecosystem restoration and enhancement and protection of ecosystem services, or natural capital.
Material Assets	The LBAP has the potential to encourage sustainable approaches to our use of natural resources and ecosystem services.
Cultural Heritage	There are actions within the LBAP that help support our regions cultural heritage, not least the positive impacts of being in nature in terms of inspiring creativity and appreciated a shared cultural heritage amongst residents, promoting this to visitors. The LBAP will help to highlight the role that ecosystems play in terms of cultural services with benefits for human health and wellbeing.
Air	Actions within the LBAP can raise awareness of the contribution biodiversity and ecosystems play in regulating air quality, as well as encouraging woodland planting and habitat enhancements that could help improve the function of regulating ecosystems.

Are there any alternatives to this Plan?

The 2005 Act requires the consideration of the reasonable alternatives considered in the development of the Strategy. The following alternatives were assessed:

Alternative Options	Outcome
OPTION 1 Produce a new Plan incorporating new objectives and actions, adopting an ecosystems approach	A new Plan can better link to updated national and international strategies and thinking about how to protect and enhance biodiversity and ecosystems at a landscape scale, also considering future challenges of climate change. **Preferred option.**
OPTION 2 Produce a revised Plan incorporating new objectives and actions, continuing the focus on habitats and species	A revised Plan can better link to updated national and international strategies and take account of future challenges including climate change. **Potential option.**
OPTION 3 Review the existing Plan and do not develop new actions	The old Plan is outdated and cannot be effectively monitored. **Not a preferred option.**
OPTION 4 Retain existing Local Biodiversity Action Plan and do not revise	The existing Plan is outdated. The structure of the Plan does not align with national strategies for biodiversity **Do not take forward.**
OPTION 5 Disregard the existing Local Biodiversity Action Plan and do not replace	Scottish Borders Council has a duty to further the conservation of biodiversity, which the LBAP supports **Not a viable option.**

How will the Plan affect the environment?

A detailed assessment, based on the ecosystem services approach has considered the likely significant environmental effects of the LBAP, if implemented. A summary of results is provided in the table below:

Significant Negative Effects	No significant negative effects were considered likely, following the assessment.
Significant Positive Effects	A number of significant positive effects were identified for regulating, cultural and provisioning ecosystem services. Many of the identified positive effects are likely to work together to deliver more significant combined benefits for the environment. Over time, it is also possible that the components of the LBAP will work together to build greater combined resilience of biodiversity and ecosystems to climate change.
Other Negative Effects	No other negative effects were considered likely, following the assessment.
Other Positive Effects	Other positive effects were considered likely for a range of ecosystems and SEA topic areas, which again would work in combination to provide a cumulatively positive effect for the environment as a result of the LBAP's implementation. In particular positive effects (but not significant positive effects) were predicted for all supporting services, which would benefit indirectly from the LBAP's implementation.
Neutral Effects	For some ecosystem services, neutral effects were predicted, either because the local environment is not as important for these services such as , or because the LBAP actions would not be at a great enough scale to positively or negatively affect these services.

No mitigation has been identified, as the LBAP's implementation is unlikely to result in any negative effects or environmental damage. However, consideration has been given to how to reduce any likely tensions between ecosystem services arising from the implementation of LBAP. Any opportunities for enhancement have also been highlighted within the Environmental Report.

How will environmental effects be monitored?

Monitoring is used to check that no negative environmental effects will arise from the implementation of the LBAP. The LBAP itself sets out commitments for monitoring, which take consideration of the likely environmental effects following the SEA. There are no specific proposals for monitoring arising from the SEA.

Next steps

The next step for both the Environmental Report and the Local Biodiversity Action Plan is a 6-week consultation with the public and key agencies. Consultees may wish to comment on the proposed Plan, taking into account the SEA findings.

All of the comments received will be taken into account and amendments may be made accordingly to both documents. Any significant changes to the LBAP in relation to consultation responses may require further consideration in terms of environmental implications.

The statutory consultation for this Strategic Environmental Assessment is in place until:

Monday 28 May 2018.

If you would like to express your views on the Environmental Report, your comments should be submitted by email or post. Comments will be accepted up until midnight on the last day of the consultation period:

Email: ecology@scotborders.gov.uk
Post: Council Headquarters, Newtown St Boswells, Melrose, TD6 0SA

All opinions will be taken into account before the Plan is adopted.

A Post-Adoption Statement will be prepared in accordance with the requirements of the SEA process, explaining how the findings of the environmental assessment and the responses to the Environmental Report were taken into account.

Environmental Report

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Appendix B: Environmental Baseline: Supporting Data tables
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1. Introduction

1.1 Overview of the SEA

1.1.1 The EC SEA Directive (2001/42/EC) and the Environmental Assessment (Scotland) Act 2005 (hereinafter referred to as "the 2005 Act") requires the Strategic Environmental Assessment (SEA) of Plans, Programmes and Strategies (PPS) that may have a significant effect on the environment.

1.1.2 To meet the requirements of the 2005 Act, the Scottish Borders Local Biodiversity Action Plan (LBAP), Scottish Borders Council is undertaking a SEA. This process involves several stages, as outlined below, and is a systematic method for considering the likely significant effects on the environment, integrating environmental factors into policy preparation and decision making.

1.1.3 **Screening** is the first SEA stage. The LBAP was not considered to be exempt under Section 4(3) or 6(1)(a) of the 2005 Act. Although not specifically required by legislative, regulatory or administrative provision, the LBAP would be prepared for town and country planning or land use (and would influence other related processes such as forestry and water management); and does not relate to a small area or a minor modification to any existing SEA. As such, it is a 'Qualifying Plan' for SEA.

1.1.4 **Scoping:** This was the process by which details for this Environmental Report were determined. The Scoping Report identified the relevant aspects of the environment to be considered further in the SEA process, and associated environmental problems that would need to be taken into account when developing the plan or policy. The appropriate SEA Consultation Authorities, (Scottish Natural Heritage (SNH), Historic Environment Scotland (HES) and the Scottish Environmental Protection Agency (SEPA)), were approached for their comments on the proposed content, level of detail and methodology for the proposed assessment from October to November 2017, in accordance with the required 35-day consultation period.

1.1.5 Consultation Authorities were generally happy with the proposed approach to the LBAP SEA, including the scoping-in of all nine SEA Topics relevant to the LBAP (Biodiversity, Flora and Fauna; Population and Human Health; Soil; Water; Air; Climatic Factors; Material Assets; Cultural Heritage, and Landscape).

1.1.6 A summary of Consultation Authority responses to the Scoping Report and how these have been taken into account in the preparation of this Environmental Report is outlined in Appendix F. It should be noted that this Appendix highlights only the responses where a specific request for action or consideration was highlighted by the Consultation Authorities. Where responses indicated they were content with the outlined approach, this has not been included in Appendix F. Responses have been abbreviated, for clarity and focus on the required issue.

1.1.7 **Environmental Assessment:** The next stage in the SEA Process is the Environmental Assessment of the LBAP and its reasonable alternatives, which this Environmental Report documents, along with an outline of the LBAP's development and information relating to the approach taken for the SEA. This includes a description of the environmental context within which the LBAP consultation and its likely environmental effects is framed. The Environmental Report establishes a monitoring framework and measures to mitigate any adverse impacts that may occur as a result of the LBAP's implementation.

1.1.8 Assessment of the LBAP has been undertaken in parallel to its development, helping refine the LBAP in order to enhance positive environmental impacts and avoid or mitigate negative environmental impacts. A timeline of progress is outlined in Table 1, below.

1.1.9 **Post-Adoption Statement**: The Post-Adoption Statement will demonstrate how the findings of the SEA have been taken into account in the adopted Plan. In accordance with the Environmental Assessment (Scotland) Act 2005, the Post-Adoption Statement will highlight:

- How the environmental considerations have been incorporated into the LBAP
- How the findings of the Environmental Assessment have been taken into account
- How opinions expressed, from both the local community and consultation authorities during the consultation on the Environmental Report have been taken into account
- The reasons for choosing the LBAP as adopted, in light of other reasonable alternatives
- The measures to be taken to monitor the significant effects of the implementation of the Plan

1.1.10 In summary, as 'an honest interpretation of the likely environmental effects' (Scottish Government, 2013: 6)[1] this SEA has supported the parallel development of the LBAP. Proposed actions have been considered in terms of connection with other relevant PPS, and in terms of their potential for significant effects on the environment. New PPS not previously considered have been added as relevant to the Plan's development and implementation, and actions have been amended where appropriate, or new actions have been proposed. Thus, the SEA has added value to the iterative development of the LBAP.

Table 1: Timeline for LBAP Preparation and SEA Process

LBAP Preparation	Stage in SEA Process	Progress
Audit of original LBAP and Habitat Action Plans Stakeholder consultation workshop preparation	Screening discussions	December 2017 – January 2018 COMPLETE
Baseline mapping Policy Mapping	Baseline mapping Policy mapping	December 2017 – January 2018 COMPLETE
Consultation workshops Action-planning	Policy mapping	February – May 2018 COMPLETE
Draft text Stakeholder consultations	Scoping Report Consultation Authority comments	June – October 2017 COMPLETE
Text revisions Review of actions	Drafting Environmental Report	October – December 2017
Final text review Final actions review Policy driver gap analysis	Drafting Environmental Report	January – April 2018
Production of Final Draft for public/stakeholder consultation	Submission of Environmental Report to Consultation Authorities	13 April 2018
6-week formal consultation period on both LBAP and SEA		
Final LBAP Document Published	Post-adoption statement	Autumn 2018

1.2 The Scottish Borders Local Biodiversity Action Plan

1.2.1 The Scottish Borders Council Local Biodiversity Action Plan (LBAP) is being updated in collaboration with the LBAP partnership: local organisations with an interest in natural heritage and

[1] Scottish Government (2013). *Strategic Environmental Assessment Guidance*. Scottish Government, Edinburgh.

land management, who assisted in the production of the original LBAP, (produced in 2001 and appended with updated Habitat Action Plans from 2003-2009).

1.2.2 The new LBAP is being produced with the knowledge gained from work undertaken in connection with the original LBAP, and promotes new actions for biodiversity based on an ecosystems approach and with experience gained from the Scottish Borders Pilot Regional Land Use Strategy Framework, which aims to ensure the protection and enhancement of functioning ecosystems within the landscape, for the benefit of communities, (rather than focussing on individual species and habitats).

Table 2 outlines Key Facts about the Scottish Borders Local Biodiversity Action Plan.

Table 2: Key Facts

Responsible Authority	Scottish Borders Council
Plan title	Scottish Borders Local Biodiversity Action Plan
Purpose of Plan	To encourage and coordinate joint partnership action for biodiversity across the Scottish Borders, based on an ecosystems approach and with consideration of the findings of the Scottish Borders Land Use Pilot Framework.
What prompted the Plan	Although the LBAP is not a statutory requirement, it was prompted by the UK Biodiversity Action Plan commitment, the Scottish Biodiversity Strategy and the Nature Conservation (Scotland) Act 2004. The Act places a duty on all local authorities and public bodies to further the conservation of biodiversity in carrying out their functions.
Subject	Biodiversity
Plan period	2017-2027 (10 year period to allow for longer-term actions/monitoring)
Frequency of updates	Every 5 years
Plan area	Scottish Borders (region-wide: 4734km²)
Nature/content of Plan	The LBAP strategically outlines proposed actions for biodiversity within the Scottish Borders and their correlation with Scottish Government Policy including the Scottish Biodiversity Strategy, Land Use Strategy and Scottish Government Economic Strategy. The LBAP adopts an ecosystems approach, in line with the Scottish Biodiversity Strategy 2020 Challenge, considering multiple benefits that support for biodiversity can bring to the Scottish Borders, including environmental, economic and social benefits and helping to prevent loss of, and to enhance biodiversity.
Plan objectives	To combat pressures on and support biodiversity and ecosystems, and to deliver social and economic benefits across the Scottish Borders, through encouraging targeted, cost-effective, coordinated actions by partner organisations and the community that will: 1. Restore ecosystems 2. Protect and enhance the regions natural capital 3. Invest in quality greenspace for health and wellbeing 4. Conserve wildlife, habitats and protected places 5. Ensure land and freshwater is managed sustainably 6. Protect and enhance marine and coastal ecosystems
Contact	Elizabeth Hall Assistant Ecology Officer Natural Heritage Regulatory Services Council HQ Newtown St Boswells TD6 0SA elizabeth.hall@scotborders.gov.uk

2. Policy Context

2.1 Key Policies

2.1.1 Schedule 3 of the 2005 Act requires that the Environmental Report includes an outline of the links between the plans, programme or strategy (PPS) under assessment and other relevant PPS.

2.1.2 Because the LBAP adopts an integrated ecosystems approach to achieving its objectives and is applicable to a range of landscapes, both rural and semi-urban, across the Scottish Borders, a large number of PPS have guided its development and are relevant to its delivery. However, four PPS are key policy drivers for the LBAP.

2.1.3 **Scottish Biodiversity Strategy:** The LBAP is rooted in the context of the Scottish Biodiversity Strategy, incorporating the updated 2020 Challenge for Scotland's Biodiversity. However, the LBAP looks beyond 2020 to a time when the UK-EU relationship may have changed and to a period when we are likely to see the pressures of climate change on living systems increasing.

2.1.4 **Land Use Strategy:** The LBAP is also guided by Scotland's Land Use Strategy (2011, 2016) and builds on pioneering work that Scottish Borders Council undertook with partners through the Land Use Strategy Pilot Framework (LUS Pilot). It attempts to secure multiple benefits through effective land use, management and stewardship that takes account of biodiversity.

2.1.5 **Scottish Government *Purpose*** The LBAP highlights the links between a high quality natural environment, economic prosperity and social well-being, seeking to help fulfil the Scottish Government's *Purpose.*

2.1.6 ***Connected Borders*****:** The LBAP highlights the links between a high quality natural environment, economic prosperity and social well-being, seeking to help support the vision of *Connected Borders* for better connected, enterprising, beautiful, well, caring and empowered communities.

2.1.7 In summary, the LBAP seeks to support national and international objectives to enhance biodiversity and arrest its loss, particularly through improved land management and recognises both the need and the opportunity to support the economy and the health and well-being of society in so doing.

2.1.8 The LBAP also takes account of a wide range of relevant international, national, regional and local PPS as well as specific local contexts and landscapes. These have been considered in the development of the LBAP, to ensure complementarity of LBAP actions that support achievement of their aims. All relevant PPS and their relationship to the LBAP are detailed in Appendix A.

2.1.9 Cross-boundary effects with neighbouring authorities are considered through the integration of the LBAP with local plans and strategies, which also consider those produced by neighbouring authorities. Stakeholders from neighbouring authorities are represented within the LBAP Partnership group, as are representatives from statutory consultees with a nation-wide remit for Scotland and links with colleagues from statutory authorities in England.

2.2 An Ecosystems Approach to the Plan and SEA

2.2.1 An ecosystems approach should assist in providing a clear strategic context for the SEA by focussing on the services that ecosystems provide, their importance to the health of the ecosystem (in the Scottish Borders and beyond), and the products or benefits people get from them. The work

of the National Ecosystems Assessment (NEA)[2] has been considered in preparing this SEA, in complement to the ecosystems approach adopted in the LBAP.

2.2.2 Specifically, the ecosystems approach considers how the LBAP might impact on ecosystems that we rely upon to support our social and economic needs, as they provide particular services from which we benefit.

2.2.3 An ecosystem is a complex set of relationships among the living resources, habitats and residents of an area. It includes plants, trees, animals, micro-organisms, water, soil and people. Ecosystems are highly varied, but each is a functioning unit. All elements of an ecosystem are interdependent.

2.2.4 Our own well-being and economic prosperity is dependent on healthy ecosystems as they provide a multitude of resources and processes which are collectively known as 'ecosystem services'. The UK National Ecosystems Assessment describes four groups of ecosystem services[3], all of which are inter-linked. The four groups of services are outlined in Table 3 below.

Table 3: Ecosystem Services

Ecosystem Services	
Supporting services:	**Regulating services:**
These provide the basic infrastructure of life, including primary production, soil formation and water/nutrient-cycling in terrestrial and aquatic ecosystems. All other ecosystem services (regulating, provisioning, cultural) depend on them. Their impacts on human well-being are unseen, but vital.	Extremely diverse, these include the impacts of pollination and regulation of pests and diseases to enable continued provision of ecosystem goods such as food, fuel and fibre. As with supporting services, regulating services are strongly inter-linked with each other, and other types of service.
Provisioning services:	**Cultural services:**
These are manifested in the goods people obtain from ecosystems, such as food and fibre, fuel in the form of peat, wood or non-woody biomass, and water from rivers, lakes and aquifers. Supplies of ecosystem goods are invariably dependent on many supporting/regulating services	These are derived from environmental settings, (where humans interact with each other and nature), such as gardens, parks, rivers and lakes, the seashore and the wider countryside. Such 'green' and 'blue' spaces provide opportunities for outdoor learning, artistic inspiration and recreation.

2.2.5 In the Scottish Borders, there are important stocks of ecosystems, or 'natural capital' that deliver such ecosystem services. Protecting ecosystems and the multiple beneficial services they provide has guided the formation of the LBAP. The LBAP aims to encourage sustainable use of these resources, balancing the ongoing health of ecosystems on which we depend, with social and economic needs.

2.2.6 This ecosystems approach to the LBAP's preparation and implementation is intended to consider the value of ecosystem services when decisions are made regarding how we use, protect and enhance natural resources. The approach takes account of how dynamic ecosystems work across landscapes, and the vast range of ecosystem services that provide us freely with multiple, often unseen benefits.

2.2.7 The ecosystems approach also seeks to involve people who manage or benefit from ecosystem services in decision-making. Preparation of the LBAP has involved people through consultation workshops with partner organisations and formal public consultation, with the aim of encouraging decision-making at a local level about priority actions for biodiversity. The LBAP actions if implemented, provide a framework within which communities can take decisions and action for their local environment.

[2] Defra et al. (2011) UK National Ecosystem Assessment. Available at: http://uknea.unep-wcmc.org/Home/tabid/38/Default.aspx
[3] Ibid. Available at: http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx

2.2.8 This SEA will illustrate links between ecosystem services and use them to help explain the Plan's effects on the environment. Assessment questions will be focussed on the effects on ecosystem services in the Scottish Borders context, which have been related to SEA topic areas and their interrelationships.

2.3 Summary of SEA Ecosystems Approach Methodology

2.3.1 In accordance with the 2005 Act, the SEA process is structured around several topic areas reflecting environmental issues that should be explored through the main Environmental Report. Topics relevant to this assessment are:

- Biodiversity, flora and fauna
- Population and human health
- Water
- Soil
- Air
- Climatic factors
- Material assets
- Cultural heritage
- Landscape

2.3.2 The SEA topics and their inter-relationships link naturally to the ecosystems approach, which can be seen as complementary[4].

2.3.3 This assessment is focussed on likely significant environmental effects arising from the LBAP on ecosystem services, as they relate to SEA Topics, (and their inter-relationships), in the context of the Scottish Borders, with consideration of the LBAP thematic action areas and relevant strategic plans and policies.

2.3.4 The following were key considerations for the assessment:

- What significant effects will the plan have on ecosystem services in the Scottish Borders?
- Does the Plan address identified pressures on these ecosystem services?
- How does the Plan perform against SEA objectives?

2.3.5 Further details on the assessment methodology are outlined in Section 4.

[4] Scottish Government (2011). Applying an ecosystems approach to land use: information note (online). Available at: http://www.scotland.gov.uk/Publications/2011/03/16083740/2

3. Environmental Context

3.1 Introduction

3.1.1 This section examines the following requirements of Schedule 3 of the 2005 Act:

- Relevant environmental protection objectives of other PPS
- Current state of the environment
- Environmental characteristics of the areas likely to be significantly affected
- Existing environmental problems
- Likely evolution of the environment without the implementation of the LBAP

3.1.2 In summary, this section establishes the current state of the baseline environment in the Scottish Borders and how this might change in the future, in the absence of the LBAP. It reviews the environmental characteristics of the Scottish Borders, including existing environmental problems.

3.1.3 Information collated from Scottish Borders Council data as well as other local, regional and national data and statistics, is presented under the broad SEA environmental topic headings as outlined above.

3.2 Relevant Environmental Objectives of Other PPS

3.2.1 The 2005 Act requires consideration of how environmental protection objectives of PPS relevant to the Plan under assessment should be taken into account during its preparation.

3.2.2 This SEA considers how the strategic actions proposed for the LBAP could affect such objectives, or assist their implementation, as outlined in Appendix A.

3.3 Relevant Aspects of the Baseline Environment

3.3.3 Review of the environmental baseline has included spatial data, which is included in Appendix C and summarised in Table 4, below.

3.3.4 An overview of the baseline environment relevant to the LBAP then follows in Table 5, organised by SEA Topic.

3.3.5 Table 5 also highlights key environmental issues/challenges relevant to the LBAP, in accordance with Schedule 3 paragraph 4 of the 2005 Act. Commentary is provided per topic area on possible impacts on existing environmental issues that may arise through implementation of the LBAP. Other PPS that have previously identified these issues through the process of SEA are indicated, where relevant.

3.3.6 Data sources relevant to each topic area are listed within Table 5.

Table 4: Spatial information used for assessment (see Appendix C)

SEA Topic	Corresponding spatial information
Air	Daily average traffic flow
Biodiversity, Flora and Fauna	International, national and local designated sites Ancient Woodland Inventory
Cultural Heritage	Listed Buildings Conservation Areas Scheduled Monuments Historic Environment Records Gardens and Designed Landscapes Inventory Battlefields
Water	River Flood Risk; Surface Water Flood Risk
Soil	Soil types
Population and Human Health	Drive times Multi Deprivation Index Core paths
Landscape	National Scenic Areas Special Landscape Areas Landscape Character Assessment Countryside Around Towns area
Material Assets	Strategic road network Rail network Cycle Network Waste recycling centres
Climatic Factors	Wind farms

**Scottish Borders Pilot Regional Land Use Strategy Framework*

Table 5: Overview of the Baseline Environment Relevant to the LBAP

SEA TOPIC: BIODIVERSITY, FLORA & FAUNA	
SEA OBJECTIVE: Protect, enhance and, where necessary, restore biodiversity and encourage habitat	
Overview of Relevant Aspects of Baseline Environment	**Data Sources**
Habitats • The Tweed Aerial Survey classifies the type of land throughout the Scottish Borders using satellite remote sensing. Information on habitats of the Borders and land cover are outlined in Appendix E. • The Phase 1 Habitat Classification is produced by the Joint Nature Conservation Committee and provides a system to record semi-natural vegetation and other wildlife habitats. The ten categories of habitats include woodland and scrub, grassland and marsh, and heathland. Amongst these categories there are 155 habitat types. Accordingly, the habitat map of the Scottish Borders is too detailed to be legible but more information on the Phase 1 Habitat Classification can be found at http://jncc.defra.gov.uk/page-4258. • The Phase 1 Habitat Survey of the Scottish Borders, derived from aerial imagery, estimated just over 5% of the Scottish Borders region to be blanket bog, 3.5% fens, marsh, swamp and reedbed; 9% upland heath; 8% acid grassland and 0.8% neutral grassland. **Protected Sites and Species** • The Scottish Borders has internationally and nationally important wildlife, habitats and protected places, including 9 Special Areas of Conservation (SAC); 6 Special Protection Areas (SPA); 3 Ramsar sites; 95 Sites of Special Scientific Interest (SSSI); 2 National Nature Reserves (NNR)	Scottish Borders Pilot Regional Land Use Strategy Framework (2016) Tweed Aerial Survey and the Phase 1 Habitat Survey of the Scottish Borders (2010) A Greenspace Strategy for the Scottish Borders Scottish Borders Council (2016) Local Development Plan Scottish Borders Council (2017) Your Community Plan

• The marine environment of the Scottish Borders includes sites and species of international and even global importance, such as the fifth largest colony of grey seals in the world. • There are also Local Biodiversity Sites within the Scottish Borders, with species and habitats of local and regional importance • Maps of protected places are outlined in Appendix C and details of important habitats and species found in the Scottish Borders, including those listed on the Scottish Biodiversity List, and the pressures they face, are found in Appendix E. **Greenspace** • Greenspace in the Scottish Borders is varied in type, form, pattern, character and design – from formal parks to allotments, sports pitches, village greens, amenity spaces and play areas • Most towns in the Borders are built around river corridors, with related green corridors that link towns or villages with open countryside. • Scottish Borders Council has a Greenspace Strategy covering assessment of potential development impacts on greenspace, outdoor sport and recreation. A map of Greenspace is provided in Appendix C. • Special Landscape Areas as well as important open and greenspace is integrated into the Local Development Plan (LDP). • Functional green spaces include outdoor sports facilities such as playing fields, play areas, allotments, cemeteries, churchyards, green corridors such as rivers or former railway lines • Amenity green spaces include parks and gardens, natural green spaces, woodlands and green spaces within residential areas used informally • The Scottish Borders LDP green belt policy is to maintain the character and distinctiveness of the area's settlements. • Key green networks are in and around Duns, Eyemouth, Hawick, Jedburgh, Kelso and Lauder, Peebles, Galashiels/Tweed valley	
Biodiversity, Flora, Fauna: Key Environmental Issues relevant to the LBAP	**Featured in which other key PPS?**
• High quality habitats and a variety of biodiversity in terms of flora and fauna contribute to the value placed upon Scottish Borders' special and distinctive landscapes. This has ensuing benefits for tourism and the food and drink industries, which will support the local economy. • Species rich hedgerows account for 20% of the Scottish resource of this type of "woodland" • The high quality natural environment of the Scottish Borders on both land and sea is recognised in regional policy documents as one of its principal assets and also brings benefits for health and wellbeing. • Habitats important for ecosystems in the Scottish Borders face a large number of varied pressures, which may negatively impact related ecosystem services, or natural capital. • Protected sites and species face similar issues to habitats, and, pressures on habitats may result in further challenges. • The LBAP's primary aim is to help address these pressures, which are outlined in Appendix E. • The Scottish Borders Pilot Regional Land Use Strategy Framework (LUS Pilot) commissioned by the Scottish Government mapped ecosystem services (or 'natural capital') across the region. The maps identify opportunities to extend ecosystem services, show overlaps between them for potential multiple benefits, and identify constraints with existing land use. Maps are shown in Appendix C. The LBAP can support the work of the LUS Pilot by encouraging land use for multiple benefits. • Access to recreational greenspace or bluespace is beneficial to human health and well-being and provides direct nature experiences that may lead to positive action for the environment. • Development on derelict and vacant land relieves pressure on greenbelt locations, however it also has potential to remove habitat, and encourage	Scottish Biodiversity Strategy (SBS) Scottish Borders Pilot Regional Land Use Strategy Framework (2016) (LUS Pilot) Land Use Strategy (2016) (LUS) Scottish Borders Your Community Plan (YCP) (2018) South East Scotland Strategic Development Plan (SESPlan) Scottish Borders Local Development Plan (LDP)

invasive non-native species (INNS). • The LBAP actions will encourage consideration of the biodiversity value of brownfield sites in the context of urban development and expansion.	

SEA TOPIC: SOIL	
SEA OBJECTIVE: Protect and, where appropriate, use high quality and sensitive soils in a sustainable manner and conserve recognised geodiversity assets	
Overview of Relevant Aspects of Baseline Environment	**Data Sources**
Soil Types • Altitude, natural and human processes determine the Scottish Borders' soil types. A map of soil types is provided in Appendix C. • Agricultural land accounts for over 80% of total land area in the Scottish Borders, although the type and quality of soils within this cultivated area are varied. • The majority of agricultural processes takes place on better quality soils (classes 1, 2 and 3.1) or prime quality agricultural land, covering the Tweed Lowlands and the Merse from Jedburgh and Earlston to the Berwickshire coast line, with small fragmented areas in close proximity. • The Scottish Borders has areas of deep peat soils that have a depth of 0.5m or greater. These are concentrated around the central southern uplands (Wauchope Forest, Newcastleton Forest etc); hills above Ettrick Valley; areas of Tweedsmuir Hills; more limited parts of Moorfoot Hills and Lammermuirs. • There are category 4, 5 and 6 soils present in the Borders, which may store significant amounts of carbon. These are widespread, though small and fragmented areas. They are broadly similar in distribution to deep peat soils. • There are 105ha of derelict and urban vacant land in Scottish Borders, which can be classed as brownfield land. **Soil Quality** • The soils of the Borders have a varied quality with regard to agricultural capability with better quality soils capable of supporting a wider range of arable crops including areas of prime agricultural land located along the south-eastern part of Scottish Borders from Jedburgh northwards to Duns and east to Eyemouth on the coast. • There are poorer quality soils within the area with regards to agricultural capability associated with upland areas of the Pentlands, in the far North West, to the Moorfoot Hills on the western boundary and the Lammermuirs in the north; here the land is only capable of supporting rough grazing. • Contaminated land can cause severe adverse conditions on ecosystems, human health and water systems. Scottish Borders Council adopted a Contaminated Land Inspection Strategy in 2001, in accordance with Part IIA of the Environmental Protection Act 1990, to strategically identify land that could be contaminated within the region. Performance indicators for such land was submitted to the Scottish Executive in 2006-07, highlighting areas warranting inspection. An area of 303 Ha, incorporating 790 sites was indicated as requiring inspection.	Contaminated Land Inspection Strategy (2001), Scottish Borders Council.

Soil: Key Environmental Issues relevant to the LBAP	**Featured in which other key PPS?**
• Soils are of key importance in water quality, flood prevention, biodiversity and other soil related functions for natural heritage. Their protection is key to maintaining natural processes and in turn the quality of our environment as a whole. It will be important, through LBAP actions, to protect soil biodiversity and quality. This is of increasing importance in the light of challenges that climate change may bring. • Threats to soil including erosion and acidification through reduced level and quality of biodiversity that impact soil's quality and functions are exacerbated by climate change. • Reductions in organic soil matter, particularly drainage and peat loss, and the sealing of soil under impermeable surfaces can increase flood risk. • Land management practices are key to the protection and enhancement of	SBS LDP SES Plan LUS Pilot LUS

biodiversity, including soil biodiversity, as well as ecosystem restoration and investment in natural capital. The LBAP proposes actions linked to sustainable land management and promotes the LUS Pilot maps in order to support decisions about land use, which may have positive benefits for soil quality. • The LBAP will consider the protection of high quality and sensitive soils such as deep peat, in terms of helping to restore ecosystem services and enhancing natural capital.	
SEA TOPIC: WATER	
SEA OBJECTIVE: Prevent deterioration and, where possible, enhance the ecological status of water bodies	
Overview of Relevant Aspects of Baseline Environment	**Data Sources**
Bodies of Water • The main watercourses in the Scottish Borders are the River Tweed and its tributaries, the Eye and Liddel Waters. • Other bodies of water include the North Sea off the eastern coast of the Scottish Borders, reservoirs, wetlands and lakes. **Water Quality** • Across the Scottish Borders, surface water (SW) quality records are available through SEPA's water classification hub, at https://www.sepa.org.uk/data-visualisation/water-classification-hub/. This tool indicates that 54% of SW are in good condition, 5% are in high condition, 28% in moderate condition and 13% in poor condition (including 1 SW in bad condition). • The Eye Water is included in the Scotland RBMP and is a priority catchment, with issues concerning water quality. Details of its condition are provided in Appendix B • The Liddel Water is overall in Good condition. • In the 2015 update of the Solway Tweed River Basin Management Plan (RBMP), 46% of water bodies (surface and ground combined) and 36% of protected areas in the district were found to be not in good condition. New targets for improving water quality are shown in Appendix B. • There is a need to diffuse rural pollution and habitat fragmentation/loss, whilst ensuring the economic viability of farming enterprise **Flood Events** • Generally, flooding is a natural phenomenon that plays an important role in shaping the environment. In the Scottish Borders, flood risk comes from a variety of sources including fluvial, coastal, groundwater, surface water and/or sewer flooding. Flood risk management plans have been developed and flooding is taken into account in decisions about locating development. • Almost all main settlements in the Scottish Borders are in "Potentially Vulnerable Areas" to flooding (Duns being the exception) and with this risk comes the potential for adverse impacts on environmental, community and economic assets. Appendix C provides spatial information on the fluvial and surface flood risk areas of the Scottish Borders. • SEPA produces the national Flood Risk Management Strategy and Scottish Borders Council produces Local Flood Risk Management Plans under the Flood Risk Management (Scotland) Act 2009 (plan period 2015-2021). Maps can be accessed at http://map.sepa.org.uk/floodmap/map.htm • Management takes the form of mitigation against the impacts of flooding, including sustainable flood management projects and adaptation to the changing flood risk in the future. • Natural Flood Management (NFM) techniques have been trialled in the Scottish Borders at Crookston Farm and the Eddleston Water, as well as in the Ettrick and Yarrow catchments through biodiversity offset schemes and Bowmont and Borthwick water catchments • Flood Protection Schemes are being established for Galashiels, Hawick and Selkirk, which include NFM measures • Drought events occurred in the Scottish Borders in 2006, with impacts on wildlife and farmland production.	The river basin management plan for the Solway Tweed river basin district 2015-2027 SEPA National Flood Risk Assessments

Water: Key Environmental Issues Relevant to the LBAP	Featured in which other key PPS?
• The management and control of our land, as well as our water resources have major implications for water quality, biodiversity and human health, which are important considerations within the LBAP. • Diffuse pollution from soil and from atmospheric transport emissions can result in eutrophication, leading to algal blooms and altered water quality, with negative impacts on biodiversity. • For rivers, lakes, estuaries and coastal waters, SEPA's main aim is to ensure good ecological quality, which requires: good, unpolluted water quality; good quality of physical structures of beds, banks and shores; removal of significant man-made impediments to migrating fish; good water flows and levels; protection from INNS. • The LBAP aims to protect watercourses and water bodies and reduce, prevent or offset adverse biodiversity impacts, to help improve water quality and support the restoration of aquatic ecosystems. This will link in with SEPA's aims and the goals of RBMPs. • Meeting updated targets for surface and ground water bodies in the Scottish Borders, in line with the RBMP targets and the Water Framework Directive (WFD), will require integrated water management from 'source to sea', particularly targeting diffuse pollution. Climate change effects and changing water demands also need to be considered in decision-making, which LBAP actions will support. • Climate change may mean that flooding becomes more severe and more frequent in certain areas. Flood prevention, particularly if climate change brings more and unpredictable flood events, is a big challenge for the Scottish Borders, which investment in natural capital may support. • The LBAP includes measures to support aquatic ecosystems and management of freshwater, in order to reduce flooding impacts and incorporate NFM strategies, which may support wider flood management plans.	SBS LDP SES Plan LUS Pilot LUS

SEA TOPIC: LANDSCAPE	
SEA OBJECTIVE: Protect and, where appropriate, restore landscape character, local distinctiveness and scenic value	
Overview of Relevant Aspects of Baseline Environment	**Data Sources**
Landscape Character • The Scottish Borders is considered to have a special, diverse landscape, with variations of upland, lowland, valley and coastal landscapes. • The Scottish Borders Landscape Character Assessment highlights the 5 key types of landscapes in the Borders as upland, upland fringe, river valley, lowland and coastal. Key areas are: Midland Valley, Tweed Lowlands, Lammermuir and Moorfoot Hills, Central Southern Uplands, Cheviot Hills and Coast. (See map in Appendix C). **Special Landscape Areas** • The most special landscapes in the Borders are protected by national and local designations. There are 2 National Scenic Areas (NSAs) and 6 Areas of Great Landscape Value, as outlined in Appendix B and C. • NSAs are nationally important areas of outstanding beauty, representing some of Scotland's grandest landscapes, and the NSA designation is intended to preserve and enhance their character or appearance. • All Special Landscape Areas (SLAs) are defined by local authorities in development plans, with a view to safeguarding areas of regional or local landscape importance from inappropriate development – the SLAs in the Scottish Borders are designated within the Supplementary Guidance titled 'Local Landscape Designations'. • In addition, the Countryside Around Towns policy aims to prevent settlement coalescence in the central Borders (see map in Appendix C).	The Scottish Borders Landscape Character Assessment (1998) The Natural Heritage of Scotland: An overview (1995) Local Landscape Designations Scottish Borders Countryside Around Towns (2011)

Landscape: Key Environmental Issues Relevant to the LBAP	Featured in which other key PPS?
• Current landscape issues in the Scottish Borders include the cumulative impact of wind turbines, which may also significantly affect habitats and species, and large plantation forestry of monoculture timber crops such as Sitka spruce, which cover hillsides and feature few native species. Incremental change from development is also a concern. • By helping to enhance biodiversity and habitat connectivity, the LBAP aims to ensure the continued local distinctiveness of landscapes, as well as contributing positively to setting and improved visual amenity, for example, through reducing fragmentation. • The LBAP actions have been considered in terms of their relationship to the defined landscape character areas of the Scottish Borders and any significant actions will take consideration of any special landscape designations.	SBS LDP SES Plan
SEA TOPIC: POPULATION & HUMAN HEALTH	
SEA OBJECTIVE: Improve human health and community wellbeing	
Overview of Relevant Aspects of Baseline Environment	**Data Sources**
Population • The Borders has a scattered rural population over two thirds of the 4734km^2 land area of the Borders, with just under one third in remote areas. • The main population hubs for the Scottish Borders are around the towns of Hawick, Selkirk, Galashiels, Melrose and Jedburgh • Remote centres of population include Peebles, Innerleithen in the west and Duns and Eyemouth to the East. • Population size is predicted to increase by 15% from by 2032 to 130,000, representing 64,000 households (an increase of 27%). • The Council's Housing Needs and Demand Assessment identifies an ongoing need for affordable houses – 100 houses per annum over the next 5 years. **Employment** • Employment is dominated by service industries (72%), with 22% of jobs in production or construction industries Unemployment is at 1.5%, with a higher proportion of men than women unemployed. • Rural industries like agriculture, forestry, fishing and minerals production continue to be important for the local economy • There is a low proportion of enterprises in professional, scientific and technical activities, which adversely affects productivity measures for the Borders • Wage levels are 94% of the Scottish average, and at 84% of the average for people employed within the Scottish Borders. • Studies show an adequate supply of business and industrial land and premises, though improvements are required in Galashiels/Tweedbank and Peebles **Deprivation** • Whilst the majority of the Scottish Borders is located in some of the least deprived areas in Scotland, eight areas are considered to be in the 5-10% of the most deprived areas in Scotland. Just under one third of the Scottish Borders is classed as remote by the Scottish Government • Looked-after school leavers going to positive destinations (including higher or further education, training, employment, voluntary work) is below the Scottish average • 50% of local households cannot afford the average market rent in the Borders • The average house price in the borders is 7% higher than Scotland, whilst the average income in the Borders is 5% lower than Scotland. **Public services** • Approximately 90% of the Scottish Borders population live within 5 miles of a town or village with a population of over 1,000 people, • Access to services (retail, education, policing, leisure facilities, cultural activities) in the	Scottish Borders Council (2016) Local Development Plan Scottish Borders Council (2017) Your Community Plan Scottish Government Statistics: Employee jobs by industry Local Authorities 1998-2007 Annual Business Inquiry Scottish Government (2002). Availability of Services in Rural Scotland National Records of Scotland Scottish Borders Community Planning Partnership – Strategic Assessment (2016) OFCOM – Connected Nations (2016) Scottish Borders Household Survey (2015) Education Outcomes for Scotland's Looked After Children 2015-16 Scottish Health Survey (2015)

Scottish Borders have previously been considered based on drive times to reach facilities such as banks, post offices, petrol stations, as shown in maps provided in Appendix C. Drive times are mostly in the range of 0-15 minutes around areas of population, but greatest in remote fringe areas. There may be potential for promoting transport other than the car near population centres. • Difficulties in accessing services is in large part due to lack of or poor public transport. **Amenities and Recreation** • The Scottish Borders has numerous existing recreational options for both residents and visitors to the region. In particular there is an extensive network of core paths for walking, cycling and horse riding, a programme of promoted paths around towns, long distance paths (Southern Upland Way, Borders Abbey way and St Cuthbert's way) and Scotland's Great Trails. There are also a number of water access points. • Recreation is a critical selling point for the quality of life within the Borders and a high quality natural environment is accessible from the "doorstep" of many residents. • The Council has an online Core Paths Plan in line with the Land Reform (Scotland) Act 2016 promoting routes and encouraging use in line with the Scottish Outdoor Access Code. • To the west of the region there is more structured recreation with associated visitor infrastructure. The area between Peebles and Cardrona has a multi-use path (or MUP), the Glentress Mountain Biking Centre and a zip wire attraction. This area is a major Scottish Visitor attraction and is due to undergo further development • There are cycle paths throughout the Scottish Borders. Sustrans develops and maintains the National Cycle Network which provides sustainable transport routes across the country. Maps in Appendix C show National Routes 1 and 76, which have sections in the Scottish Borders. **Health** • Overall life expectancies in the Scottish Borders in 2011 were higher than the Scottish average • People registered with Type 2 diabetes increased in the Scottish Borders by 26.4% (Scottish increase – 25.9%). • 71% of adults in the Scottish Borders are overweight, compared to 65% in Scotland. • Close to 1 in 5 people in the Borders have a mental health problem – above the Scottish average • An ageing population in the Borders (over 89.5% of the population expected to be aged 75+ by 2039), is expected to drive increased need for care • Fatalities linked to road safety have increased by 57% in the Borders – compared to a decrease of -9% over Scotland. Combined fatalities and serious injuries have increased by 12% in the Borders, whilst figures for Scotland overall have decreased by -13%. **Public opinions on the Borders** • Community surveys have identified that people, the area and the countryside make the Borders a good place to live • Over half of people cited what they liked best was the Borders landscape, scenery and open spaces • Top problems cited include parking, waste and dangerous driving • The top priority cited was growing the local economy and supporting retail/business • Other changes needed were considered to be better access, transport, job opportunities, affordable activities and involving communities • 65% of adults rated their area as a good place to live, higher than the Scottish average	Scottish Diabetes Survey (2010) Information Services Department Scotland

Population & Human Health: Key Environmental Issues Relevant to the LBAP	Featured in which other key PPS?
• People enjoy living in the Scottish Borders because of the people, area and countryside and more than half enjoying the landscapes. By supporting the biodiversity that is inherent in the landscape, the LBAP actions will help ensure people continue to enjoy living in the Borders. • The Scottish Borders has a population increasing in age, where health issues include higher than the Scottish average instances of people being overweight,	YCP SBS LDP

or having a mental health problem. There is a reliance on transportation by private car and an increase in instances of serious injury or fatality linked to road safety. The LBAP actions can support other PPS in addressing some of these issues. • Actions include promoting increased participation in nature-based activities, use of active travel, promoting new long-distance paths, and raising awareness of the benefits of incorporating greenspace and infrastructure into urban development. • Challenges that the LBAP aims to address are the increased provision of green networks and balancing development requirements (e.g. housing expansion) with biodiversity considerations. • The LBAP will aim to increase awareness of the importance of protecting, enhancing and enjoying the biodiversity responsibly, with consideration for wildlife within local landscapes, with the added health benefits this may bring. • Poor mental health can impact people at all life stages and can result in poor outcomes in other areas of life such as physical health, employment and participation within the community. The LBAP actions include promotion of community schemes to support biodiversity that may help support people to participate more in their communities. • The LBAP aims to promote other forms of transport such as active travel like cycling and walking, which could be a realistic proposition for commuting as well as leisure trips. • As well as reducing transport impacts, the LBAP actions to promote active travel are linked to emphasising recreational opportunities within the region, which is a selling point for residents and visitors. • Prosperous town centres with good amenities are linked to the success of the local economy, employment, tourism, recreation and the built environment. The LBAP aims to support the local economy and tourism and to encourage rural industries to adopt approaches that work with biodiversity and ecosystems, for mutual benefit. By supporting the economy in this way, there may be some ensuing indirect influence on work opportunities and reducing deprivation.	
SEA TOPIC: CLIMATIC FACTORS	
SEA OBJECTIVE: Contribute towards the reduction of Scottish greenhouse gas outputs in line with Government targets. Reduce or prevent the overall effects of climate change including those related to flood risks.	
Overview of Relevant Aspects of Baseline Environment	**Data Sources**

Greenhouse Gas Reduction • The Climate Change Act 2009 sets out ambitious targets for Scotland to reduce carbon emissions 42% by 2020 and 80% by 2050. • The global average greenhouse gas footprint is 16.34 tonnes of CO2eq per capita, whilst Scottish Borders emissions figures indicate an average footprint of 17.02 tCO2eq/capita. • The UK average ecological footprint is 5.3 global hectares per person, well above what is considered to be a sustainable level (1.8 g/ha/capita – WWF), however the Scottish Borders Local Authority area footprint is higher than the UK average at 5.52g/ha/capita. • The most recent Scottish Borders greenhouse gas emissions data is shown in Appendix B. **Renewable Energy** • The development of renewable energy sources has been identified as a key strand in the Scottish Government's plans to help tackle the issue of climate change. This is demonstrated by the framework for renewables in 'Scotland's Renewables Action Plan'. • The estimated capacity of renewable energy generation is Scotland has been estimated at 60GW. Scottish Borders has, and continues to play a key role in the development of sustainable energy sources with 19 consented windfarms and 11 proposed and pending a decision, (indicative numbers of windfarms of 5MW or above generation are shown in Appendix C) • Wind farms and small groups of turbines, or individual turbines are located throughout the Scottish Borders, with a concentration in the north and east of the region. They are subject to landscape and visual guidelines, depending on size of turbine. • The Scottish Borders also has the potential of wood fuel and heat recovery systems associated with forestry with potential for trees to contribute to the wood biomass sector. Scale of biomass production is hard to quantify, but demand is predicted to grow as wood is being exported currently to meet demand outwith the Borders. • Recently there has been a growing interest in solar farms.	WWF Footprint Calculator: footprint.wwf.org.uk Scottish Borders Local Development Plan The Scottish Government (2009) Renewables Action Plan The Scottish Government (2002) Scotland's Renewable Energy Potential – Beyond 2010 Scottish Borders Pilot Regional Land Use Strategy Framework (2016)

Climatic Factors: Key Environmental Issues Relevant to the LBAP	**Featured in which other key PPS?**
• Climate change is a major global issue that in the Scottish Borders is likely to affect average temperatures and phenology of some species, with impacts on breeding, growth, distribution or abundance in the region. • Climate change may present opportunities for some new species (including potentially more invasive species) to move their range northwards into the region, or have impacts in terms of habitat change or loss. • In the Scottish Borders, climate change impacts may include impacts on water resources and flooding, population, health and well-being. Alterations to ecosystem services such as water or climate regulation, for example, are likely to have ensuing impacts on biodiversity and ecosystems and our natural capital. • An assumption that can be drawn from Scottish Borders greenhouse gas emissions figures, is that the Scottish Borders consumes resources at an unsustainable rate. • The region's population is increasing, as outlined in *Population & Human Health*, which may result in higher energy demand and a rise in car use. • Emissions reductions of 80% by 2050 are being supported by renewable energy developments. The LBAP aims to encourage appropriate development in terms of impacts on biodiversity and ensure developments avoid adverse impacts on biodiversity.	SBS LDP SES Plan LUS Pilot LUS

SEA TOPIC: MATERIAL ASSETS	
SEA OBJECTIVE: Promote the sustainable use of community assets in the Scottish Borders.	
Overview of Relevant Aspects of Baseline Environment	Data Sources
Timber • The Scottish Borders Woodland Strategy estimates woodland cover in the Borders to	Scottish Borders Woodland Strategy (2005)

be 18.5% of total land area, including 2750 individual woodland blocks greater than 2ha. The average woodland size overall is 30ha. • Forest is largely characterised as upland commercial coniferous plantations, which predominate in the Central Southern Uplands (Tweed Valley and Peeblesshire to the western boundary of the Borders and Craik forest, and the major blocks bounded by the Ettrick and Teviot rivers, extending west from Selkirk and Hawick) and Cheviot Hills (Eskdalemuir; Wauchhope and Newcastleton, which adjoin to Kielder forest). • Forestry of the Tweed Lowlands is characterised by small scale, scattered woodlands within a matrix of agricultural land from the Cheviots to the Merse and the Lammermuir Hills to the north. • The remaining ancient and semi-natural woodland of the Scottish Borders makes up around 0.26% of total land area and represents around 1.4% of total woodland. Associated habitats are steep slopes along watercourses. The biodiversity value of such woodland is high. **Renewable Energy** • Renewable energy, such as from wind-farms, is considered under *Climatic Factors* in the above section **Transport** • The Scottish Government defines just over two thirds of the Scottish Borders as being "accessible" with the remainder being "remote", this means that there is a significant reliance on private car for use in daily life. • Transport infrastructure in the Scottish Borders includes the new Waverley Line, bus routes and road networks. Core Paths provide some active travel routes for walkers and cyclists. • 22% of respondents to the Borders Railway Baseline Survey commute to Edinburgh daily, most by car, with the Scottish Borders population (compared to respondents from other regions in the survey) most dependent on car use • The reliance on the car has impacts for daily traffic flows, emissions and the regional ecological and GHG footprint. • Maps showing Strategic Road Network and Rail Network are presented in Appendix C. • Cycle paths in the Scottish Borders have various local linkages to national routes such as Route 1, which runs from Dover to John O'Groats, and on to Orkney and Shetland, passing Berwick-upon-Tweed and Melrose. Route 76 runs from Berwick-upon-Tweed to St Andrews, passing through the Scottish Borders. • Information on core paths and cycle paths is outlined in *Population and Human Health* **Waste** • The Scottish Government introduced the Zero Waste Plan in 2010, the vision of the document is to reach 70% recycling and maximum 5% to landfill of Scotland's waste by 2025. In addition, there will also be landfill bans for specific waste types, source segregation and separate collection of specific waste types; and restrictions on inputs to energy from waste facilities. • Details of waste collected within the Scottish Borders and quantities composted or recycled are outlined in Appendix B. • Current water and wastewater asset capacity in the Scottish Borders is also shown in Appendix B. Treatment facilities are shown spatially in Appendix C. **Mineral Resources** • Consented mineral operations in Scottish Borders are shown in Appendix B. • Mineral resources are finite and set in specific locations. They must be worked in the most efficient and sustainable manner, as use of mineral alternatives or recycling of minerals cannot fully meet demand. • Transporting minerals over long distances is costly – including in environmental terms. • Securing local supplies can make an important contribution to sustainable Development.	Scotland's Zero Waste Plan (2010) Borders Railway Baseline Survey

Material Assets: Key Environmental Issues Relevant to the LBAP	Featured in which other key PPS?
• Timber is important for energy supplies and as stated under *Climatic Factors*, the Scottish Borders' forestry resource is significant. It is also essential for construction and development purposes. However, poorly managed commercial forestry may have negative impacts on biodiversity, which the LBAP will seek to avoid. • Whilst government planting targets include provision of native woodland alongside commercial forestry, there is an ongoing need for native tree planting, which the LBAP promotes, since the extent of ancient and semi-natural woodland in the Scottish Borders compares unfavourably with other parts of Scotland. • Other challenges relevant to the LBAP include ensuring wind development or repowering does not damage areas with sensitive habitats and species, ensuring sustainable use of mineral resources and increasing waste recycling to meet Scotland's Zero Waste Plan objectives by 2025. • The LBAP will aim to support sustainable management of natural resources and promote improvement and use of green networks in support of more active forms of transport, whilst avoiding disturbance to sensitive species and habitats. • By encouraging green infrastructure and including a focus on support for biodiversity in urban areas, the LBAP may contribute to town centre enhancements, with benefits for the economy and communities. • Some protected species may use sites where minerals are extracted or exist in new locations, or old workings that are re-opened. The LBAP promotes actions aimed at increasing wildlife recording, ensuring development is appropriate and that legal implications relating to wildlife are fully considered, in order to protect species and habitats for the benefit of the region's biodiversity.	SBS LDP SES Plan LUS Pilot LUS

SEA TOPIC: CULTURAL HERITAGE	
SEA OBJECTIVE: Protect, conserve and where appropriate enhance the historic environment	
Overview of Relevant Aspects of Baseline Environment	**Data Sources**
Designations • Scottish Borders has a rich cultural and historical heritage and this is shown through the number of related designations and initiatives undertaken in the area. For example the Council has completed Townscape Heritage Initiatives (THI) in Hawick and Kelso in recent years, which were undertaken with the aim to culturally, socially and economically regenerate the towns. Supplementary guidance reports include Planning Briefs for historically sensitive sites including one underway for Kelso High School. • The Historic Environment Scotland website shows that Scottish Borders has 3,020 listed buildings. Categories and descriptions of listed buildings and the description are listed in Appendix B. • The location of the Scottish Borders' 43 Conservation areas (covering almost 900ha), 749 scheduled monuments, 31 gardens/designed landscapes and 3 battlefields are also mapped in Appendix C. • The Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) manages a register of cultural heritage interest on behalf of Historic Scotland, and provides information on properties of architectural or historic merit throughout the country that are considered to be at risk. Currently the register identifies that there are 172 buildings within Scottish Borders at risk whilst 11 are currently being restored (as at 20/07/2016). **Tourism and Recreation Links** • Cultural heritage attractions are evident throughout the Borders and there are designed landscapes, castles/houses with associated grounds, and numerous other assets. At a strategic level these assets range from nationally significant to locally significant. In addition, many assets remain undisturbed or suspected in certain locations. • There is also a cultural significance to recreational access, with the respective Common	Historic Environment Scotland The Royal Commission on the Ancient and Historical Monuments of Scotland Register

Ridings for settlements, now marked each year in the summer months. • Local walks and tourist routes are often connected with cultural aspects of life in the Scottish Borders, such as walks connected with the life and works of writers, artists, philosophers or engineers.	
Cultural Heritage: Key Environmental Issues Relevant to the LBAP	**Featured in which other key PPS?**
• The cultural heritage of the region is part of what residents find most appealing about the Borders as a place to live, in terms of people and landscapes. The LBAP seeks to encourage experiences of nature and the outdoors, which may take place at cultural heritage or designated sites. • Buildings which require repair may present an issue in terms of protected species such as bats or breeding birds and the LBAP places emphasis on the importance of enhancing habitats and protecting such species. • Work took place in connection with the LUS Pilot to map historic land use in the Scottish Borders, which the LBAP aims to continue. Actions arising from the LBAP will promote the Historic Land Use Value project supported by Historic Scotland, and interconnections with recreation and greenspace to support health and well-being.	SBS LDP SES Plan LUS Pilot LUS
SEA TOPIC: AIR	
SEA OBJECTIVE: Prevent deterioration and, where possible, enhance air quality	
Overview of Relevant Aspects of Baseline Environment	**Data Sources**
Air Quality • Local Authorities have a responsibility under the Environment Act 1995 and Air Quality (Scotland) Amendments Regulations (2002) to improve air quality, not merely minimise pollution. • The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2000) and Addendum (2003) set health-based objectives for nine air pollutants and two for the protection of vegetation and ecosystems. Where it is found that these objectives are unlikely to be met by the due date, an Air Quality Management Area (AQMA) must be declared and an action plan setting out proposals for addressing the problems prepared. In the Scottish Borders there are no AQMAs nor areas close to designation. • Transport emissions also affect air quality. New rail transport such as the Borders Railway will help assist with reducing CO2 emissions from cars, the use of which is high in the Scottish Borders in comparison to public transport. • In terms of car emissions, route management schemes also exist for major road routes, the A1, A68, A7 and A702. • The most recent census data, published 2017, shows information up to 2011 on the method of travel to work or study by 'day time' population in Scottish Borders. This information is provided in Appendix B. Daily average traffic flows for certain key routes in Scottish Borders which are shown in Appendix C in maps. **Greenhouse Gas Emissions** • The Climate Change (Scotland) Act 2009 includes emissions reduction targets covering a range of greenhouse gases (GHG): Carbon dioxide (CO2), Methane (CH4), Nitrous oxide (N20), Hydroflurocarbons (HFCs), Perfluorocarbons (PFCs) and Sulphur hexafluoride (SF6). • Greenhouse gases are discussed in relation to climate change in *Climatic Factors.*	Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2000) and Addendum (2003)
Key Environmental Issues Relevant to the LBAP	**Feature in which other PPS?**
• Contributing factors that can lead to increased emissions and result in air pollution, include, transport (both private and public) and developments which generate traffic flows and general movement to and from areas. In areas of particularly poor air quality, emissions in the atmosphere as well as potential acid rain can adversely alter and affect biodiversity. Ecosystem services are also likely to be changed as a result.	SBS LDP SES Plan

• The Scottish Borders has no Air Quality Management Areas (SESplan Environment Report). However, traffic volumes are increasing at around 1.5% per annum, which may impact future air quality (and climate change targets). • Planting can be beneficial for improving air quality through the removal of pollutants in the soil and in the air. Woodland and forestry will also contribute to this as carbon capture assets. The LBAP aims to promote woodland creation and expansion, which will support clean air in the Scottish Borders. • The LBAP also promotes actions that support more active travel, including creation of a local walking route and support for existing walking/cycle paths.	LUS Pilot LUS

3.4 Evolution of the Environmental Baseline in the Absence of the Plan

3.4.1 The SEA process requires assessment of the environmental impact in the absence of the Plan's implementation.

3.4.2 The LBAP seeks to encourage co-ordinated, collaborative action, adopting an ecosystems approach and encouraging creative partnership action for biodiversity and ecosystems, at a time of economic uncertainty. Without this Plan, action within the local environment may be disjointed and less effective for biodiversity and ecosystems than if it were adopted: Without the LBAP, it is considered likely that an opportunity would be lost to co-ordinate collaborative, focussed action by partner organisations, land managers and communities that would help to protect and enhance ecosystems and biodiversity across the landscapes of the Scottish Borders.

3.4.3 The LBAP also represents an opportunity to contribute to international efforts to meet the Aichi biodiversity targets by 2020[5], and to help with climate change adaptation.

3.4.5 Table 6 outlines the likely evolution of the environmental baseline in the absence of the LBAP in respect of the SEA topic areas.

Table 6: Evolution of the baseline in the absence of the Plan

SEA Topic	Anticipated evolution without the LBAP's Implementation
Biodiversity, Flora & Fauna	It may be more challenging to harness the joint efforts of partner organisations to adopt collaborative projects that aim to protect and restore ecosystems and natural capital, promote sustainable land management for mutual benefit and to address threats and pressures faced by wildlife, including protected sites and species. The LBAP provides a focus and a framework for the work of partners, land managers and the community to support biodiversity. Species may continue to decline and pressures on habitats may not be adequately considered in decisions about land use, that fail to consider the connectedness of habitats and species at a landscape scale. There is also an opportunity help species to adapt to climate change, by encouraging connected ecological networks that aid migration and by supporting healthy ecosystems that will help alleviate climate change impacts.
Soil	The LBAP takes consideration of related PPS such as the Land Use Strategy and Scottish Borders LUS Pilot, as described above. Without the LBAP there would be lost opportunities to continue the work of the LUS Pilot and to encourage effective land management that supports ecosystems, and helps improve and protect soil quality and biodiversity. Whilst legislation and statutory agencies will work to minimise pollution, without the LBAP pollution may have greater impacts on biodiversity within sensitive habitats than if it were adopted.
Water	Water quality in the Scottish Borders is in general very good within freshwater and marine areas. It is likely that this will remain the same in the absence of the LBAP as a result of other policy, regulation and action. However, the LBAP actions are intended to promote water quality and represent an additional opportunity to improve existing issues through

[5] Secretariat of the Convention on Biological Diversity (2010). *Strategic Plan for Biodiversity 2011-2020 and the Aichi Targets: "Living in Harmony with Nature".* Available at: https://www.cbd.int/doc/strategic-plan/2011-2020/Aichi-Targets-EN.pdf.

	measures such as restoring and improving ecosystems in catchment areas, that will bring benefits for biodiversity in terrestrial and marine environments.
Landscape	The LBAP will contribute to connected habitats that enhance and support biodiversity, in so doing contributing to the preservation of Scottish Borders land and marine habitats, which are valued for their distinctiveness by both the community and visitors.
Population & Human Health	The LBAP seeks to increase awareness of and positive action for biodiversity. There may be missed opportunities to work with communities to promote direct nature experiences and enjoyment of natural greenspace as well as marine areas, which would mean a loss of benefits for people in terms of health, well-being, enjoyment and economic prosperity. It may also mean a loss in terms of gathering data records through citizen science and encouraging people to better understand the pressures on our local ecosystems and biodiversity, in order to help address them. Although the LBAP has a primarily environmental focus, it has the potential to address social and economic issues as outlined in Table 5 above, including supporting biodiversity in urban habitats and raising awareness of the possible benefits of green infrastructure.
Climatic Factors	Without the LBAP there would be less coordinated effort to enhance ecosystems that can assist with carbon capture and sequestration, such as protection of blanket bog habitats and woodlands, including strategic woodland planting schemes. Such schemes exist, however the LBAP provides a framework for action to support ecosystem restoration and enhancement and protection of ecosystem services, or natural capital.
Material Assets	The LBAP has the potential to encourage sustainable approaches to our use of natural resources and ecosystem services.
Cultural Heritage	There are ongoing efforts within the Scottish Borders to protect and celebrate cultural heritage, which will continue without the LBAP. However, there are actions within the LBAP that help support our regions cultural heritage, not least the positive impacts of being in nature in terms of inspiring creativity and appreciated a shared cultural heritage amongst residents, promoting this to visitors. The LBAP will help to highlight the role that ecosystems play in terms of cultural services with benefits for human health and wellbeing.
Air	The LBAP will support existing policies to reduce air pollution, which would continue without its adoption. However actions within the LBAP can also raise awareness of the contribution biodiversity and ecosystems play in regulating air quality, as well as encouraging woodland planting and habitat enhancements that could help improve the function of regulating ecosystems.

3.4.6 In summary, if adopted the LBAP will seek to address pressures and environmental issues through an ecosystems approach to action planning, including protection and enhancement of natural capital, restoration of ecosystems, conservation of wildlife and habitats, promotion of greenspace to support wildlife in more urban areas (as well as health and wellbeing), sustainable management of land, freshwater, marine and coastal areas. The adoption of an ecosystems approach will enable the consideration of LBAP actions across a variety of habitats, at a landscape scale, in line with the aims of the Scottish Biodiversity Strategy.

3.4.7 Actions include a focus on tackling INNS and targeting action on certain key species for which projects or funding are in place and can be supported, bearing in mind that resources (financial and personnel) are more limited than formerly. By adopting an ecosystems approach and supporting enhancement of biodiversity at a landscape scale, the LBAP has potential to strengthen ecological networks and lead to creation of more green space and networks. This includes woodland creation and habitat restoration, which will also have benefits in terms of climate change adaptation.

4. Assessment of Environmental Effects: Methodology

4.1 Reasonable Alternatives

4.1.1 The 2005 Act requires the consideration of the reasonable alternatives considered in the development of the Strategy. The following alternatives in Table 7 were considered and shared with the LBAP Partnership during initial consultation stages, and were outlined at Scoping stage:

Table 7: Alternative Options Considered

Alternative Options	Discussion Outcome
OPTION 1 Produce a new Plan incorporating new objectives and actions, adopting an ecosystems approach	A new Plan can better link to updated national and international strategies, and an ecosystems approach is at the heart of the Scottish Government's thinking about how to protect and enhance biodiversity. An ecosystems approach that involves people in decision-making and takes account of protecting ecosystems and the services they provide, will help to focus actions at a broad landscape or catchment scale, incorporating SMART actions that take account of future challenges such as climate change and the future for the UK after leaving the EU. **Preferred option.**
OPTION 2 Produce a revised Plan incorporating new objectives and actions, continuing the focus on habitats and species	A revised Plan can better link to updated national and international strategies and take account of future challenges including climate change. Streamlined, SMART actions can be created. **Potential option.**
OPTION 3 Review the existing Plan and do not develop new actions	The old Plan and related 14 'Habitat Action Plans' are resource-intensive and outdated. The objectives attached to the old Plan are numerous and cannot be effectively monitored. **Not a preferred option.**
OPTION 4 Retain existing Local Biodiversity Action Plan and do not revise	The existing Plan is outdated and does not fully meet SEA objectives. The structure of the Plan does not align with the most recent national strategies for biodiversity and land use. **Do not take forward.**
OPTION 5 Disregard the existing Plan and do not replace	The absence of a plan would weaken Scottish Borders Council's delivery of the biodiversity duty. **Not a viable option.**

4.1.2 Option 1 was agreed to be the best approach to updating the LBAP and it is this option which is the primary focus of the assessment.

4.1.3 Consideration of which alternative options are viable as reasonable alternatives has continued since the Scoping exercise for the SEA.

4.1.4 Option 2 is still considered to be a reasonable alternative, offering an ongoing focus on habitats and species, without attempting to incorporate an ecosystems approach.

4.1.5 Options 3 shares similarities with Option 4 and is not felt to be a viable option on further reflection. Furthermore, a review of the existing LBAP has been undertaken as part of the audit of the plan undertaking during the LBAP consultation with partners, and this has informed development of a new approach to the LBAP. Therefore Option 3 is now redundant in this regard.

4.1.6 Option 4 is not considered viable at Scoping, it was outlined that this option would not be taken forward. The LBAP in its current form has not been updated since 2003, some actions have

been completed or funding streams have closed and national strategies have moved on. Therefore Option 4 is not considered any further within this document.
Option 5 is not a reasonable alternative for the reasons outlined in Table 7, above and at Scoping stage. There is a legal requirement, as well as a desire to protect biodiversity, therefore a plan is required.

4.1.7 In summary, the assessment has considered Options 1 and 2 and this has helped in the development and finalisation of the Plan in its current form. The framework for assessment is outlined below and the detailed assessment is outlined in Appendix D.

4.1.8 Within the detailed assessment, Option 1 is referred to as *Preferred Option* and Option 2 as *Reasonable Alternative Option.*

4.2 Assessment Framework

4.2.1 The assessment methodology incorporates an ecosystems approach into the requirements of the 2005 Act.

4.2.2 The environmental effects of the LBAP as a Plan, and the reasonable alternative option, are considered in terms of any likely significant effects on the delivery of ecosystem services, in the context of the SEA Topic areas and their inter-relationship, and with consideration of cumulative (direct, indirect, secondary and synergistic) effects.

4.2.3 The 2005 Act also requires environmental assessments to consider international, European and national-level objectives relevant to the Plan under consideration.

4.2.4 Table 8 below links the SEA Topics, with the objectives and sub-objectives that were outlined in the Scoping Report (also featured in Table 5 above regarding the baseline environment), and that were agreed to by Consultation Authorities.

4.2.5 Table 8 also displays linked ecosystem services, related to each SEA Topic (provisioning services in yellow; regulating services in purple; supporting services in blue, and cultural services in green). Decisions about which ecosystem service should link to which topic have been made in light of the UK National Ecosystem Assessment, and with consideration of other key policies that are drivers for this LBAP, and which have also adopted an ecosystems approach to their assessment, namely, the Scottish Biodiversity Strategy[6] and the Scottish Borders Pilot Regional Land Use Framework.[7]

4.2.6 Consideration of significant effects on the outlined ecosystem services in the context of SEA Topics will form the backbone of the LBAP's assessment.

4.2.7 Indicators that will aid monitoring of significant effects on the wider environment resulting from the LBAP are also included in Table 8. These have been refined based on proposed baseline information and the existing environmental issues within the Scottish Borders.

[6] The Scottish Government (2013). *2020 Challenge for Scotland's biodiversity – A strategy for the conservation and enhancement of biodiversity in Scotland.* The Scottish Government, Edinburgh.
[7] Spray, C. (2016). *Scottish Borders Pilot Regional Land Use Framework*. Scottish Borders Council, Scottish Borders.

Table 8: SEA Topics with Ecosystem Service-linked Assessment Framework

SEA Topic	SEA Objective	Linked Ecosystem Services[8]	Indicators
Biodiversity, Flora and Fauna	Protect, enhance, create and restore biodiversity, and encourage habitat connectivity in the Scottish Borders • Protect and enhance species/habitats • Avoid damage to designated sites/protected species • Conserve and enhance natural heritage	• **Pollination** • **Disease and pest regulation (e.g. INNS)** • **Hazard regulation (erosion, flood, wildfire)** • **Nutrient cycling** • **Primary production e.g. photosynthesis** • **Wildlife diversity** • **Trees, vegetation, peat**	• Hectares of habitat restoration undertaken • Condition of designated sites • Water Framework Directive status • Trends for key species
Soil	Help maintain soil and peat quality and avoid exacerbating pollution; conserve geodiversity • Minimise soil and peat contamination and disturbance, maintaining high soil quality • Protect and enhance the geology of the Scottish Borders, including natural landforms and peatland	• **Hazard regulation** • **Soil quality** • **Carbon storage** • **Nutrient cycling** • **Soil formation**	• % of peatland improved/ deteriorated • Condition of SSSI geodiversity and biodiversity sites
Water	Help protect the status of the water environment • Protect and enhance inland and coastal waters • Protect and enhance water quality • Avoid flood risk and protect flood-risk areas	• **Pollution control** • **Water quality** • **Coastal defence** • **Nutrient cycling** • **Water Cycling** • **Fresh water supply**	• Changes to classification of water bodies in line with WFD requirements • Hectares of wetland created or managed • Number of hectares of land where natural flood management projects are developing created/enhanced/ maintained
Landscape	Help protect and restore landscape character, local distinctiveness and scenic value • Encourage biodiversity projects that will help enhance the landscape and visual amenity • Contribute to and enhance local distinctiveness in the Scottish	• **Wild species diversity** • **Sense of place** • **Aesthetic values**	• Biodiversity actions result in improved green networks and better connected green spaces • Landscape-scale actions for

[8] Defra et al. (2011) *UK National Ecosystem Assessment*. Available at: http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx

	Borders • Protect and enhance landscape designations • Seek to improve habitat connectivity		biodiversity consider the local character and distinctiveness of the area
Population and Human Health	Support improvements in human health and community wellbeing • Safeguard the natural environment for the benefit of communities	• **Noise regulation** • **Hazard regulation** • **Coastal defence** • **Invasive Non-Native Species** • **Health benefits (recreation, tourism, mental health)** • **Education** • **Sense of place** • **Aesthetic values**	• Number of community/volunteer-led biodiversity projects • Number of people undertaking outdoor recreation • Number of projects that raise awareness of the health and wellbeing benefits of enjoying biodiversity
Climatic Factors	Support reduction of greenhouse gas emissions and promote climate change adaptation • Contribute to the mitigation of and adaptation to climate change • Assist with less greenhouse gas emissions being released into the atmosphere	• **Hazard regulation** • **Climate regulation** • **Carbon storage**	• Hectares of native woodland created • NFM projects ha of habitats • Hectares of peatland restoration • Transport statistics for walking/cycling/public transport
Material Assets	Encourage adequate protection and sustainable use of material assets • Protect and enhance natural assets of economic and recreational value, including tourism, food and drink • Support Core Paths and green networks by supporting bid for a new Tweed walk • Maintain consideration of Zero Waste Plan objectives in the delivery of all actions	• **Pollination** • **Food (crops, livestock, wild fish, game)** • **Fibre (crops, trees, wool)** • **Timber** • **Fuel** • **Pharmaceuticals** • **Employment**	• Areas of green space connected through restored ecological networks • Increased awareness and use of local walks and biodiversity projects
Cultural Heritage	Help protect the character, quality and diversity of the Scottish Borders' landscape • Promote visits to enjoy cultural as well as natural heritage assets of the Scottish Borders	• **Sense of place** • **Aesthetic values** • **Cultural heritage**	• Visitor numbers to key cultural heritage assets
Air	Help protect current air quality • Increase woodland creation to support high quality air in the Scottish Borders	• **Hazard regulation** • **Air quality regulation** • **Health benefits**	• Hectares of native woodland created • Increase in frequency of and % of people

	• Promote health and wellbeing benefits of biodiversity and encourage more walking and cycling	**(recreation, tourism, mental health)**	cycling and walking (Reduction in car use/emissions?)

4.2.8 The Plan has objectives to protect and enhance biodiversity alongside ecosystem services in the Scottish Borders. In light of acknowledged environmental issues for the Scottish Borders as outlined in the assessment of the baseline environment (Section 3), key questions for the assessment were:

- What significant effects will the Plan have on ecosystem services in the Scottish Borders?
- Does the Plan address the identified pressures on ecosystem services?
- How does the Plan perform against SEA objectives?

4.2.9 An assessment matrix (example shown in Table 9) was adopted to record findings in relation to the Plan, with consideration of its its six key thematic areas (Ecosystem Restoration; Natural Capital, Greenspace, Conserving Wildlife & Habitats; Land & Freshwater Management; Marine & Coastal Ecosystems).

4.2.10 Assessment of the Plan's reasonable alternatives was also recorded against this matrix.

4.2.11 The matrix adopts a ranking system for environmental effects, as outlined below:

Table 9: Assessment Matrix

Ranking System for Environmental Effects				
xx	**x**	**0**	**✓**	**✓✓**
Significantly negative	Negative	Neutral	Positive	Significantly Positive

4.2.12 The matrix has evolved since the Scoping exercise to incorporate consideration of ecosystem services, in order to incorporate an ecosystems approach to the SEA. The Assessment Matrix is outlined in Table 10 below.

Table 10: Assessment Matrix

Plan: [*e.g. the preferred option; or a reasonable alternative*]			
SEA Topic		**Objectives**	
e.g. Cultural Heritage		*e.g. Help protect the character, quality and diversity of the Scottish Borders' landscape* • *Promote visits to enjoy cultural as well as natural heritage assets of the Scottish Borders*	
Topic-Linked ES	**ES Sub-Type**	**Effect Per Sub-Type**	**Discussion of Anticipated Overall Effects**
Supporting	*e.g. Nutrient cycling*		
Regulating			
Provisioning			
Cultural			
Overview			
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?	**Significant Negative Environmental Effects?**	*e.g. None predicted.*	**Signficant Positive Environmental Effects?** *e.g. Nutrient cycling*

Does the Plan address identified pressures on these ecosystem services?	
How does the Plan perform against SEA objectives?	

4.2.13 Additional aspects of the assessment matrix include an overview of all effects for the alternative or preferred option, to show any significant effects at a glance (not shown here). This summary includes an outline of any possible enhancements considered feasible or appropriate and any mitigation required.

4.2.14 Assessment has been undertaken using professional judgement and in light of the environmental baseline with consideration of the proposed plan and its reasonable alternatives.

4.2.15 Determination of the significance of effects, as detailed in the assessment and summarised in Section 5, includes consideration of a combination of the magnitude of the impact and the importance or sensitivity of receptors.

4.2.16 Assessment of cumulative and synergistic significant effects has been addressed through by consideration tensions, conflicts and synergies between ecosystem services. Discussion of these effects is provided in Section 5.

4.2.17 The full, detailed assessment of the Plan and its reasonable alternatives, including commentary is provided in Appendix D.

5. Assessment of Environmental Effects: Discussion and Mitigation

5.1 Introduction

5.1.1 This section sets out the environmental effects of the Plan on ecosystem services, considering the likely significant effects and the effects of the outlined reasonable alternatives, (Section 4, above), to ensure transparency and comparison between the outlined options. The discussion in this section is based on the detailed assessment, which is provided in full in Appendix D.

5.1.2 As outlined in Section 4, above, the detailed assessment was undertaken in light of the examination of the baseline environment within the Scottish Borders against the proposed LBAP and its main alternative option. A wealth of baseline data, including spatial information has been available and there have been no significant obstacles to the completion of the assessment.

5.1.3 Owing to the acceptance of the detailed assessment matrix at Scoping stage, and given the additional complexity of undertaking spatial analysis, a focus on the assessment matrix was maintained. However, maps discussed throughout the detailed assessment that shall inform the implementation of the proposed Plan are available online.[9]

5.2 Assessment of Reasonable Alternative Option

5.2.1 The findings of the assessment of the Reasonable Alternative Option (as identified in Section 4, Table 7), is outlined in the following paragraphs. The detailed assessment of and commentary on this option can be found in Appendix D.

5.2.2 The Reasonable Alternative Option focuses on the actions directly linked to the protection and enhancement of habitats, protected sites and species of the Scottish Borders (habitats as outlined in Appendix E). The predominant focus of this option is species- or site-specific. There will be some wider focus on specific habitats across the region, however the interplay between habitat functionality at a landscape scale is not considered, nor is the interaction between actions for habitats and species and ecosystem services across the region.

5.2.3 Table 11 summarises the environmental effects of the Reasonable Alternative Option in line with the methodology outlined in Table 9 above and provides commentary on the overall findings of the detailed assessment.

Table 11: Reasonable Alternative Option – Summary of Environmental Effects

OPTION 2 ENVIRONMENTAL EFFECTS ON ECOSYSTEM SERVICES		
Supporting	**Effect**	**Commentary**
Nutrient Cycling	**0**	There is potential for beneficial impacts on supporting services through protection and enhancement of key habitats. This is more likely to be at a site-specific level under this option, which does not have a focus on broader ecosystem services across the region.
Primary Production	**0**	No negative effects were considered likely, and some benefits in terms of soil formation services are predicted, through actions linked to peatland, grassland and farmland habitat enhancements. There may be some locally beneficial impacts on aquatic ecosystems,

[9] Available at: https://www.scotborders.gov.uk/info/20013/environment/723/biodiversity/5

Water Cycling	0	including marine and freshwater systems through targeted efforts to support these habitats and there may be some indirect benefits to ecosystems through promoting their health and resilience via enhancement of habitats. Where no conservation action was undertaken, there would be no effects on supporting services. Overall, it is not considered that this option would be at a scale to result in positive or negative effects on supporting ecosystem services and effects were predicted to have a neutral impact, given the site-specific rather than landscape-scale focus of this option.
Soil Formation	0	
Regulating	**Effect**	**Commentary**
Hazard	✓	Again, due to the focus on conservation measures to support biodiversity in relation to specific habitats, sites or species, the benefits are likely to be limited and where no targeted measures are applied, ecosystem services would not be affected by this scenario. A significant positive effect was considered likely for disease and pest regulating services, in relation to measures to specifically target Invasive Non-Native Species (INNS), which will happen in habitats across the region under this option. Other predicted positive effects on pollination services related to measures to enhance habitat that would benefit pollinator species and direct measures for pollinating insects. It is unlikely, however, that there would be a significant impact on pollination regulating services, without a broader approach that considers the interplay of other ecosystem services such as provisioning services. Hazard regulation (flood risk reduction) would be benefited by efforts to enhance woodland habitats, and enhancements to peatlands and bog areas may positively impact soil quality and carbon storage, also supporting climate regulation. Other efforts on aquatic habitats would help with pollution regulation and water quality, producing positive effects in specific areas. Actions for improving urban habitats could indirectly benefit regulating services through planting of native trees in urban areas and encouraging people to spend more time in nature, or walk/cycle rather than using private cars as transport, with potential positive impacts on air quality and climate. This option would also indirectly support the ability of species to adapt to climate change, through undertaking of management approaches to support species and enhance the habitat on which they rely. There are no specific measures within this option that would be considered likely to positively (or negatively) impact noise regulating services or coastal defence.
Air Quality	✓	
Pollination	✓	
Climate	✓	
Carbon Storage	✓	
Noise	0	
Coastal Defence	0	
Pollution	✓	
Water	✓	
Soil Quality	✓	
Disease & Pest (INNS)	✓✓	
Provisioning	**Effect**	**Commentary**
Wildlife Diversity	✓✓	Supporting biodiversity in the region would be the primary of aim of the plan, under this option. A significant positive effect is predicted on wildlife diversity through measures to protect and enhance specific species and habitats of importance throughout the Scottish Borders. This may lead to other positive impacts e.g. on cultural services, which are discussed below. There may also be positive effects on trees, vegetation and peat through habitat-focussed actions to restore peatlands and woodland habitats. Specific actions may not be at a large enough scale to positively impact the region's fresh water supply, although no detrimental impact would be predicted. Similarly, a neutral effect was predicted for fuel and pharmaceuticals, which are not primary produce for the Scottish Borders. As a result of this option, there is potential for negative effects on food, timber and fibre provisioning services, as they may face constraints due to measures to protect mobile species and specific habitats. (Although these services may also be reasonably said to have some negative impacts on wildlife diversity, where an ecosystems approach to land management is not adopted). Overall, the actions would not be of an intensity to result in significant negative effects on these services.
Trees, Vegetation, Peat	✓	
Fresh Water Supply	0	
Food	x	
Timber	x	
Fibre	x	
Fuel	0	
Pharmaceuticals	0	

<table>
<tr><th>Cultural</th><th>Effect</th><th>Commentary</th></tr>
<tr><td>Sense of Place</td><td>✓✓</td><td rowspan="6">The plan focuses on measures to protect and enhance habitats and species in order to benefit biodiversity. This option has potential for significant positive effects on some cultural services, namely sense of place, cultural heritage and aesthetic value. Actions aimed at enhancing biodiversity could increase appreciation of and attachment to the area's natural heritage in terms of both landscapes and seascapes, and its high-quality environment, inspiring aesthetic valuation and creation/enhancement of cultural heritage. This may encourage people to be more active in nature and to appreciate being in nature, however there are no actions that directly encourage or raise awareness of the health benefits of nature for people, and it is not considered overall that the plan would result in a positive effect, although no negative effect would be likely.
There may be indirect positive impacts in terms of education, relating to increased understanding about species and habitats, and for employment, either directly through delivery of key actions for this option, or indirectly through enhancing natural heritage and encouraging visitors and food and drink production (however, some potentially negative interplay with food provisioning services has been identified above).
Since there is no ecosystems approach with consideration of linked services, there is less of a focus in this plan on encouraging people to use more active transport and be active in nature, although negative effects are not predicted.</td></tr>
<tr><td>Health Benefits</td><td>0</td></tr>
<tr><td>Aesthetic Value</td><td>✓✓</td></tr>
<tr><td>Cultural Heritage</td><td>✓✓</td></tr>
<tr><td>Employment</td><td>✓</td></tr>
<tr><td>Education</td><td>✓</td></tr>
<tr><td>What significant effects will this option have on the identified ecosystem services in the Scottish Borders?</td><td colspan="2">Significant Negative Environmental Effects</td><td>None predicted.</td><td>Significant Positive Environmental Effects</td><td>Disease & Pest (INNS)
Wildlife Diversity
Sense of Place
Aesthetic Value
Cultural Heritage</td></tr>
<tr><td>Other (not significant) effects)</td><td colspan="5">• Indirectly, this option could lead to other positive benefits for some ecosystem services
• Neutral effects are predicted for some services
• Some negative effects are indicated (though not significant) for provisioning services</td></tr>
<tr><td>Does this option address identified pressures on these ecosystem services?</td><td colspan="5">• Where positive effects are indicated, this is considered to demonstrate the potential to alleviate pressures on the identified ecosystem services.
• Pressures are likely to be relieved at a site-specific level, rather than across the region as a whole.
• For provisioning services, the actions connected with this option may increase pressure, e.g. on food, timber or fibre supply, although not at a significant level.</td></tr>
<tr><td rowspan="3">How does this option perform against the SEA objectives?</td><td colspan="2">Objectives Fully Met:</td><td colspan="3">Biodiversity, Flora & Fauna;
Water;
Landscape</td></tr>
<tr><td colspan="2">Objectives Indirectly Met:</td><td colspan="3">Cultural Heritage;
Population & Human Health; Climatic Factors</td></tr>
<tr><td colspan="2">Objectives Not Fully Met:</td><td colspan="3">Soil; Material Assets; Air</td></tr>
</table>

5.3 Assessment of Preferred Option

5.3.1 The findings of the assessment of the proposed Plan, which is a new Local Biodiversity Action Plan (LBAP) that adopts an ecosystems approach to action planning (as outlined in Section 2, above), are provided in the following paragraphs. The detailed assessment of and commentary on this option can be found in Appendix D.

5.3.2 This preferred option for the LBAP incorporates actions aimed at protecting and enhancing the ecosystems and natural capital (ecosystem services) of the Scottish Borders, across all habitats and at a landscape scale.

5.3.3 Actions within the LBAP are grouped under six key themes, which were fully considered in the assessment of environmental effects:

Theme 1 Ecosystem Restoration
Theme 2 Natural Capital
Theme 3 Greenspace
Theme 4 Conserving Wildlife & Habitats
Theme 5 Land & Freshwater Management
Theme 6 Marine & Coastal Ecosystems

5.3.4 Table 12, below, summarises the likely environmental effects of the LBAP as the preferred option, in line with the assessment methodology outlined in Table 9, above, and provides commentary on the findings of the detailed assessment in Appendix D.

Table 12: Preferred Option – Summary of Environmental Effects

OPTION 1 (LBAP) ENVIRONMENTAL EFFECTS ON ECOSYSTEM SERVICES			
Supporting	**Effect**	**Commentary**	
Nutrient Cycling	✓	Theme 1	Actions will support ecosystem health and restoration, for example through improving aquatic habitats, actions aiming to reduce development impacts on ecosystems and to enhance and restore the ecological network, including through tree planting. This which will in turn support services like photosynthesis, soil formation and nutrient cycling.
		Theme 2	Actions include restoration of peatland and woodland ecosystems, which will have positive indirect effects on soils and support nutrient cycling, with other positive impacts for climate change adaptation, through increased carbon storage capacity.
Primary Production	✓	Theme 3	Actions seek to encourage supporting ecosystems in urban areas through increased awareness of SUDS use and green infrastructure, which could also have positive indirect effects on supporting services
		Theme 4	In maintaining and enhancing biodiversity, including in soil and water, actions will help protect ecosystems and natural capital, and indirectly promote the health of supporting ecosystem services. In turn, this will harness the benefits of other services.
Water Cycling	✓	Theme 5	Under Theme 5, creative land and freshwater management projects will be encouraged, to enhance supporting services such as soil formation and nutrient cycling, employing lessons learned from the Scottish Borders Pilot Regional Land Use Framework.
Soil Formation	✓	Theme 6	Theme 6 actions such as marine biosecurity may support water cycling, as would actions supporting for Marine Protected Areas.
Regulating	**Effect**	**Commentary**	
Hazard	✓	Theme 1	Theme 1 actions include restoration of farmland habitats and species-rich hedgerows and woodlands, with the aim of enhancing biodiversity. There are potential benefits for carbon storage and climate regulation services (as well as climate change adaptation), and indirect benefits for hazard regulation, such as flood risk mitigation. Restoration of ecosystems is also considered likely to have a significant positive effect on pollution regulating systems for both freshwater and marine environments.
Air Quality	✓		

Pollination	✓✓		Other actions linked to assessing and minimising development impacts in order to support ecosystem restoration may have a positive benefit on noise regulation
Climate	✓✓	Theme 2	Under Theme 2, actions are likely to result in significant positive effects pollination services through habitat restoration and monitoring projects, and for carbon storage and soil quality, through enhancement of natural capital.
Carbon Storage	✓✓	Theme 3	Theme 3 actions will support biodiversity in urban areas, through improving green networks around towns and wildlflower planting, with benefits for pollination services, and actions also promote active travel, and raise awareness of the health benefits of being active in nature, which is likely to have a positive effect on climate and indirectly have a positive effect on air quality through reduced car use.
Noise	✓	Theme 4	Theme 4 actions also seek to improve habitats across the landscape, which will support pollinators and actions also encourage citizen science and dissemination of good practice to raise awareness of biodiversity and how to look after it, which can extend to pollinator species, and benefit them indirectly. creation, which may also have a positive impact on carbon storage. enhancement of peatland ecosystems and natural flood management techniques, including tree planting. Other actions include land management approaches that optimise ecosystems and their beneficial services, resulting in positive effects on hazard regulating services (e.g. relating to flood risk) and carbon storage. This may lead to indirect benefits for air quality.
Coastal Defence	**0**	Theme 5	Theme 5 actions include tackling INNS through awareness raising and direct action, and a focus on maintaining biosecurity with benefits for the regulation of disease and pests. This will be important since other actions for land and freshwater management aim to support a robust ecological network with improved resilience to climate change and a stronger ecological network may provide more opportunities for INNS to spread. Theme 5 also indirectly support improved soil quality, with emphasis on farmland management and air quality, through native woodland Efforts under Theme 5 will include awareness raising of the natural capital value of key environmental features and the costs of negative impacts on regulating services at a landscape scale.
Pollution	✓✓	Theme 6	Actions under Theme 6 for the marine environment seek to establish codes of conduct to protect the water environment in relation to Marine Protected Areas and there will be indirect benefits to water quality through actions to raise awareness of factors that threaten the marine environment, such as diffuse pollution. There are also actions to support participation in plastic bead monitoring, and to raise awareness of this new and increasing type of pollution. There are no specific actions focussed on coastal defence within the plan, although indirectly, other actions within the plan may support climate change adaptation, increasing the overall resilience of ecosystems to climate change effects. However, it is not considered that there would be any negative, or significantly negative effect on this regulating service
Water Quality	✓✓		
Soil Quality	✓✓		
Disease & Pest (INNS)	✓✓		
Provisioning	**Effect**	**Commentary**	

Wildlife Diversity	✓✓	Theme 1	The LBAP actions support sustainability production and use of provisioning services, through protection and restoration of healthy ecosystems. Theme 1 actions include meeting Water Framework Directive requirements, which could indirectly positively impact fresh water supplies (as well as pollution reduction).
Trees, Vegetation, Peat	✓✓	Theme 2	Theme 2 includes woodland ecosystem and peatland restoration as well as enhancement of farmland habitats and grasslands, with a view to using the LUS Pilot maps to ensure land management delivers multiple benefits for a range of ecosystem services, including provisioning services of trees, vegetation and peat and indirect positive effects on food and timber production.
Fresh Water Supply	✓	Theme 3	Actions include native tree species selection and management in community woodlands, streets and settlements as well as biodiversity projects for communal land and encouragement of green infrastructure, including planting and SUDS, as well as wildlife friendly management of greenspace, all of which will have a significantly positive effect on provisioning services. Key actions under this theme that may benefit provisioning services indirectly link to awareness raising of SUDS potential to maintain fresh, clean water, as well as information sharing concerning good practice in relation to urban development.
Food	✓	Theme 4	The primary aim of the LBAP is to act as a framework for the protection and enhancement of biodiversity. A significantly positive direct impact on wildlife diversity is anticipated from the implementation of LBAP actions, all of which aim, through an ecosystems approach, to enhance and protect biodiversity on both land and sea. Theme 4 actions include direct support for wild species diversity, as a primary aim of the LBAP. Other direct actions including ongoing identification and promotion of Local Biodiversity Sites, which will add and enhance the networks between national and internationally protected areas, by recognising the regional and local value of distinctive and important habitats across the Borders. Other actions including awareness raising and monitoring and encouraging appreciation of local biodiversity will have an indirect positive impact on wildlife diversity. Theme 4 actions seek to enhance both habitats and native species diversity at a landscape scale, with priority and most relevant areas for action highlighted in the plan, organised in accordance with the 5 key landscape types in the Borders (Map shown in Appendix C). The LBAP adopts a holistic ecosystems approach to biodiversity action planning, with the aim of targeting action so that benefits to biodiversity protection and enhancement can be maximised whilst tensions with provisioning services are reduced.
Timber	**0**	Theme 5	Theme 5 actions to tackle INNS will have a significant positive effect on wild species diversity, by enhancing their habitats and encouraging their success through removing species that would otherwise out-compete them. Actions to improve land and freshwater management may have indirect positive effects on production of food, fibre and timber.
Fibre	✓	Theme 6	Theme 6 actions also aim to support species diversity within seascapes, through recording, awareness raising and action to improve habitats for native species diversity, such as by tackling INNS.
Fuel	**0**		
Pharmaceuticals	**0**		

Cultural	Effect	Commentary
Sense of Place	✓✓	Theme 1 actions include restoration of ecosystems guided by the LUS Pilot maps, which will look after special landscapes and assist in the retention and enhancements of landscapes which give residents and visitors to the area a sense of place. Theme 2 actions also aim to enhance and protect the high quality natural environment through investment in Natural Capital. The aesthetic appeal of local landscapes is therefore supported by the LBAP actions. Theme 3 actions seek to enhance urban landscapes and to celebrate the historic land use of the Scottish Borders, and to promote the sense of it being a special place both for residents and for visitors. Actions also promote health and wellbeing via green networks and active travel awareness raising as well as increasing biodiversity in and around towns through green infrastructure. Theme 4 actions, it is reasonable to assume, will help in enhancing cultural ecosystem services through support for protected areas, wild species diversity and important habitats. The Scottish Borders features notable species that are iconic to Scotland and important as charismatic species that people actively wish to protect, such as bird species and mammals. actions under Theme 4 to conserve wild species diversity and protect special and designated sites, as well as under Theme 6 relating to enhancement of the marine environment, can be considered to be likely to have a significantly positive impact on cultural services. Theme 6 actions seek to raise awareness and appreciation of the marine and coastal environment and encourage actions that protect it, using educational opportunities to build engagement and enjoyment of the marine and coastal environment in terms of biodiversity awareness and protection. The LBAP includes actions that may indirectly lead to positive benefits for the employment sector, for example in relation to land management for food or timber production, or in relation to tourism. The assessment of impacts on cultural services is difficult since these are subjective concepts; however, there is scientific research that experience of nature can support cultural services, for example by improving mental health and wellbeing through people having a positive sense of place, a feeling of belonging and of being in touch with their cultural heritage, and an appreciation of the aesthetic value of the landscapes. It is reasonable to think that the LBAP actions will have significant positive impacts on cultural ecosystem services overall. All actions seek to enhance biodiversity, and specific actions seek to not only support biodiversity but also enhance green spaces through dedicated walks and promotion of green networks and paths. actions may have resultant benefits for special landscapes, and potentially positive impacts on the local economy through increasing tourism or food and drink industry sales. Actions may assist in increasing a sense of pride in the special character of the Scottish Borders amongst the local population as well as having benefits for the economy
Health Benefits	✓✓	
Aesthetic Value	✓✓	
Cultural Heritage	✓✓	
Employment	✓	
Education	✓	

What significant effects will this option have on the identified ecosystem services in the Scottish Borders?	**Significant Negative Environmental Effects?**	None predicted.	**Significant Positive Environmental Effects?**	**Pollination** **Climate** **Carbon Storage** **Pollution** **Water Quality** **Soil Quality** **Disease & Pest (INNS)** **Wildlife Diversity** **Trees, Vegetation, Peat** **Sense of Place** **Health Benefits** **Aesthetic Value** **Cultural Heritage**

Other (not significant) effects	• Positive (indirect) effects are considered likely for supporting services • Neutral effects are predicted for coastal defence regulating services and for timber, fuel and pharmaceutical supporting services. • No negative effects are predicted – mitigation takes account of possible tensions (see Appendix D and Section 5.5).	
Does this option address identified pressures on these ecosystem services?	• Supporting services are indirectly benefited through the implementation of the LBAP, which will assist in addressing pressures through contribution to a robust ecological network with well-functioning ecosystems. • It is considered that there will be a significant positive effect on some regulating services, with benefits in addressing pressures across the region. Other regulating services will indirectly benefit through actions to protect and enhance biodiversity and take an ecosystems approach to action planning. In addition, this approach, using the LUS Pilot Maps to target activity, will help in avoiding tensions that may exist with provisioning services, to avoid adding to pressures on these services. • The LBAP actions present an opportunity to relieve pressure on cultural services, perhaps most relevant to the region is positive impacts on health benefits, given the statistics outlined in the baseline report concerning mental and physical wellbeing. In addition, the LBAP looks at supporting a high quality natural environment, which will benefit the region in terms of aesthetic value and lead to indirect economic benefits in industries such as tourism, food and drink. • LBAP actions have been drafted and will be undertaken with consideration of insight gained via the LUS Pilot maps, since the Land Use Strategy is a key policy driver, to ensure land use is undertaken with consideration for ecosystem service health and protection of natural capital.	
How does this option perform against the SEA objectives?	Objectives Fully Met:	ALL
	Objectives Indirectly Met:	-
	Objectives Not Fully Met:	-

5.4 Cumulative & Synergistic Effects

5.4.1 The actions of the preferred option are cumulatively positive, and are designed to be collaborative working with a wide range of partners with multiple interests and with the insight gained from the ecosystem services mapping undertaken by the LUS Pilot. Such collaboration and cumulative positive impacts are predicted to help optimise land use, take a wide range of ecosystem services into account effectively and to ultimately enhance biodiversity. Stronger and more coherent ecosystems will provide benefits for all four main types of ecosystem services.

5.4.2 Where there are natural tensions, for example with provisioning services such as wildlife diversity and food production, actions being guided by LUS Pilot spatial mapping data, close collaboration and consideration of how ecosystems operate across landscapes, is predicted to mitigate any potential negative impacts.

5.4.3 Synergistic effects have been highlighted throughout the detailed assessment, such as peatland restoration benefiting both soil quality and formation, as well as carbon storage and climate. Actions to enhance natural capital, and to restore ecosystems as well as in relation to improved land and freshwater management and marine and coastal ecosystems may have indirect positive impacts on food such as fish, game and livestock and arable crops.

5.4.3 It is also considered that actions to protect and enhance biodiversity, with a view to increasing ecosystem health, will have a longer-term, cumulatively positive effect on adaptations to the challenges of climate change.

5.4.4 The plan adopts a 10 year timescale, with a review scheduled for 5 years. Some actions are tied to partner activities, for example water quality and pollution reduction is linked to SEPA's Water

Framework Directive Targets. Given this timescale, and the spatial scale of the plan, together with the collaboration required and the nature of ecosystems, the expectation is that the predicted significant positive effects will arise over the medium to long-term, rather than short-term results being achieved.

5.5 Proposed Mitigation Measures & Enhancements

5.5.1 As the effects of the Plan, including likely significant effects are expected to be positive, following the detailed assessment, there is no requirement to identify mitigation to avoid or reduce negative effects.

5.5.2 However, undertaking the SEA has identified that potential tensions exist, such as between actions, priorities and pressures for provisioning services, and cultural, regulating or supporting services. These will be considered in the undertaking of all actions, by judicious use of the LUS Pilot maps, which have identified possible opportunities, areas of tension or constraint, where trade-offs may be required (e.g. whether to focus on woodland creation or species rich grassland conservation in particular areas, or the priorities of food production versus the hazard regulation support that natural flood management may provide).

5.5.3 Areas of tension are considered to be:

Increased recreation through positive benefits on cultural ecosystem services (e.g. health benefits) has a negative impact on wildlife sites and habitats
→ *Mitigation proposed:* Care will be taken to encourage responsible access to the countryside to avoid increased visitor impacts in terms of recreational disturbance, erosion or other impacts on ecosystem services, through awareness raising alongside promotion of health benefits.

Stress on provisioning services through actions related to farmland habitat restoration for wildlife diversity, or trees, vegetation and peat.
→ *Mitigation proposed:* Apply information gathered during the LUS Pilot mapping process, which identifies areas of mutual benefit for land use and seeks to avoid negative impacts, or seek to reduce their impact.

5.5.4 Possible enhancement opportunities for some ecosystem services have arisen through the assessment, including:

Coastal defence
→ *Enhancements:* Consider whether to include actions that may directly or indirectly support coastal erosion prevention under Theme 6

Carbon storage
→ *Enhancements:* Consider potential actions to enhance carbon storage potential in the marine environment

5.5.5 Issues raised in the assessment will be considered in the finalisation of the LBAP and discussed with LBAP partners, for example, discussing whether any further refinement can be made to actions in areas of potential tension, as described above, or seeking further, more direct enhancements for cultural services.

5.6 Monitoring

5.6.1 The 2005 Act requires the monitoring of the significant environmental effects of the Plan. The purpose of the monitoring is to identify significant positive and negative environmental effects, including those that were unforeseen.

5.6.2 A monitoring approach is briefly outlined within the LBAP in order to clarify how progress will be measured.

- Key policy drivers including the Scottish Biodiversity Strategy and the Land Use Strategy, as well as the Scottish Borders Local Development Plan, Administration Vision and Communities Plan provide measures for the LBAP.
- In addition, indicators outlined in Section 4, Table 8, will be used as measures for monitoring.
- Monitoring will be integrated with the Biodiversity Duty Report, which Scottish Borders Council is required to produce in line with the Wildlife and Natural Environment (Scotland) Act 2011.
- The final approach to monitoring will be agreed with LBAP partners.

5.6.3 No additional SEA monitoring is proposed, since an established reporting protocol exists, and since the proposed and preferred LBAP option is not predicted to have any negative environmental effects. As the LBAP is put into action, the tensions identified throughout the detailed assessment will be subject to review and monitoring.

6. Next Steps

6.1 Consultation on the Plan and Environmental Report

6.1.1 Public views and opinions on this Environmental Report, and the consultation on the LBAP to which it relates, are now invited. The following questions may provide a helpful structure for responses, although responses need not be refined to these questions and general comments are welcome:

- Are you content that an accurate description of the current environmental baseline has been provided?
- Are you aware of any further environmental information that will help to inform the assessment findings?
- Do you agree with the conclusions on the environmental effects of the Plan?
- Are you aware of other 'reasonable alternatives' to the Plan that should be considered as part of the SEA process?

6.1.2 Queries and general comments on the Environmental Report and relevant documents are invited. Comments should be made, by 25 May 2018 to:

Ecology Team
Council Headquarters
Newtown St Boswells
Melrose
Scottish Borders
TD6 0SA

Or by email to: ecology@scotborders.gov.uk

6.2 Post-consultation Procedures

6.2.1 Following the consultation period, responses will be analysed. The findings from this analysis will be taken into account as the LBAP is finalised. The finalised LBAP will be published by September 2018. As soon as reasonably practicable thereafter, a post-adoption SEA Statement will be prepared, which reflects on the findings of the assessment and associated consultation, and explains how the issues raised have been addressed.

APPENDICES

Appendix A: Relevant Environmental Objectives of Other PPS:

SEA TOPIC		
Biodiversity, fauna and flora		
Plan, programme or strategy	Key considerations for LBAP	Overview of Environmental Objectives of the PPS Relevant to the SEA Topic and the PPS (LBAP)
Rio Declaration (1992)	The LBAP will play a vital role in ensuring that the goals and targets of strategic international plans relating to biodiversity are delivered, taking into account their priorities at a level specific to the Scottish Borders.	Biodiversity policies from international to local levels aim in particular to conserve habitats, species and ecosystems and halt the loss of biodiversity. Halting the decline of key species is important, and where possible remedial action and enhancement should be implemented in degraded areas. Policies also note the importance of an ecosystem approach – an holistic, landscape approach to biodiversity conservation that goes beyond the traditional emphasis on protecting individual sites. The Marine Conservation Strategy seeks to manage seas sustainable to protect a biologically diverse marine and coastal environment and recover seas where practical. The non-native framework will seek to minimise the risk posed, and reduce the negative impacts caused, by invasive non-native species. Agricultural and forestry policies promote sustainable land use, environmental protection and stewardship, and emphasise the importance of delivering public goods outwith market mechanisms. Policy sets a target of increasing forest cover to 25% of land cover.
Convention on Biological Diversity (1992)		
Kyoto Protocol (1997)		
Strategic Plan for Biodiversity 2011-2020		
Aichi Biodiversity Targets		
EU 2020 Biodiversity Strategy		
Scottish Biodiversity Strategy (including Scotland's Biodiversity: It's In Your Hands 2004 and The 2020 Challenge for Scotland's Biodiversity 2013)	The strategy is key to the development of the LBAP, which will deliver the Strategy's aims at a level specific to the Scottish Borders and support the targets set within The 2020 Challenge for Scotland's Biodiversity.	
Nature Conservation (Scotland) Act 2004	Through the production of the LBAP, Scottish Borders Council will contribute to the requirements of the Act, including that the Council, as a public body, will show its commitment to the biodiversity duty.	
Wildlife and Countryside Act (1981)	The objectives of the LBAP will be compliant with the Act and support its requirements	
Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora	Set out the legal protection of designated sites that are found in the Scottish Borders, specifically Ramsar sites, Special Areas of Conservation and Special Protection Areas. The LBAP will support protection of these sites.	
Directive 79/409/EEC on the conservation of wild birds		
Convention on Wetlands of International Importance 1971 (amended 1982 and 1987) (Ramsar Convention)		
The Scottish Forestry Strategy (2006) (and associated SEA)	The LBAP will contribute towards a "high quality, robust and adaptable environment", with actions for woodlands.	
Scottish Borders Woodland Strategy (2005)	As above, the LBAP will help achieve the vision of "Trees, woodlands and forests will achieve their full potential as a natural resource, creating the environment that	

	gives greatest benefit to the life and work of the Borders people"	
The Non-Native Species Framework Strategy for Great Britain.	In relation to Invasive Non-Native Species, the LBAP is complementary to the aims of these PPS, as it will seek to tackle INNS in the Scottish Borders, reduce negative impacts and minimse the risk of spread	
WANE Act		
Strategy for Marine Conservation in Scotland's Seas	Actions within the LBAP relating to the marine environment will support this strategy to encourage biodiversity through sustainable use of the marine resource	
Population and Human Health		
Plan, programme or strategy	Key considerations for LBAP	Overview of Relevant Environmental Objectives of the PPS
Scottish Government National Outcomes	The LBAP aims to support the National Outcomes, for example in terms of actions that promote: longer, healthier lives, successful learners, tackling inequality, sustainable places, supportive and resilient communities, valuing the built and natural environment, reducing local and global environmental impacts.	The PPS highlight that in settlements, networks of linked, good quality open space are important for their contribution to amenity and their role in nature conservation, biodiversity, recreation and physical activity. The LBAP recognises the important role the quality of the physical environment has to play in mental health improvement.
Scottish Borders Core Path Plan (2008)	The core paths of the Borders are essential to health, sense of place and vitality of Borders residents and visitors. The LBAP takes cognisance of these and their potential enhancement for biodiversity and people.	
Soil		
Plan, programme or strategy	Key considerations for LBAP	Overview of Relevant Environmental Objectives of the PPS
Scottish Soils Framework (2009)	The purpose of the framework is to ensure more sustainable management of the soil resource. It identifies 13 outcomes of threats to the soil resource and provides action to tackle these outcomes. The LBAP will add efforts to address these threats and assist in tackling them in line with the actions where appropriate.	Policies on soil seek to protect resources from a range of impacts including increased susceptibility to erosion and soil pollution. The LBAP will support protection of soils through its actions, and its links with key policy drivers such as the Land Use Strategy, Scottish Borders Pilot Land Use Framework and Scottish Biodiversity Strategy, which have informed such actions and also seek to protect Scotland's soils.
Water		
Plan, programme or strategy	Key considerations for LBAP	Overview of Relevant Environmental Objectives of the PPS
Water Environment and Water Services (Scotland) Act 2003 (Designation of Scotland River Basin District) Order 2003	The documents are the Scottish distillation of the European Water Framework Directive. They give Ministers regulatory powers over water activities in order to protect, improve and promote sustainable use of Scotland's water environment. The LBAP will support these PPS through its actions.	Water related policies aim to protect water resources, achieve an improvement in their ecological condition where appropriate and aim to achieve or maintain Good Environmental Status. River Basin Management Plans, which were prepared under the Water Framework Directive and WEWS Act set specific objectives for the protection and improvement of water resources within each river basin. The LBAP supports
The Water Environment (Controlled Activities) (Scotland) Regulations 2005		
Scotland River Basin	The two RBMPs are the documents that	

Management Plan and Solway Tweed River Basin Management Plan (RBMP)	state the targets and aims for the protection and improvement of Scotland's water environment. The key target is to improve the proportion of water courses in good condition. In the Borders the Tweed is subject to a separate RBMP to the rest of Scotland and thus the LBAP takes account of the objectives of both documents.	such PPS and protection of the water environment and aquatic ecosystems.
Flood Risk Management (Scotland) Act 2009	Sets national policy the requirement to take flood risk into account has been considered in preparing the LBAP.	
Scottish Water, Water Resource Plan (2008)	Sets Scottish Water's plan to ensure a safe supply of drinking water to 2032. One of the key challenges is to adapt to pressures on water resources due to climate change and environmental constraints. The LBAP aims to support to work to meet this challenge.	
National Marine Plan 2010	The LBAP maintains awareness of the vision of this document for the marine environment: "clean, healthy, safe, productive and biologically diverse oceans and seas, managed to meet the long term needs of nature & people"	
Tweed Catchment Management Plan	The Plan has a series of strategic aims with regards to water quality, water resources, habitats and species, river works and flood management. The LBAP aims to assist in work towards these aims	
Tweed Wetland Strategy 2010	The strategy has broad aims related to protection, enhancement of wetland habitats; promotion of habitat connectivity; identification of threats; and supporting sustainable land use. The LBAP will assist in work towards these aims.	
Air		
Plan, programme or strategy	Key considerations for LBAP	Overview of Relevant Environmental Objectives of the PPS
Low Carbon Scotland – Meeting the Emissions Reduction Targets 2010-2020	The LBAP should contribute to the targets of Low Carbon Scotland by highlighting the role of biodiversity in carbon sequestration and as a natural resource. The LBAP aims to play a role in achieving targets set at a local level and reflecting the benefits of biodiversity for low carbon communities.	These national strategies aim to achieve the best air quality for Scotland, thereby supporting health and wellbeing and protecting the environment as a natural asset. They aim to ensure that Scotland's air quality has a reputation as high as Scottish landscapes and scenery. LBAP actions are linked to protecting ecosystem services such as air quality regulation and increasing health and wellbeing through encouraging active travel, with potential knock-on benefits for reducing travel by car.
Cleaner Air for Scotland – The Road to a Healthier Future	The LBAP will support this strategy with actions that promote adaptation to climate change and reduction of greenhouse gas emissions, efforts to encourage walking locally and actions to enhance biodiversity and ecosystem services that support air quality and its regulation	
Cultural Heritage		
Plan, programme or strategy	Key considerations for LBAP	Overview of Relevant Environmental Objectives of the PPS
NPPG5 Archaeology and Planning (1998)	Sets national policy on archaeology and the historic environment	Policies extend beyond specific designated sites to reflect the value of

NPPG18 Planning and the Historic Environment		the setting of monuments and historic buildings, and wider cultural landscapes. The LBAP includes actions aimed at protecting and promoting the value of the historic environment in terms land use
Scottish Historic Environment Policy (SHEP) (2009)	The LBAP aims to impact as little as possible on the historic environment. The LBAP seeks to promote the SHEP vision.	
Climatic Factors		
Plan, programme or strategy	Key considerations for LBAP	Overview of Relevant Environmental Objectives of the PPS
Climate Change (Scotland) Act 2009	The Act sets target for carbon emissions reductions (against a baseline) by 2050. It also informs the national Land Use Strategy, which has led to the Pilot Land Use Strategy in the Scottish Borders. This in turn informs key objectives of the LBAP.	Healthy ecosystems play an important role as carbon sinks and the LBAP aims to contribute to climate change targets and adaptation strategy to increase the resilience of the local community, and natural and economic systems. Indirectly the actions of the LBAP will help to meet climate change targets through the promotion of biodiversity and the role aspects of biodiversity can play as a carbon sink and seek to promote adaptation.
Scottish Climate Change Adaptation	The document has the vision: "To increase the resilience of Scotland's people, environment and economy to the impacts of a changing climate". Within this there are objectives to support a healthy and diverse natural environment with capacity to adapt and to sustain and enhance the benefits, goods and services that the natural environment provides". The document is directly relevant to the aims of the LBAP.	
Biomass Action Plan for Scotland (2007)	The aim of the Plan is to set out a coordinated programme for development of the biomass sector in Scotland. It provides actions to supplement a framework to assist further production. The LBAP should be aware of the need for forestry to provide biomass.	
Material Assets		
Plan, programme or strategy	Key considerations for LBAP	Overview of Relevant Environmental Objectives of the PPS
NPF 3	The LBAP and NPF3 should be aligned in their commitment to the Scottish Biodiversity Strategy. The LBAP will represent opportunities in the Scottish Borders to ensure the protection of biodiversity.	These PPS all promote a high quality natural environment and protection of national heritage, internationally and nationally protected sites and species, as well as of locally important sites and species. The Zero Waste Plan seeks to make a positive contribution to Scotland's climate change and renewable energy targets. The LBAP will be adopted as Supplementary Guidance for the Scottish Borders in relation to planning and supports the aims of these PPS.
Scottish Planning Policy	The LBAP will need to consider the requirements of the SPP throughout its development, including the impact of development on biodiversity in the Scottish Borders. The LBAP will contribute to SPP policies in relation to biodiversity and the natural environment.	

Planning Advice Note (PAN) 60	The LBAP will put into practice the requirements of PAN 60, and will be a proactive measure for the encouragement and understanding of the natural environment. The proposed outcomes of the LBAP are in line with PAN 60 requirements.	The LUS Pilot aimed to test principles of the national LUS at a local level to see how they can be realised in a practical way, based on an ecosystems approach that guides decision on integrated land management. In adopting an ecosystems approach and building on learning and outstanding actions from the Pilot, the LBAP supports these PPS
Scottish Borders Local Development Plan	The LBAP will be able to help guide developments to reduce, prevent or offset the effects of development on biodiversity.	
Scotland's Zero Waste Plan (2010)	The LBAP actions promote sustainable use of resources through individual and collective community action	
Scottish Borders Pilot Regional Land Use Strategy Framework	The strategies represent key policy drivers for the LBAP and the maps produced for the LUS Pilot in the Scottish Borders, along with outstanding actions from the Pilot, have shaped preparation of LBAP actions and targeting of effort in the landscape	
Land Use Strategy (2016)		
Landscape		
Plan, programme or strategy	Key considerations for LBAP	Overview of Relevant Environmental Objectives of the PPS
European Landscape Convention (2000)	Requires protection and enhancement of landscapes. LBAP actions are focussed at a landscape scale across the Scottish Borders, which supports these PPS.	Landscape policies recognise the importance of both designated and non-designated landscapes and aims to conserve these. They recognise that landscape has no boundaries and that people are central to its management. The LBAP also highlights the need for biodiversity action to support ecosystems and their beneficial services at a landscape scale.
SNH Natural Heritage Futures		
SNH National Scenic Areas Programme		

Appendix B: Environmental Baseline: Supporting Data Tables

1 Biodiversity Flora & Fauna

1.1 Land Cover and Habitats of the Scottish Borders

Land cover and habitat data is provided in the separate Appendix E.

(See also spatial information in Appendix C – Maps 1 - 4).

2 Soil

(See spatial information in Appendix C – Map 5).

3 Water

3.1 Improvement objectives for water bodies and protected areas for 2015 to 2027

Target	Genre	Percentage
Currently Good or Better	Protected Areas (58 in total)	64%
Achieving Good by 2021		14%
Achieving Good by 2027		19%
Recovering to Good after 2027		3%
Currently Good or Better	Surface and Ground Water Bodies (624 in total)	48%
Achieving Good by 2021		9%
Achieving Good by 2027		33%
Recovering to Good after 2027		4%
Will not achieve Good		6%

Source: The river basin management plan for the Solway Tweed river basin district: 2015 update

3.2 Condition of the Eye Water Catchment (2014 data)

Water Body	Overall Condition	Water Quality
Eye Water (Ale Water Confluence to Eyemouth)	Poor	Poor
Ale Water	Good	Good
Eye Water (Source to Ale Water Confluence)	Moderate	Moderate
Horn Burn	Good	Moderate

Source: SEPA Water Environment Hub.

(See also spatial information in Appendix C – Maps 6 & 7).

4 Landscape

4.1 Landscape Areas of the Scottish Borders (NSAs and SLAs)

Landscape Designation	Area (Ha)
Eildon and Leaderfoot NSA	3880
Upper Tweeddale NSA	12770
Berwickshire Coast SLA	4469
Cheviot Foothills SLA	18602
Lammermuir Hills SLA	25057
Pentland Hills SLA	5949
Teviot Valleys SLA	15693
Tweed, Ettrick and Yarrow Confluences SLA	11994
Tweed Lowlands SLA	6819
Tweedsmuir Uplands SLA	53569
Tweed Valley SLA	10959
TOTAL Ha of Designated Landscapes	169761 (1697.61 km^2 = 36% of Borders region)

(See also spatial information in Appendix C – Maps 8 – 10).

5 Population & Human Health

5.1 Scottish Borders Population Breakdown (2014 Figures)

Age Group	Male Population Scottish Borders	Female Population Scottish Borders	Total Population of Scottish Borders	% of total population of Scottish Borders
0 - 14	9,070	8,771	17,841	15.7
15 - 29	8,304	8,276	16,580	14.5
30 - 44	8,704	9,653	18,357	16.1
45 - 59	13,202	13,632	26,834	23.5
60 - 74	11,146	11,707	22,853	20.1
75+	4,890	6,675	11,565	10.1

Source: Office for National Statistics

(See also spatial information in Appendix C – Maps 11 - 13)

6 Climatic Factors

6.1 Scottish Borders Greenhouse Gas Emissions

Scottish Borders Population = 114,530							
PER CAPITA FOOTPRINT					**TOTAL FOOTPRINT**		
	Ecological Footprint (gha/capita)	Carbon Footprint (tonnes CO2/capita)	GHG Footprint (tonnes CO2eq/capita)		Total Ecological Footprint (gha)	Total Carbon Footprint (Tonnes CO2)	Total GHG Footprint (Tonnes CO2 eq)
TOTAL	**5.52**	**12.59**	**17.02**		**611,216**	**1,392,837**	**1,882,729**
Housing	1.44	4.10	4.59		159,741	454,143	507,433
Transport	0.94	3.09	3.58		103,548	341,616	396,351
Food	1.40	1.23	3.05		155,110	135,697	337,371
Consumer Items	0.73	1.44	2.09		80,764	158,856	231,677
Private Services	0.29	0.74	1.05		31,839	81,415	116,578
Public Services	0.59	1.58	2.13		65,637	174,520	236,014
Capital Investment	0.12	0.36	0.46		13,756	39,298	51,049
Other	0.01	0.07	0.06		821	7,293	6,257

Source: Scottish Borders Council Greenhouse Gas Emissions Data

(See also spatial information in Appendix C – Map 14).

7 Material Assets

7.1 Municipal Waste collected within Scottish Borders (2009)

Total municipal waste collected in tonnes	Waste collected for disposal (tonnes)			Waste collected for recycling and composting (tonnes)	
	Household	Commercial	Other non-household	Household	Commercial
70,498	30,699	12,698	120	23,593	3,088

7.2 Water and Wastewater Asset Capacity

Area	Wastewater Asset Status	Drinking Water Asset Status
Stow	Current capacity is sufficient for identified development needs	Current capacity is sufficient for identified development needs
Lauder	Current capacity is sufficient for identified development needs	Current capacity is sufficient for identified development needs
Galashiels	Galashiels has limited capacity. Contributions may be required when updates are necessary. Developers may be required to contribute to the local water network to enable development.	There is currently limited capacity at Manse Street WTW; supply may be supported by another WTW
Peebles	A growth project has been raised to enable development in this area	There is currently sufficient capacity for identified development needs. However, any further development a growth project may be required where the developer will need to meet 5 growth criteria
Innerleithen	Current capacity is sufficient for identified development needs	There is currently sufficient capacity for identified development needs. However, any further development a growth project may be required where the developer will need to meet 5 growth criteria
Selkirk	Current capacity is sufficient for identified development needs	Current capacity is sufficient for identified development needs
Hawick	Current capacity is sufficient for identified development needs	Current capacity is sufficient for identified development needs
Newtown St Boswells	A growth project has been raised to enable development in this area	Current capacity is sufficient for identified development needs
Jedburgh	Current capacity is sufficient for identified development needs	Current capacity is sufficient for identified development needs
Melrose	Current capacity is sufficient for identified development needs	Current capacity is sufficient for identified development needs
Duns	Current capacity is sufficient for identified development needs. Developers may be required to contribute towards upgrading the local water network to enable development.	Current capacity is sufficient for identified development needs
Reston	There is currently sufficient capacity at the treatment works. However, if development exceeds current capacity a growth	Current capacity is sufficient for identified development needs

	project would be required.	
Kelso	Current capacity is sufficient for identified development needs	Current capacity is sufficient for identified development needs
Earlston	Earlston has limited capacity, however the growth project is awaiting confirmation of the 5 Criteria from the developer. Contributions may be required when upgrades are necessary	Current capacity is sufficient for identified development needs
Coldstream	Current capacity is sufficient for identified development needs	Current capacity is sufficient for identified development needs
Eyemouth	Current capacity is sufficient for identified development needs	Current capacity is sufficient for identified development needs
Howden WWTW	Current capacity is sufficient for identified development needs	N/A

7.3 Consented Mineral Operations in Scottish Borders

Hard rock mineral extraction	Sand and gravel mineral extraction	Other mineral extraction
• Cowieslinn • Craighouse • Greena • Soutra Hill • Trowknowes • Edston • Glenfin • Hazelbank • Swinton	• Kinegar • Reston	• Whim Moss

(See also spatial information in Appendix C – Maps 15 – 18).

8 Cultural Heritage

Listed Buildings in the Scottish Borders by Category

Category	Category Description	Total number
A Listed	Buildings of national or international importance, either architectural or historic, or fine little-altered examples of some particular period, style or building type.	185
B Listed	Buildings of regional or more than local importance, or major examples of some particular period, style or building type which may have been altered.	1,233
C Listed	Buildings of local importance, lesser examples of any period, style, or building type, as originally constructed or moderately altered; and simple traditional buildings which group well with others in categories A and B.	1,602
	TOTAL OF ALL CATEGORIES:	**3,020**

Source: Historic Environment Scotland Website, 2017 data

(See also spatial information in Appendix C – Maps 19 - 25).

9 Air

9.1 Mode of transport to work or study in the Scottish Borders

Method of Travel to Work or Study	Number of People
Total 'day time' population (as of 2011)	106,944
'Day time' population not currently working or studying	41,152
'Day time' population that works or studies mainly at or from home	10,469
Train	62
Bus, minibus or coach	5,595
Driving a car or van	27,794
Passenger in a car or van	5,604
Bicycle	691
On foot	14,882
Other	695

Source: Census data 2001

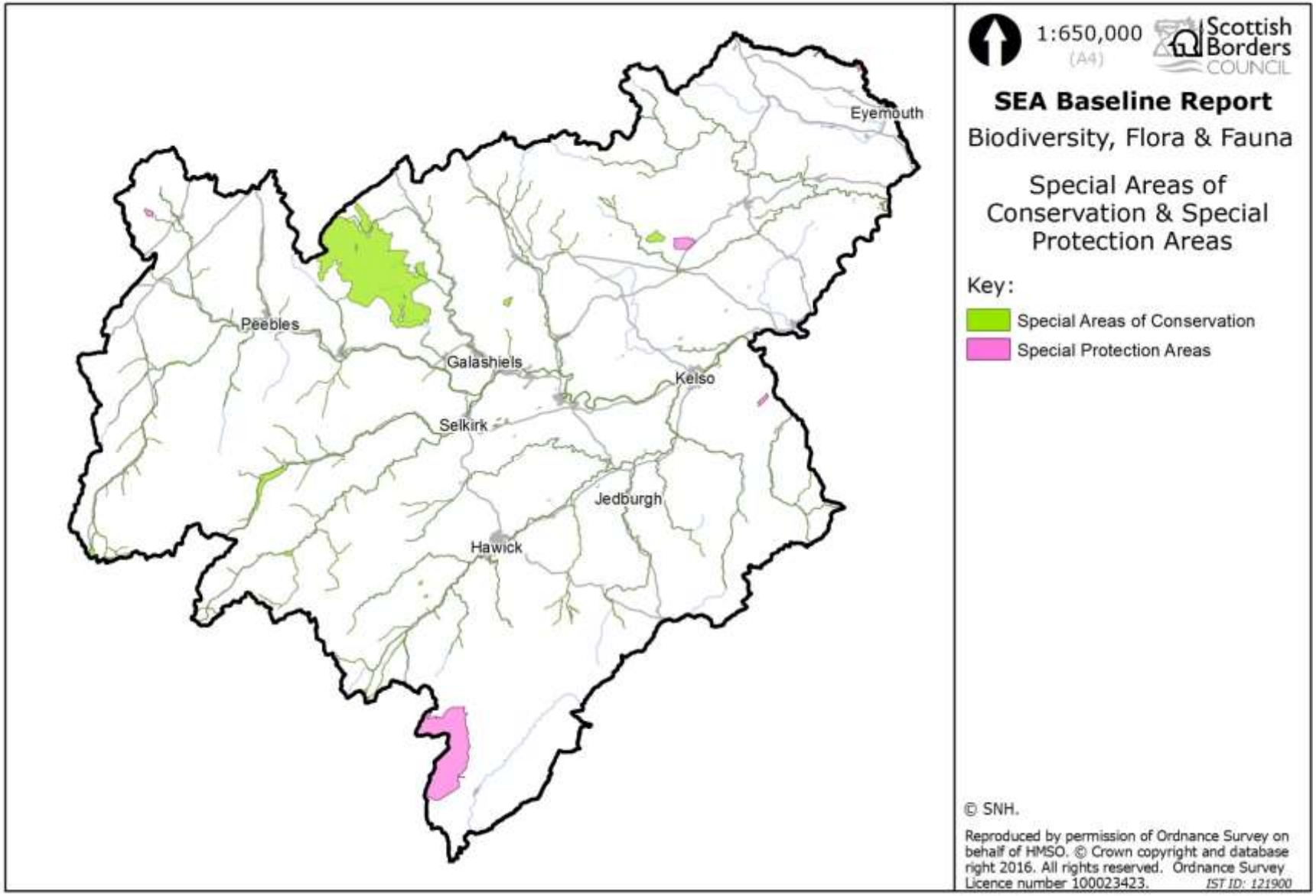
(See also spatial information in Appendix C – Map 25).

Appendix C: Environmental Baseline: Spatial Information

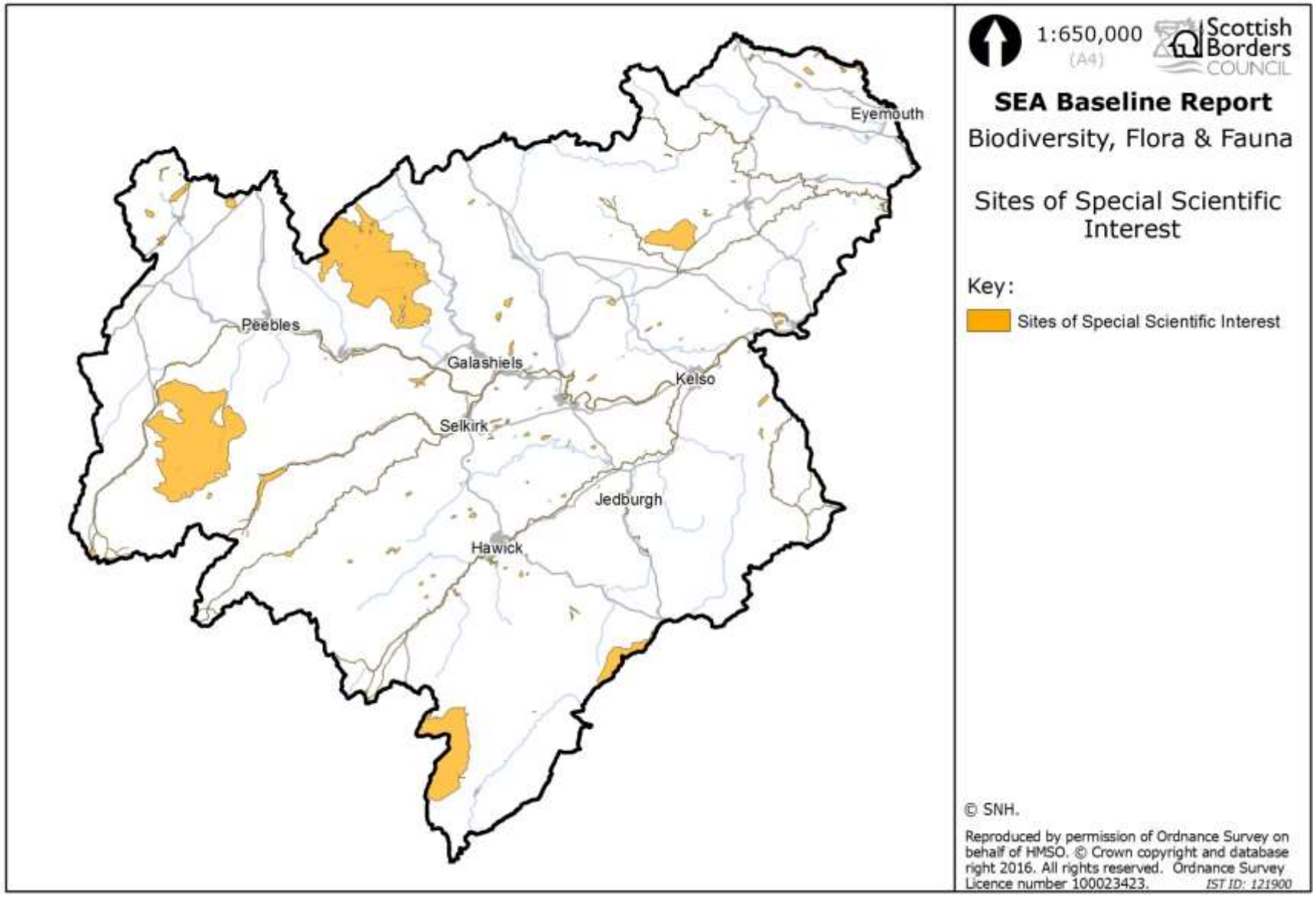
SEA Topics Mapped:

Biodiversity Flora and Fauna	Maps 1 – 4
Soil	Map 5
Water	Maps 6 & 7
Landscape	Maps 8 – 10
Population & Human Health	Map 11 – 13
Climatic Factors	Map 14
Material Assets	Map 15 – 18
Cultural Heritage	Maps 19 – 24
Air	Map 25

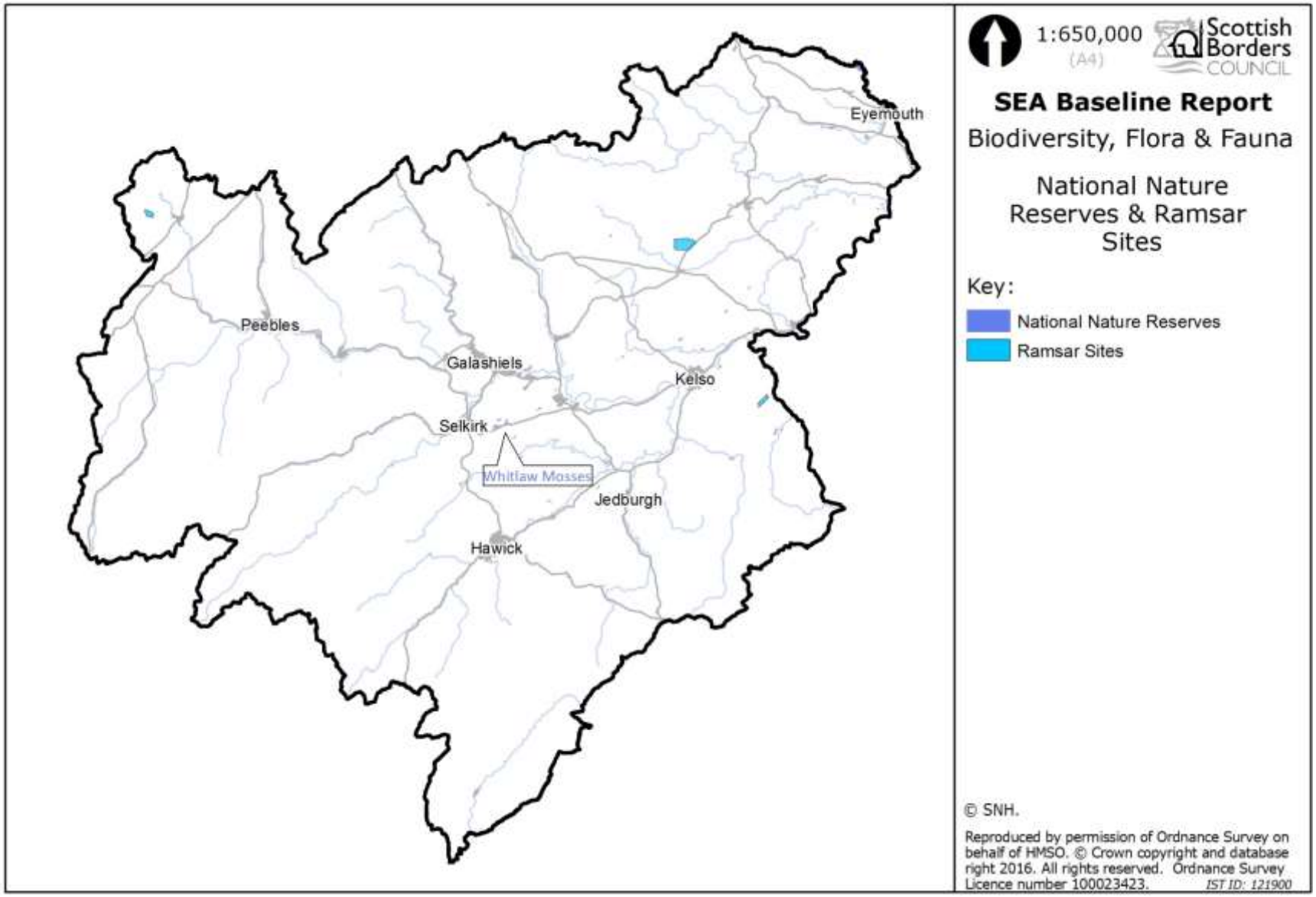
Map 1: Special Areas of Conservation & Special Protection Areas



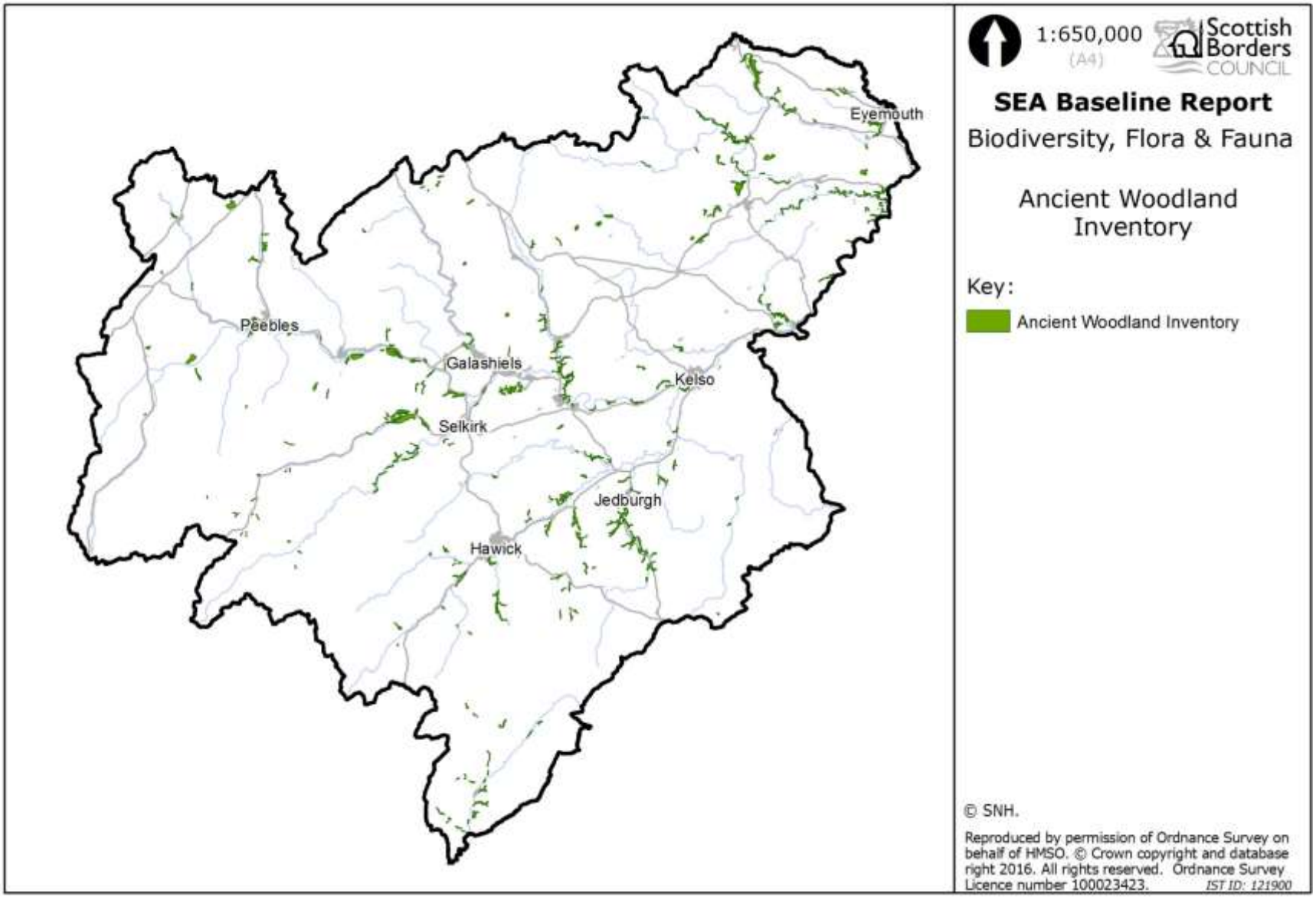
Map 2: Sites of Scientific Special Interest



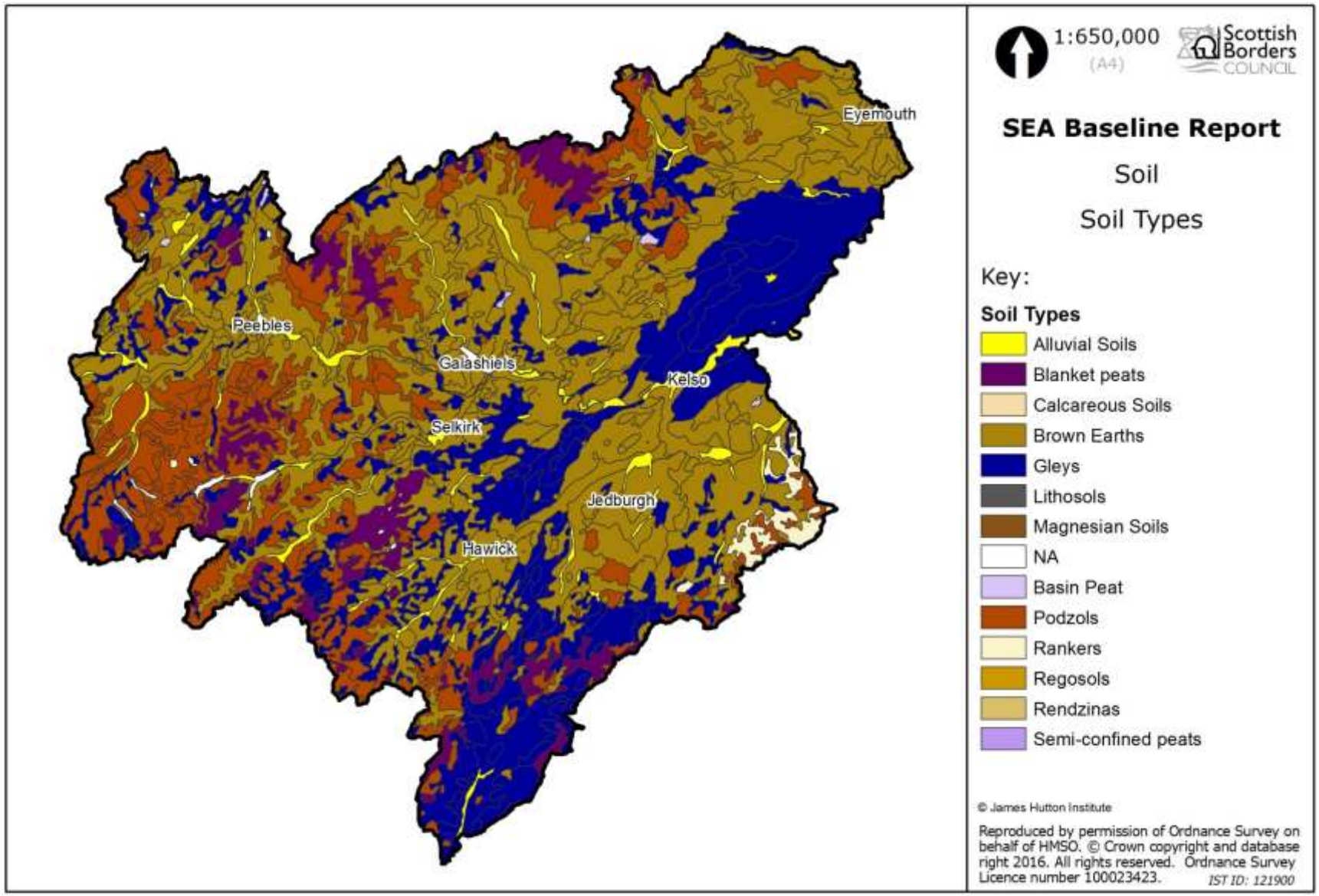
Map 3: National Nature Reserves & Ramsar Sites



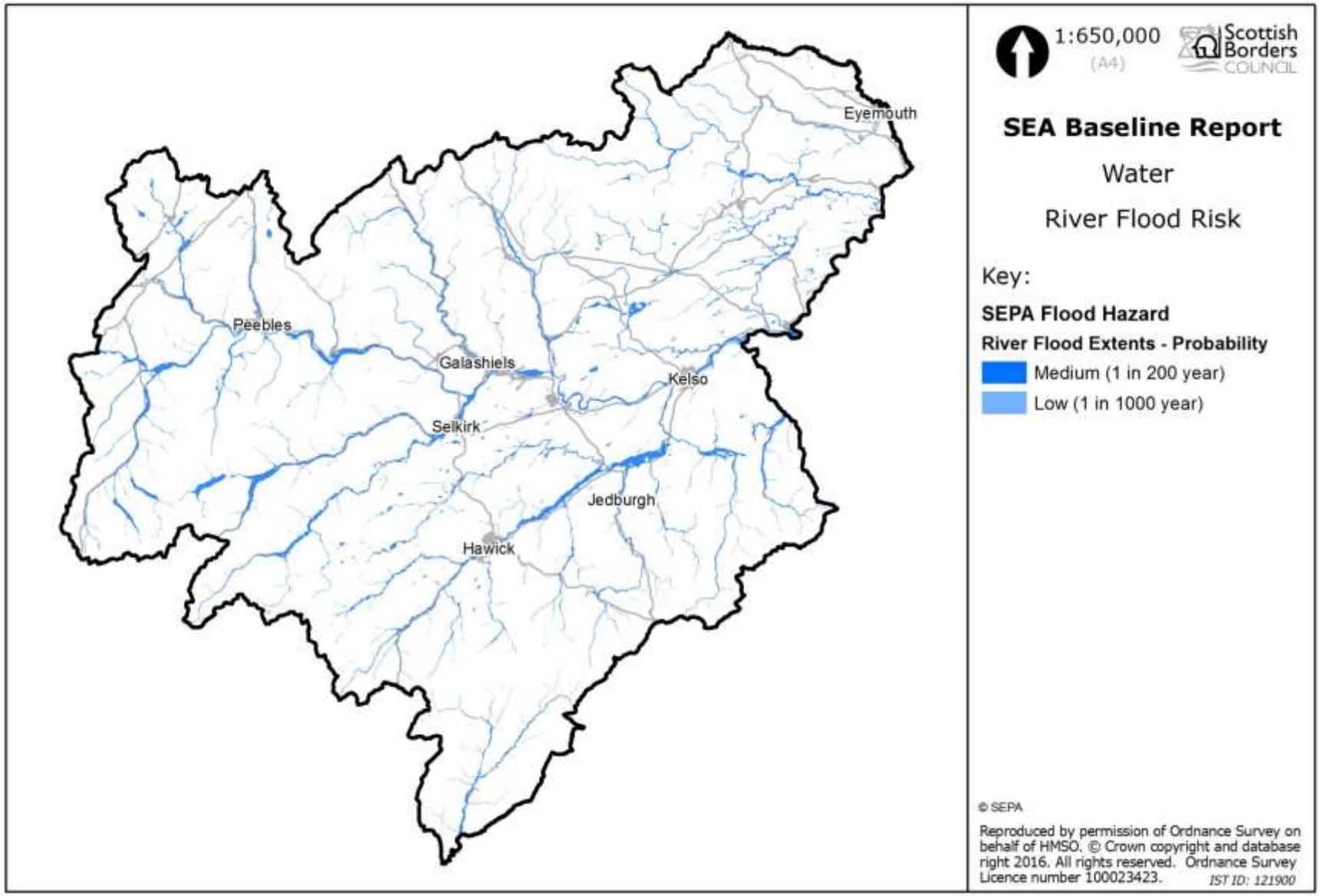
Map 4: Ancient Woodland Inventory



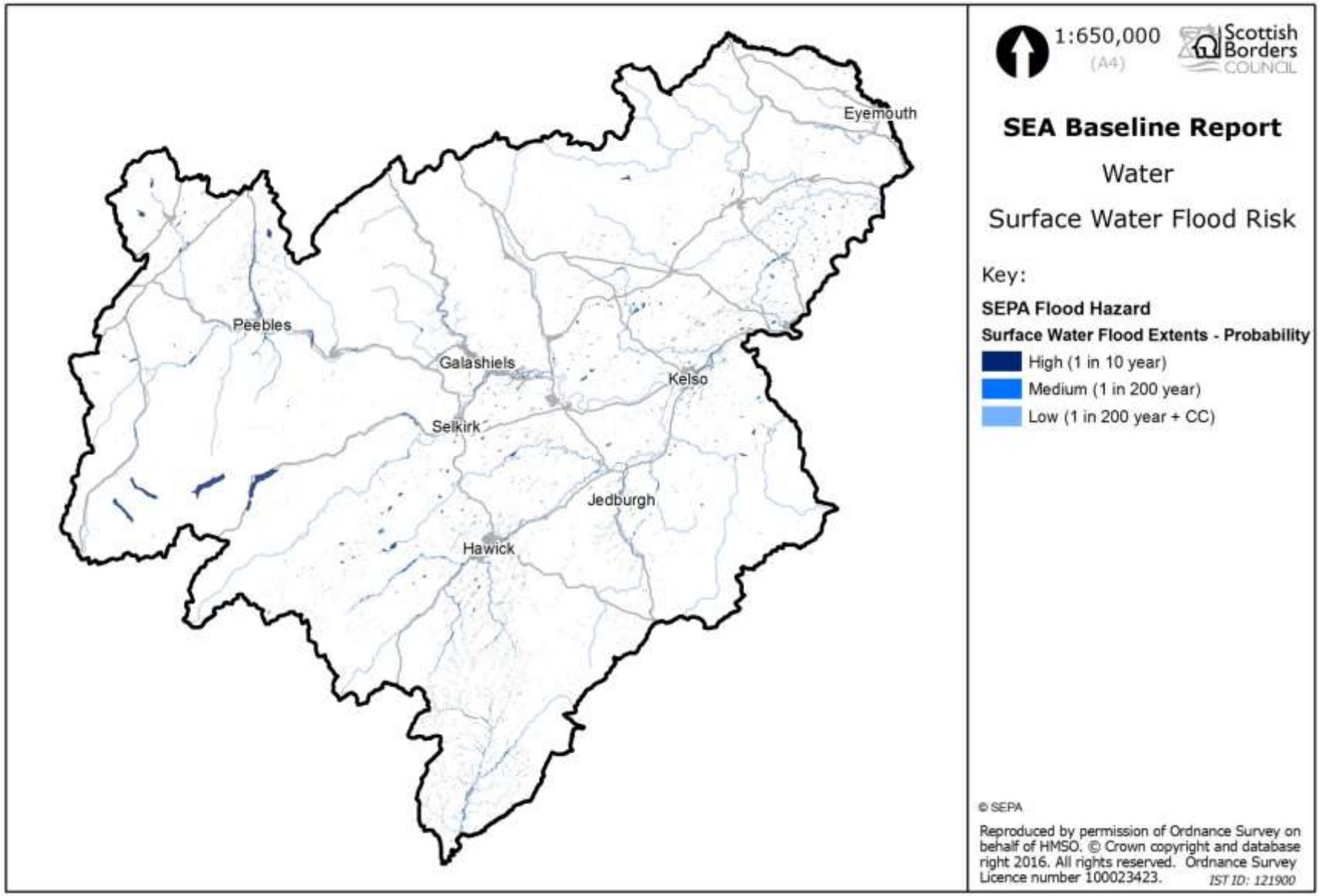
Map 5: Soil Types



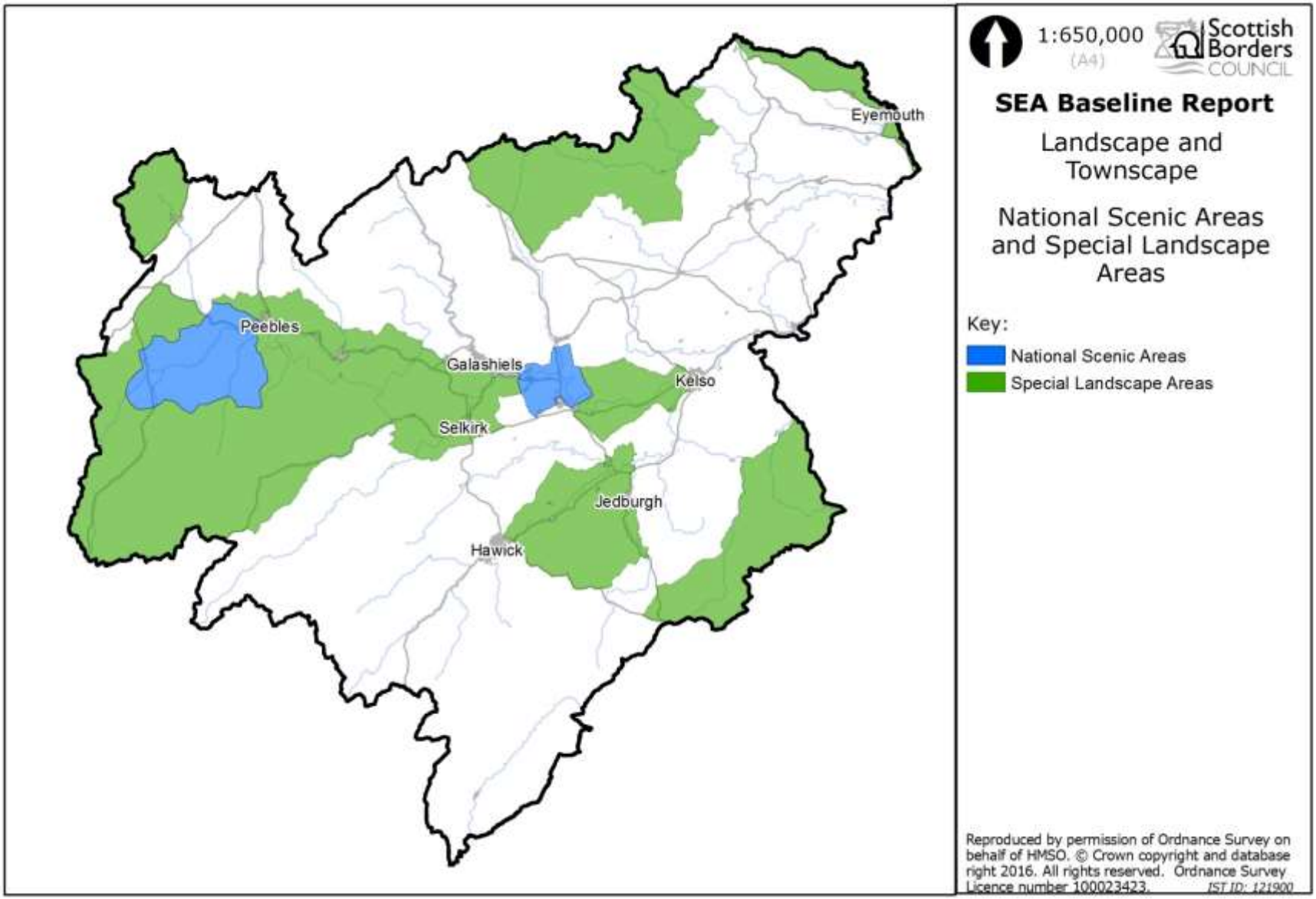
Map 6: River Flood Risk



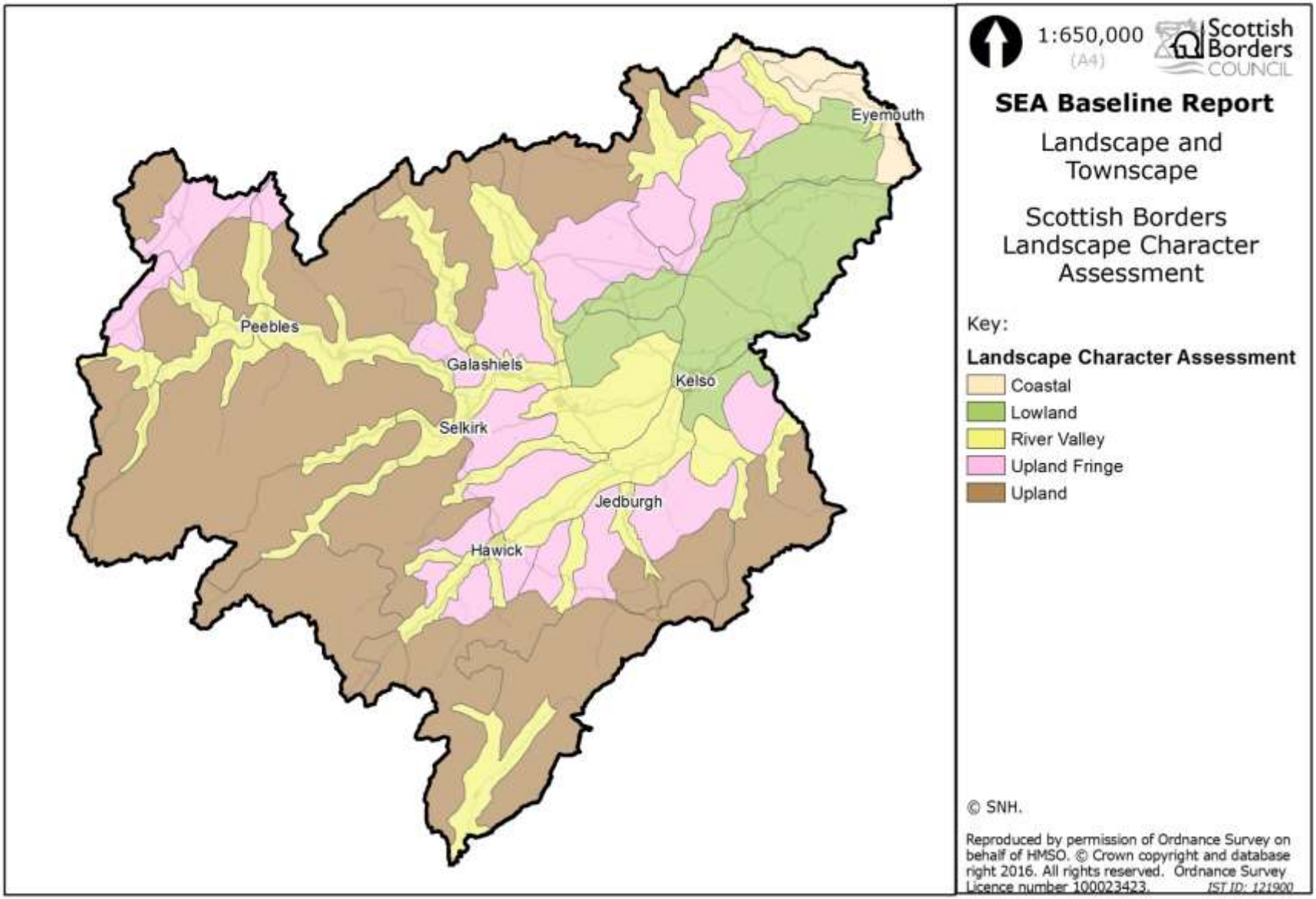
Map 7: Surface Water Flood Risk



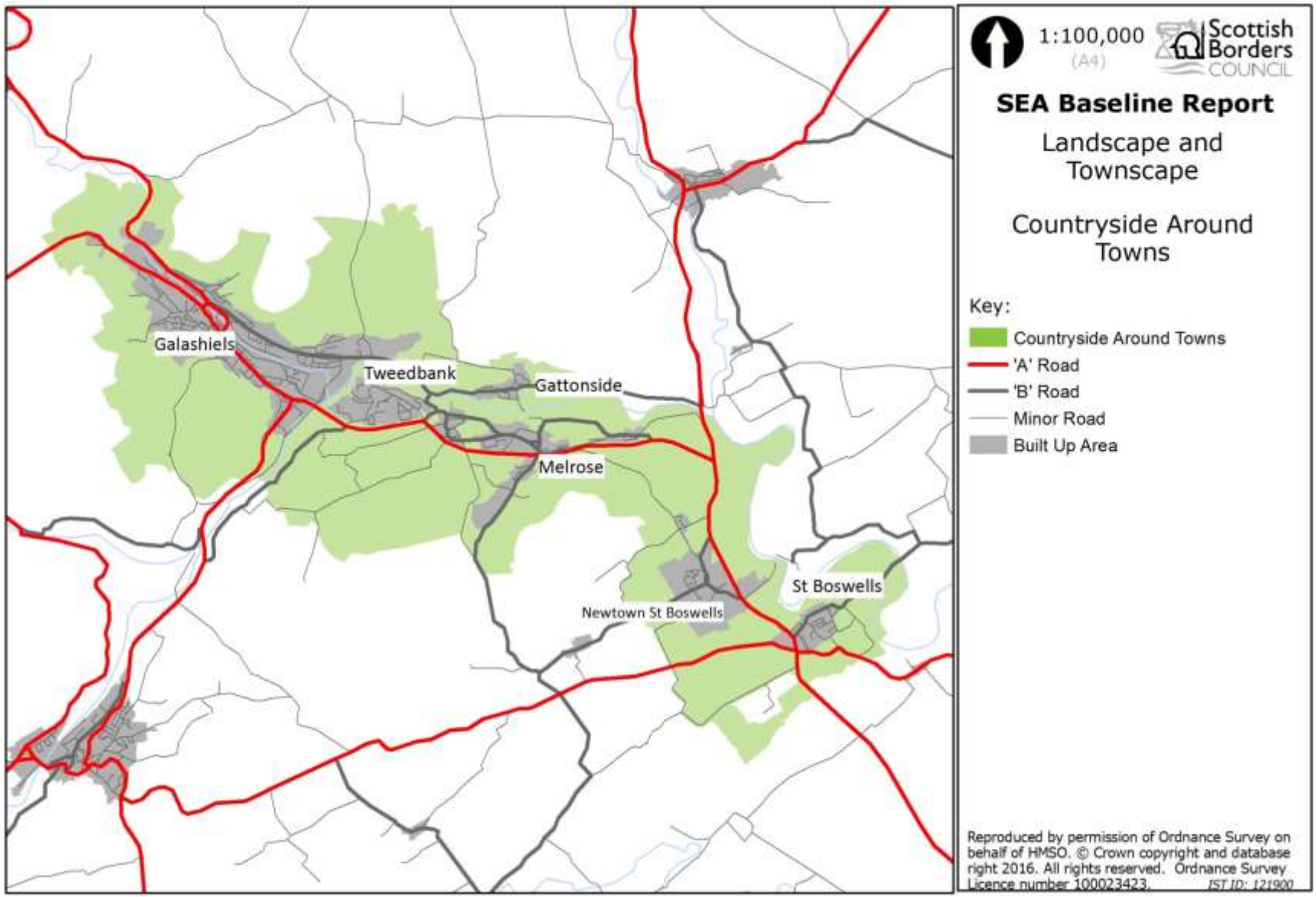
Map 8: National Scenic Areas and Special Landscape Areas



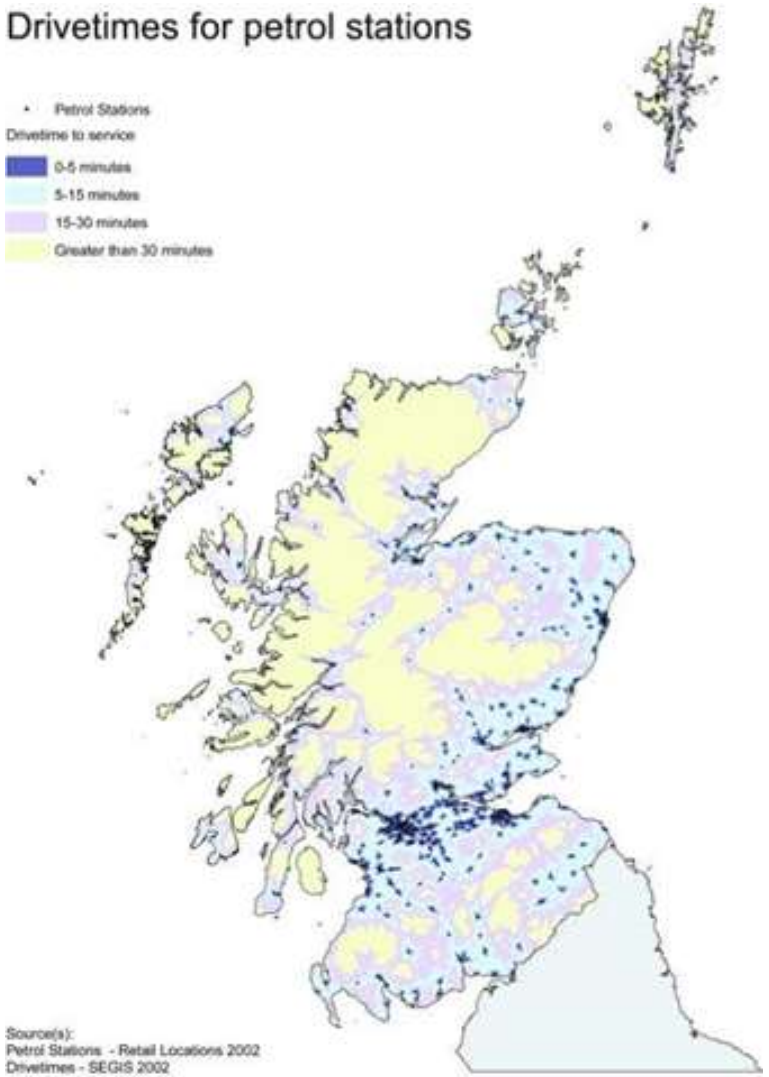
Map 9: Scottish Borders Landscape Character Assessment

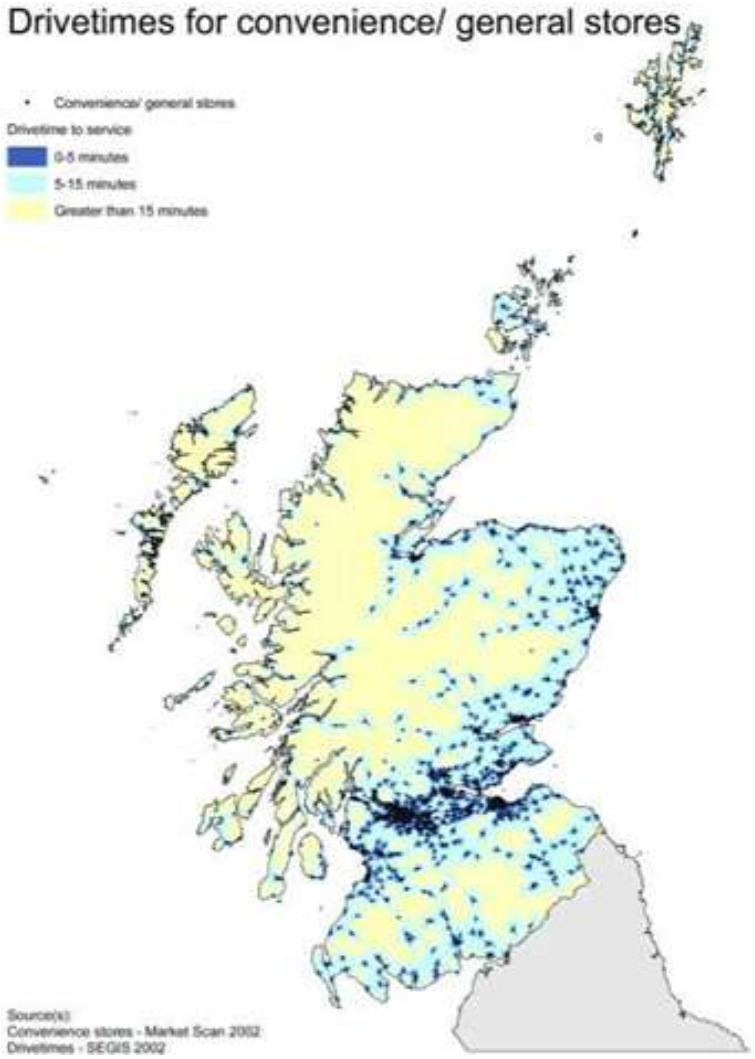


Map 10: Countryside around Towns

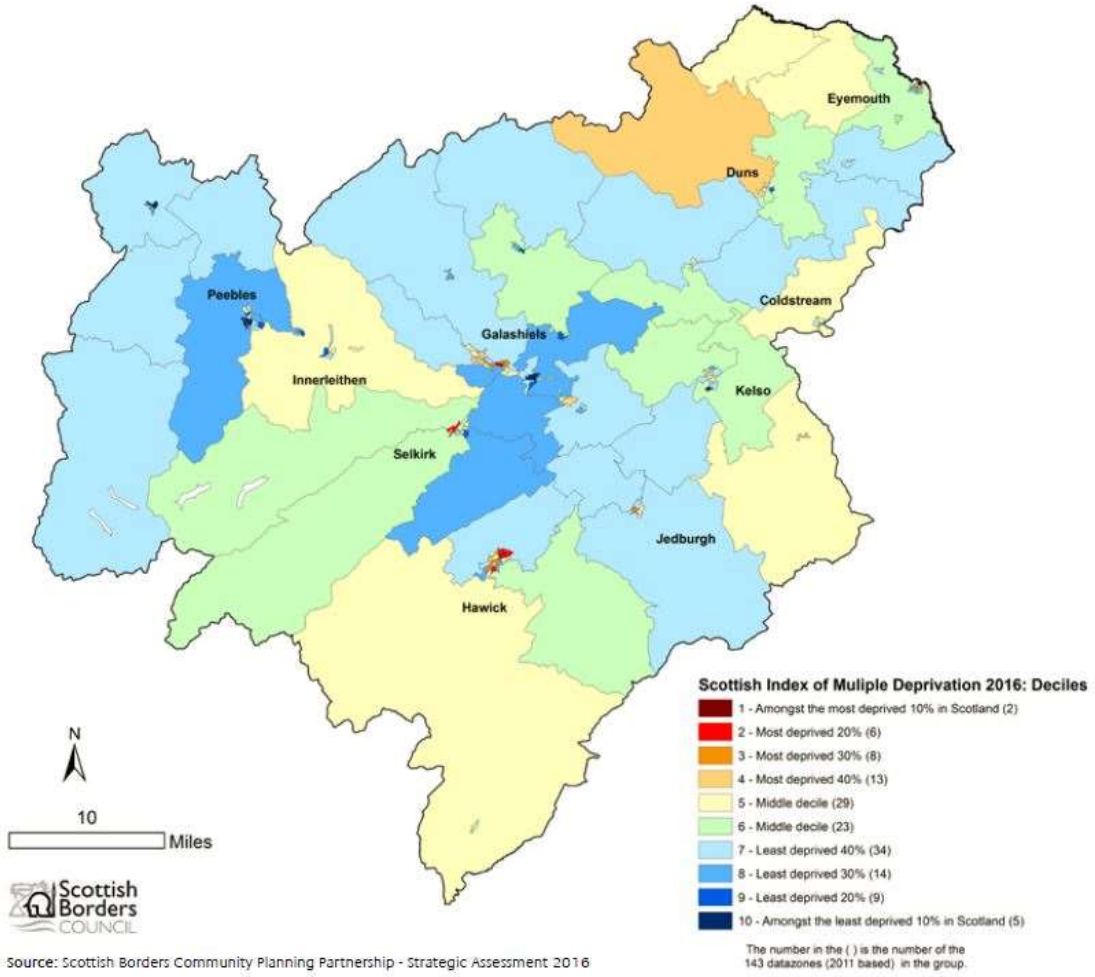


Map 11: Drive times



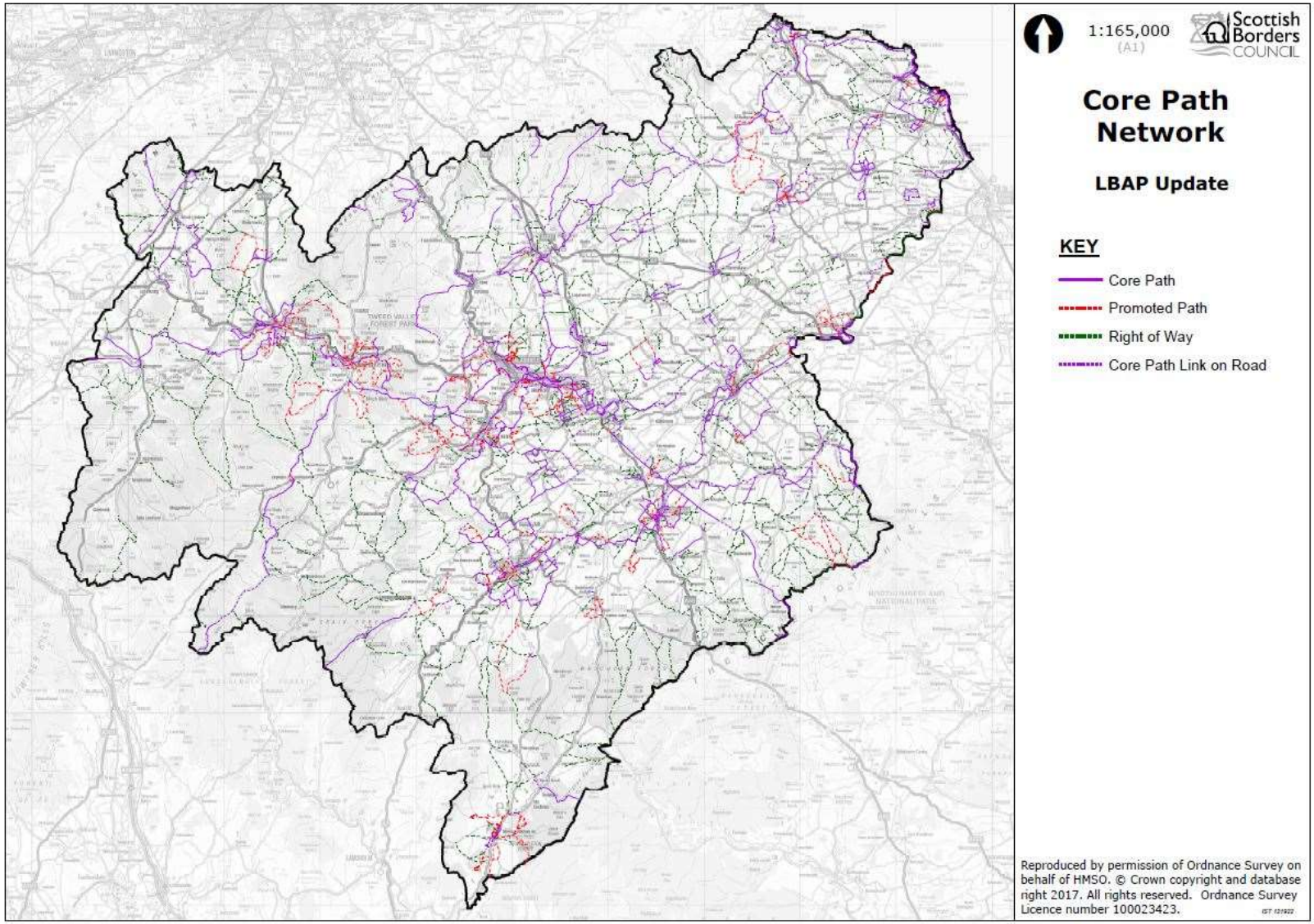


Map 12: Multi Deprivation Index (2016)

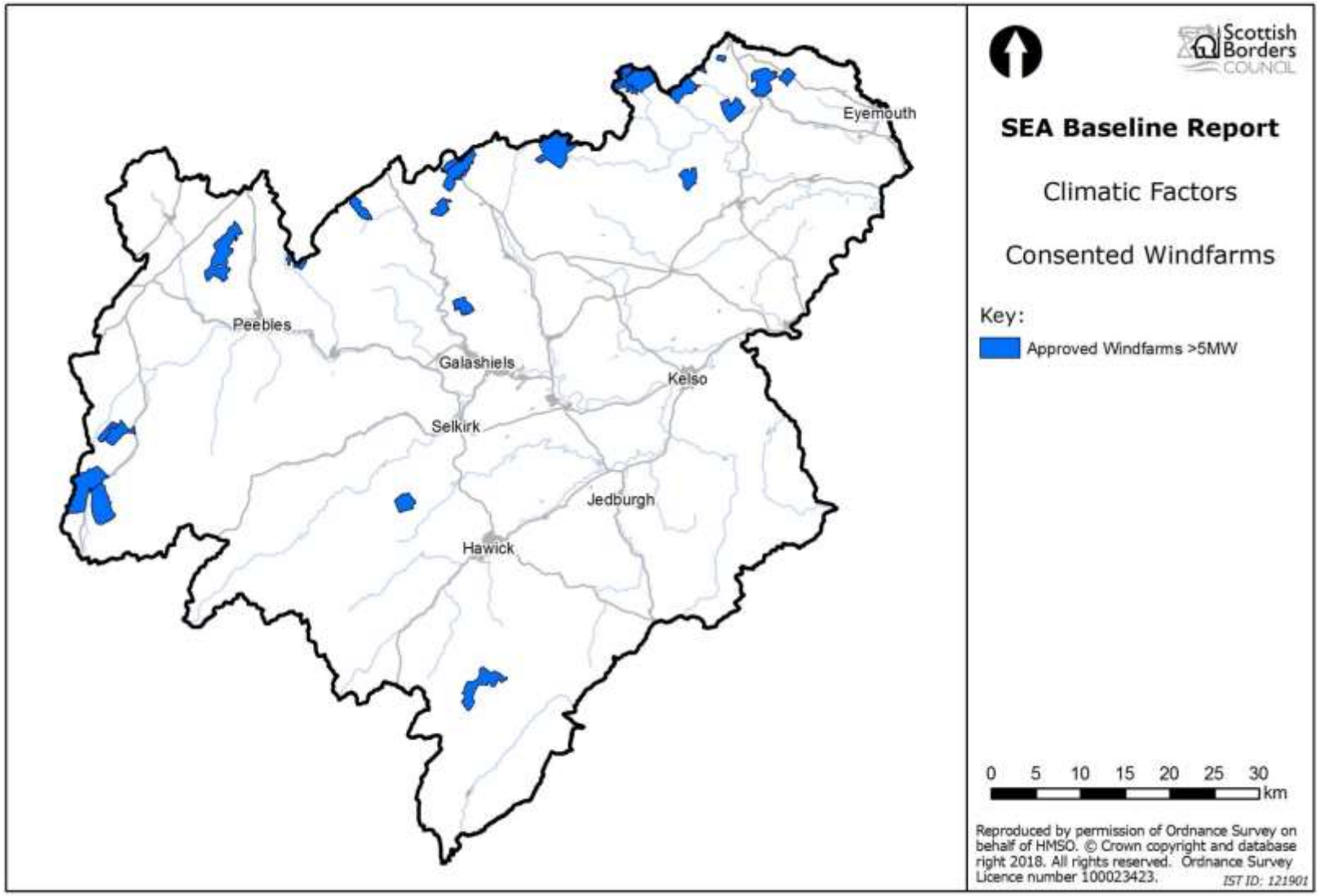


Source: Scottish Borders Community Planning Partnership - Strategic Assessment 2016

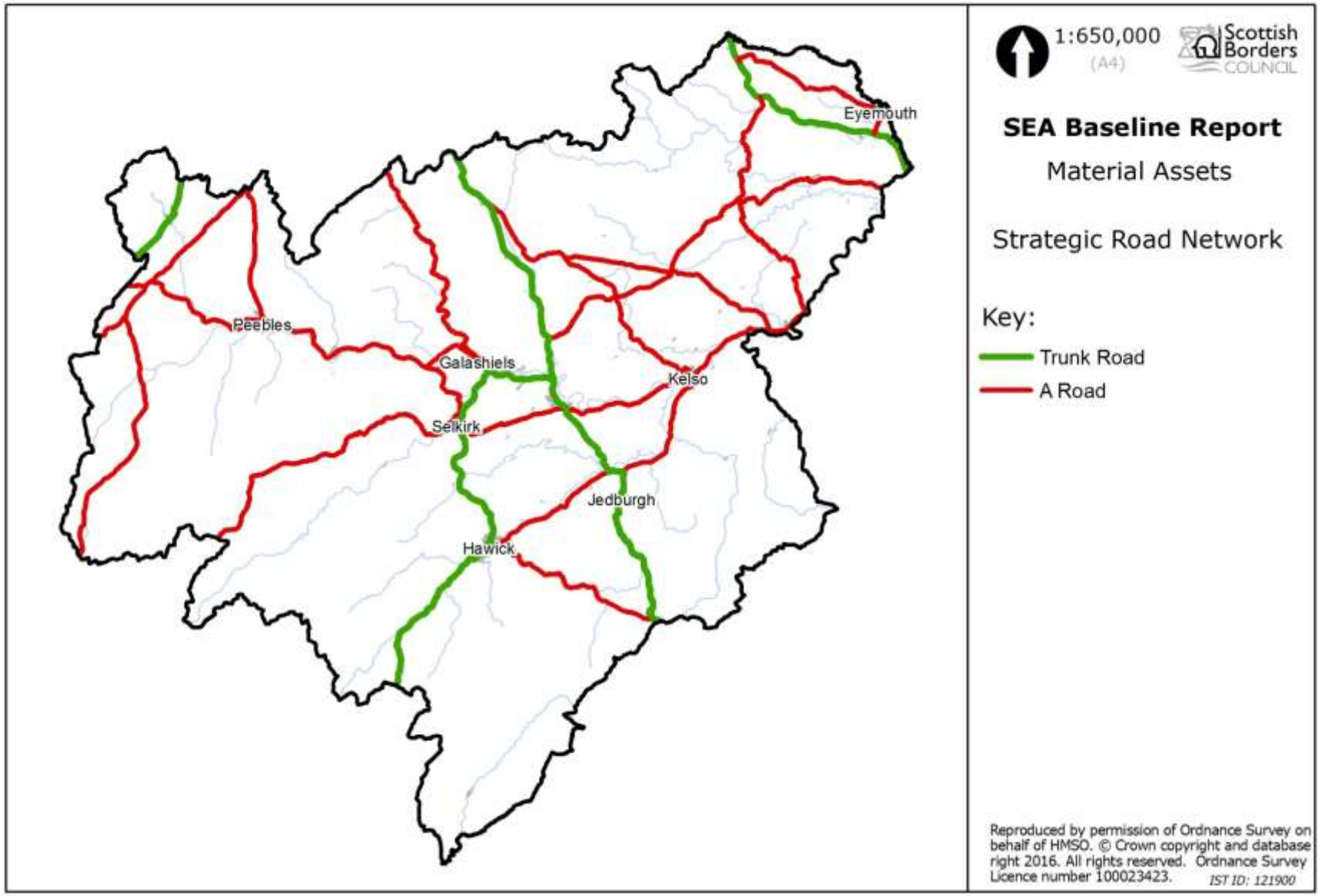
Map 13: Core Path Network



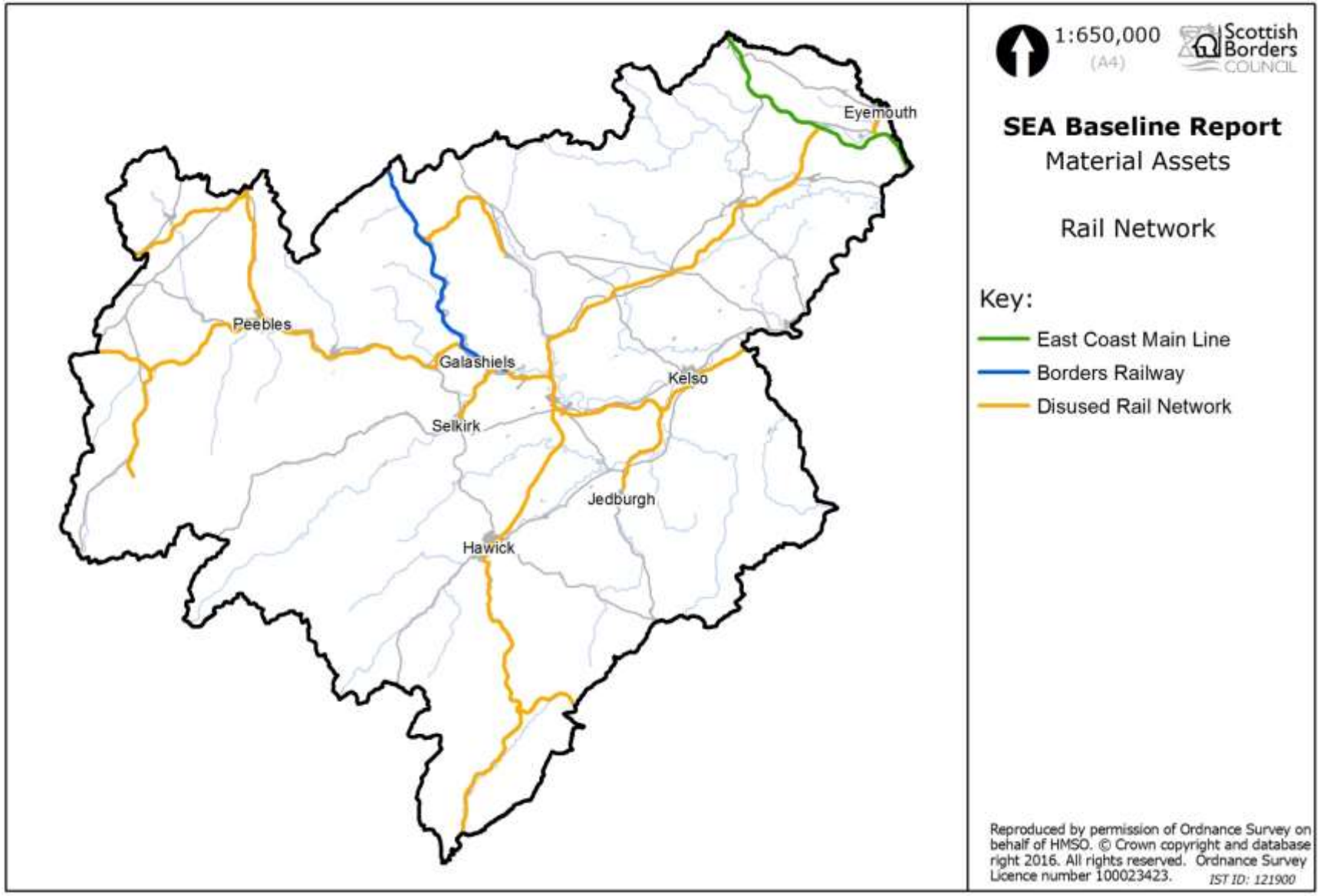
Map 14: Operational and Consented Windfarms



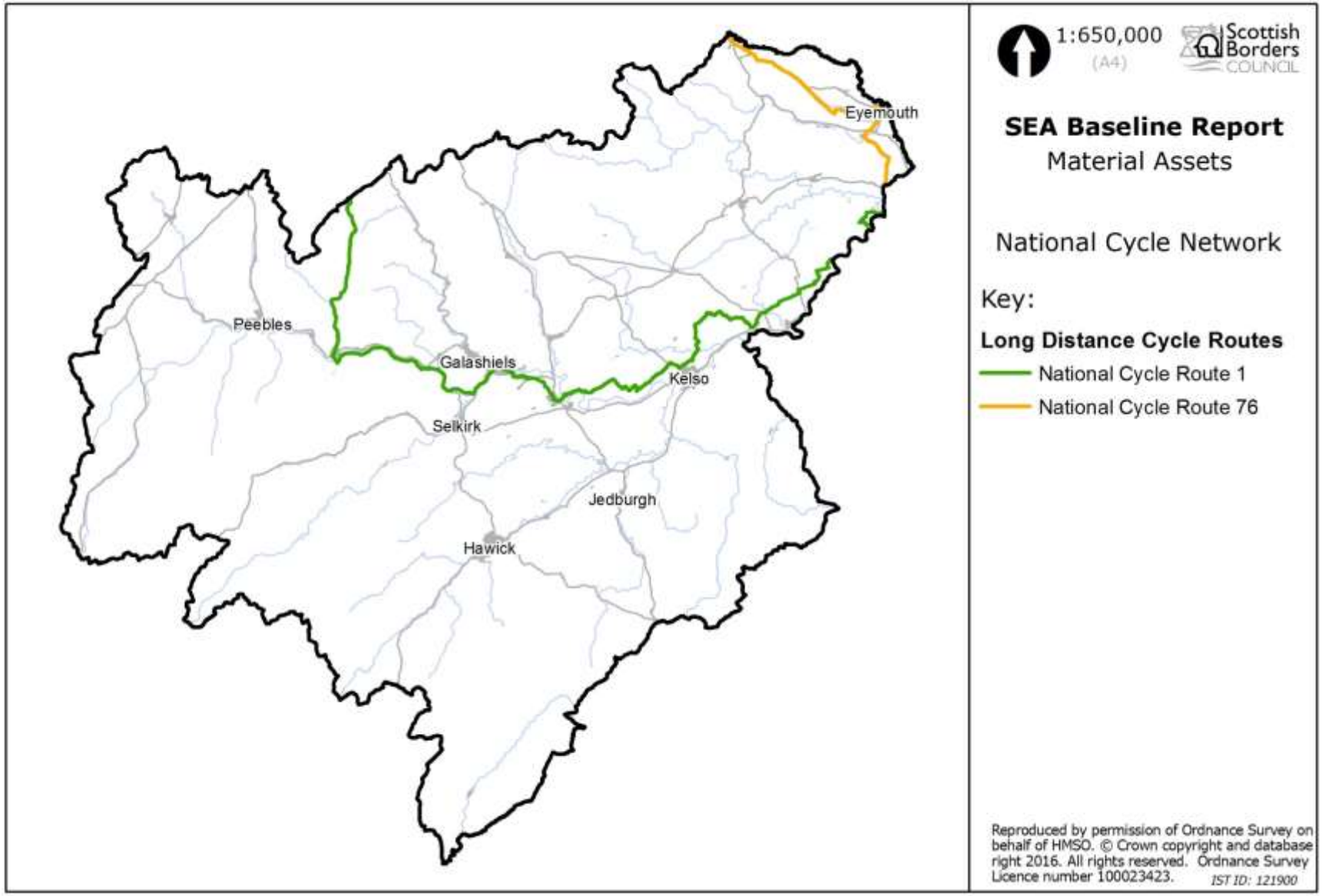
Map 15: Strategic Road Network



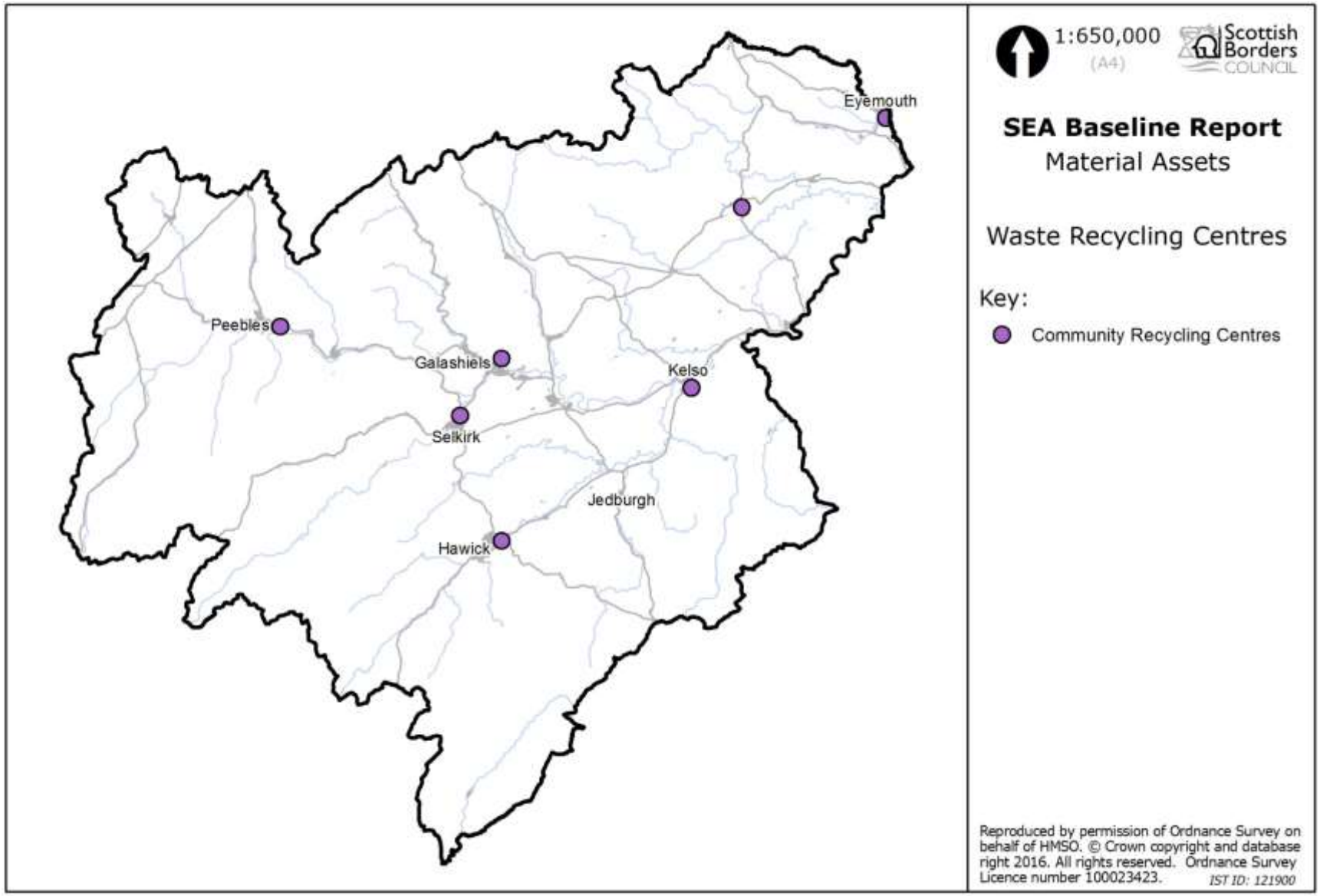
Map 16: Rail Network



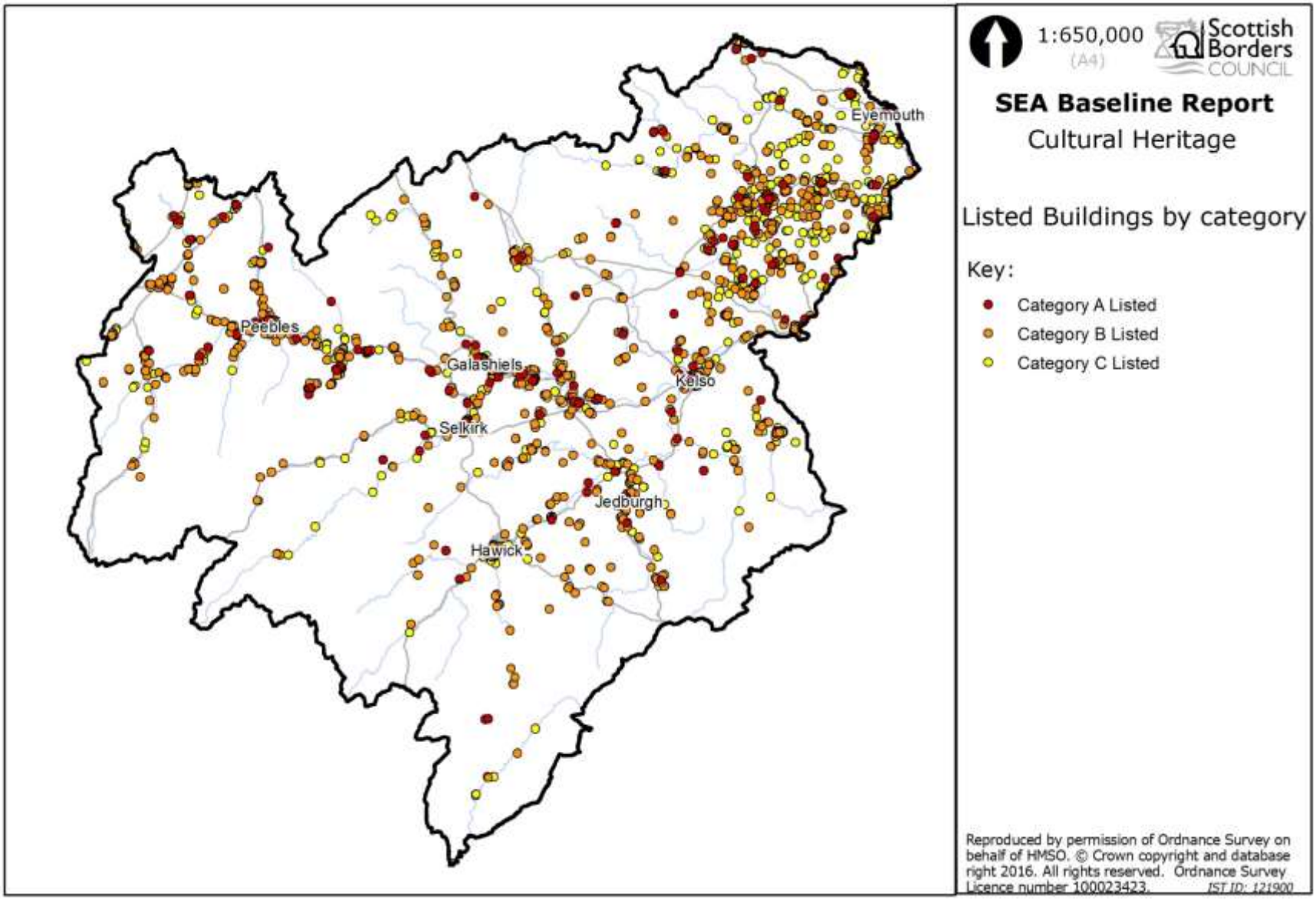
Map 17: National Cycle Network



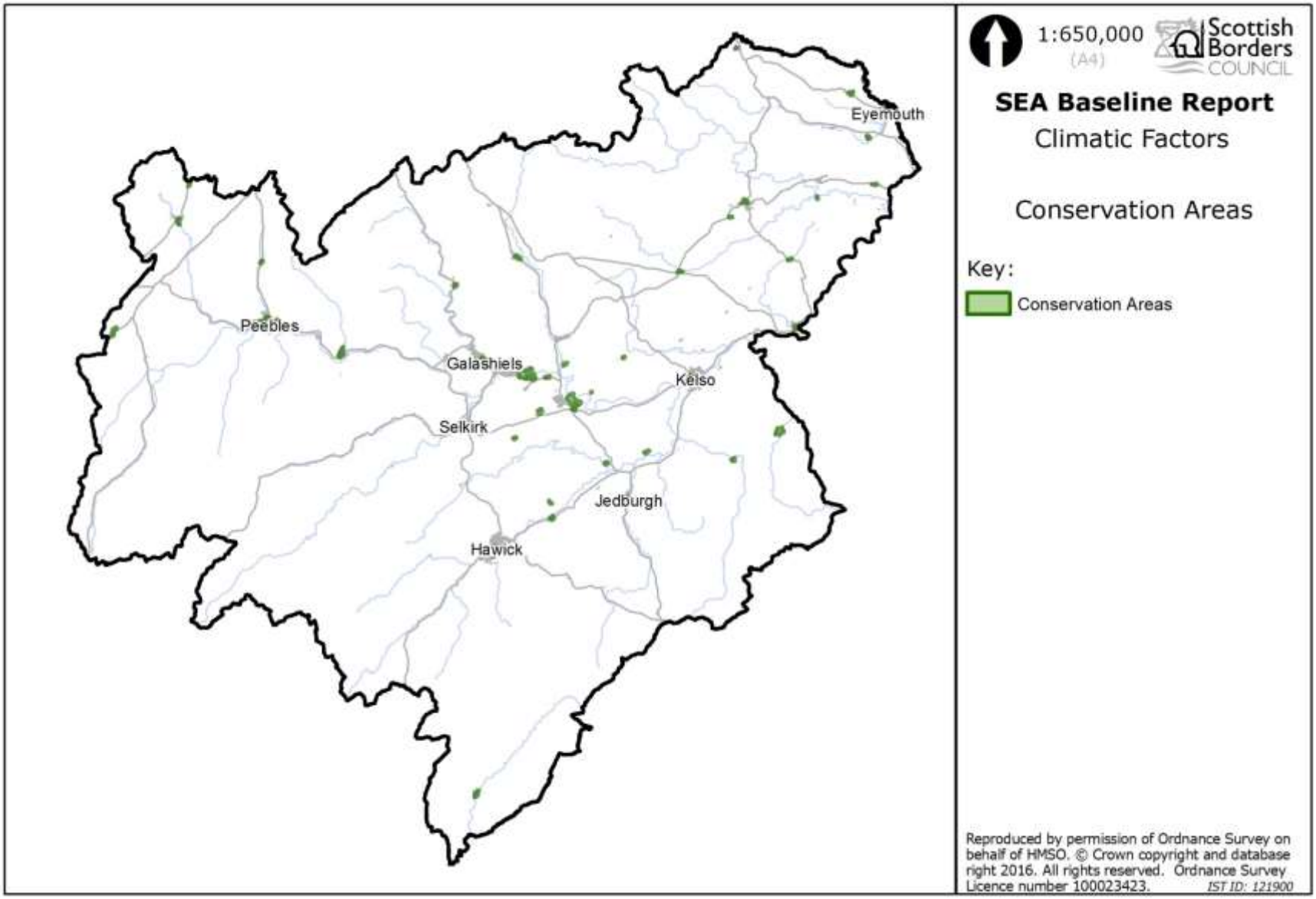
Map 18: Waste Recycling Centres



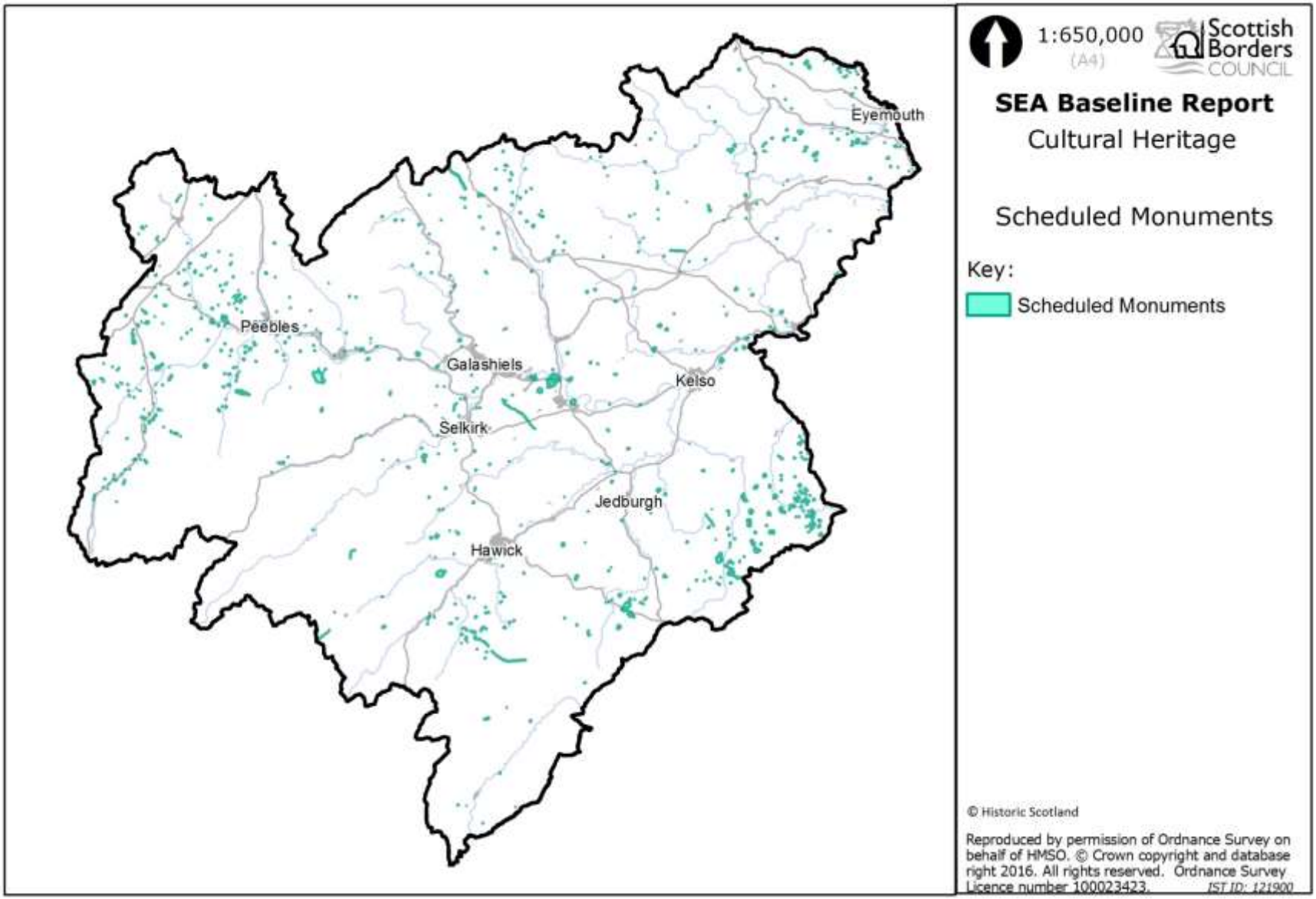
Map 19: Listed Buildings



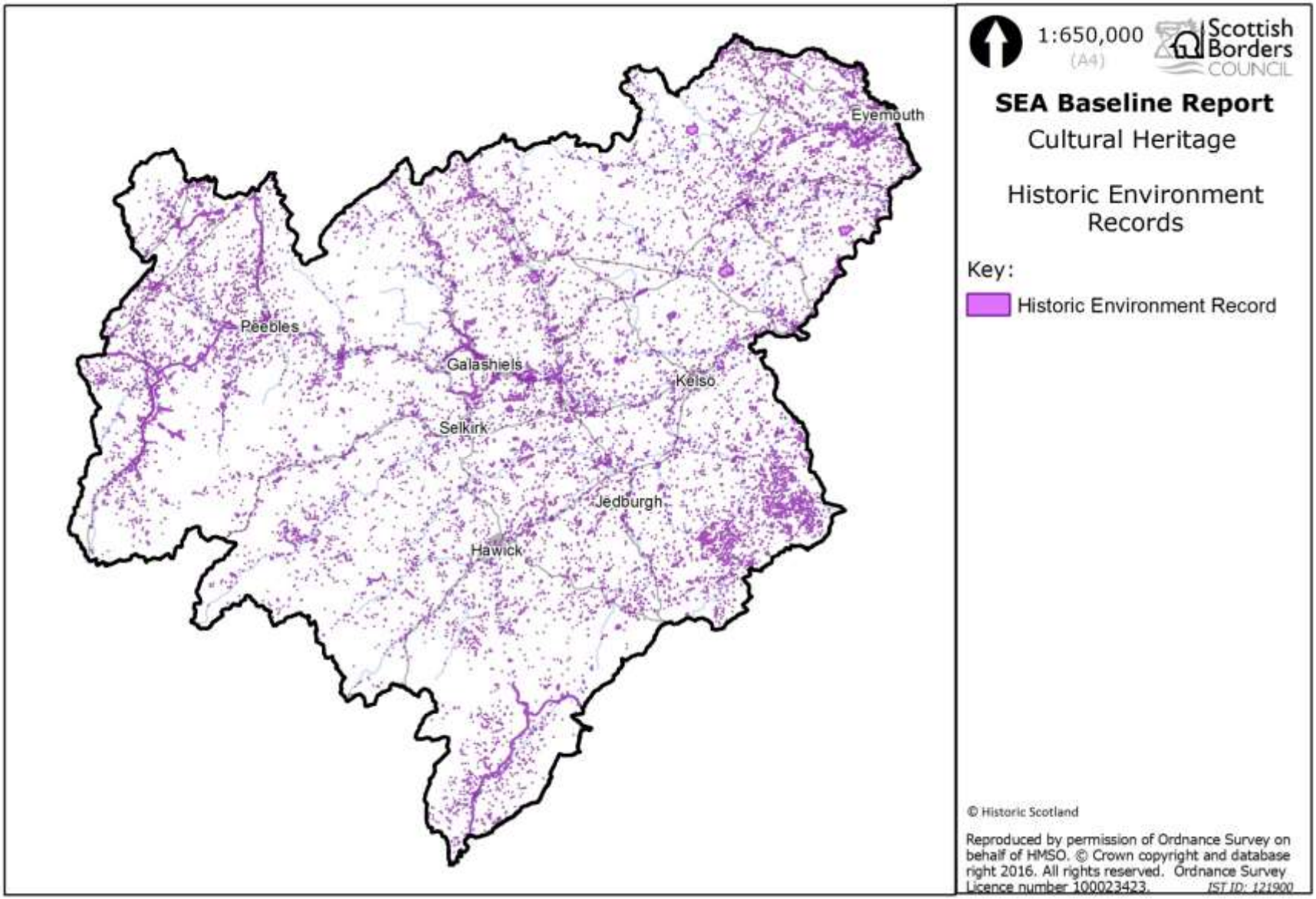
Map 20: Conservation Areas



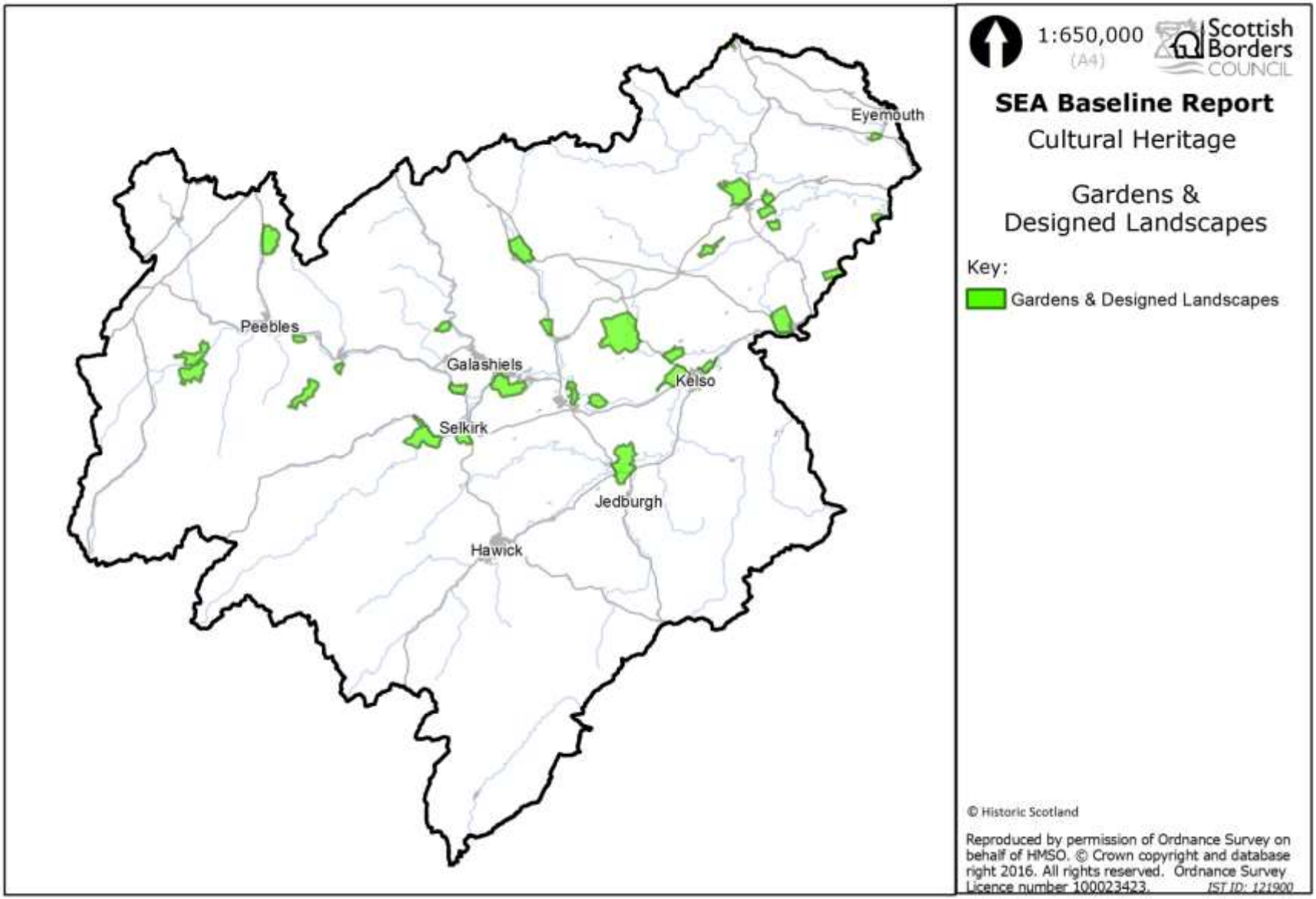
Map 21: Scheduled Monuments



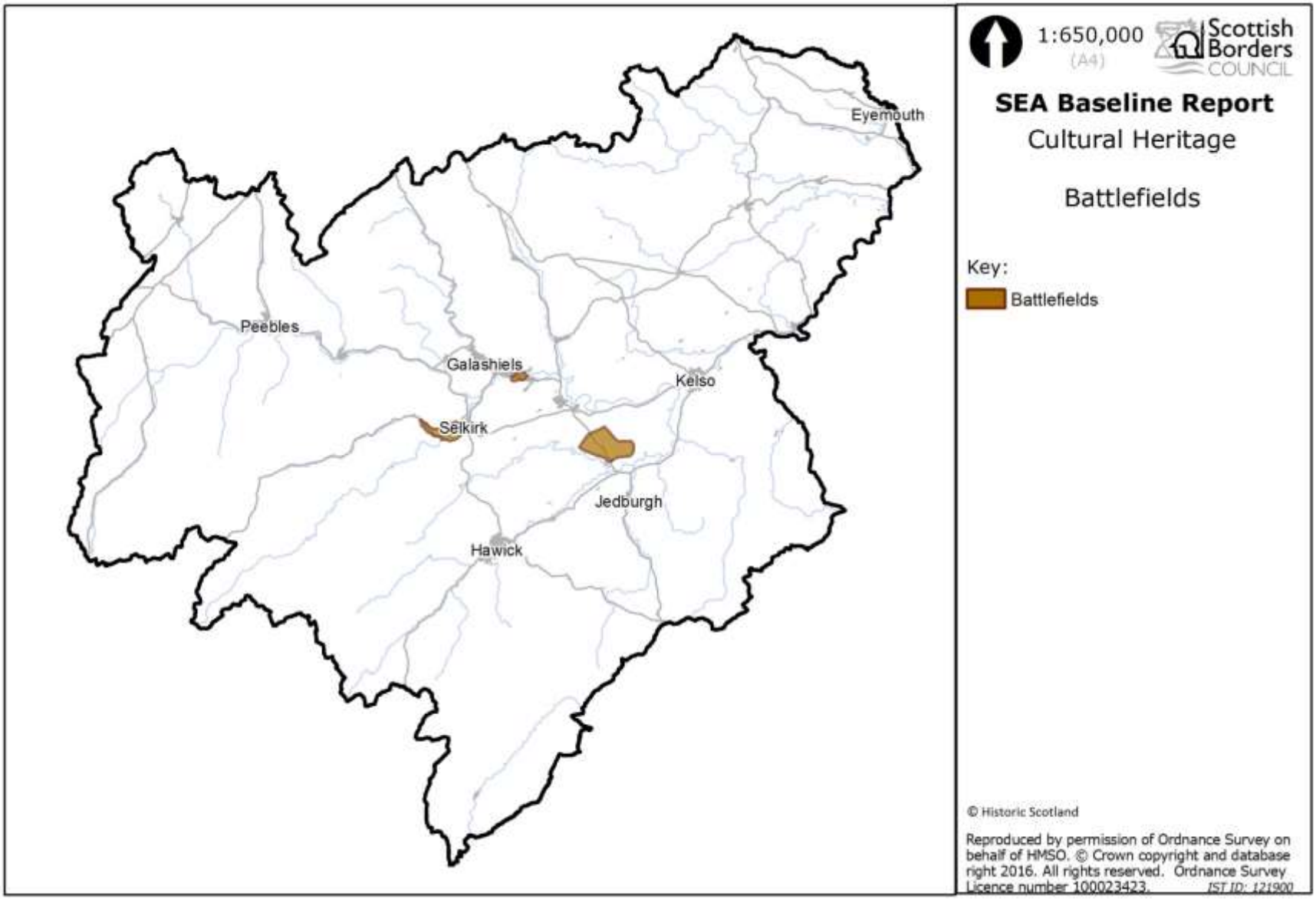
Map 22: Historic Environment Records



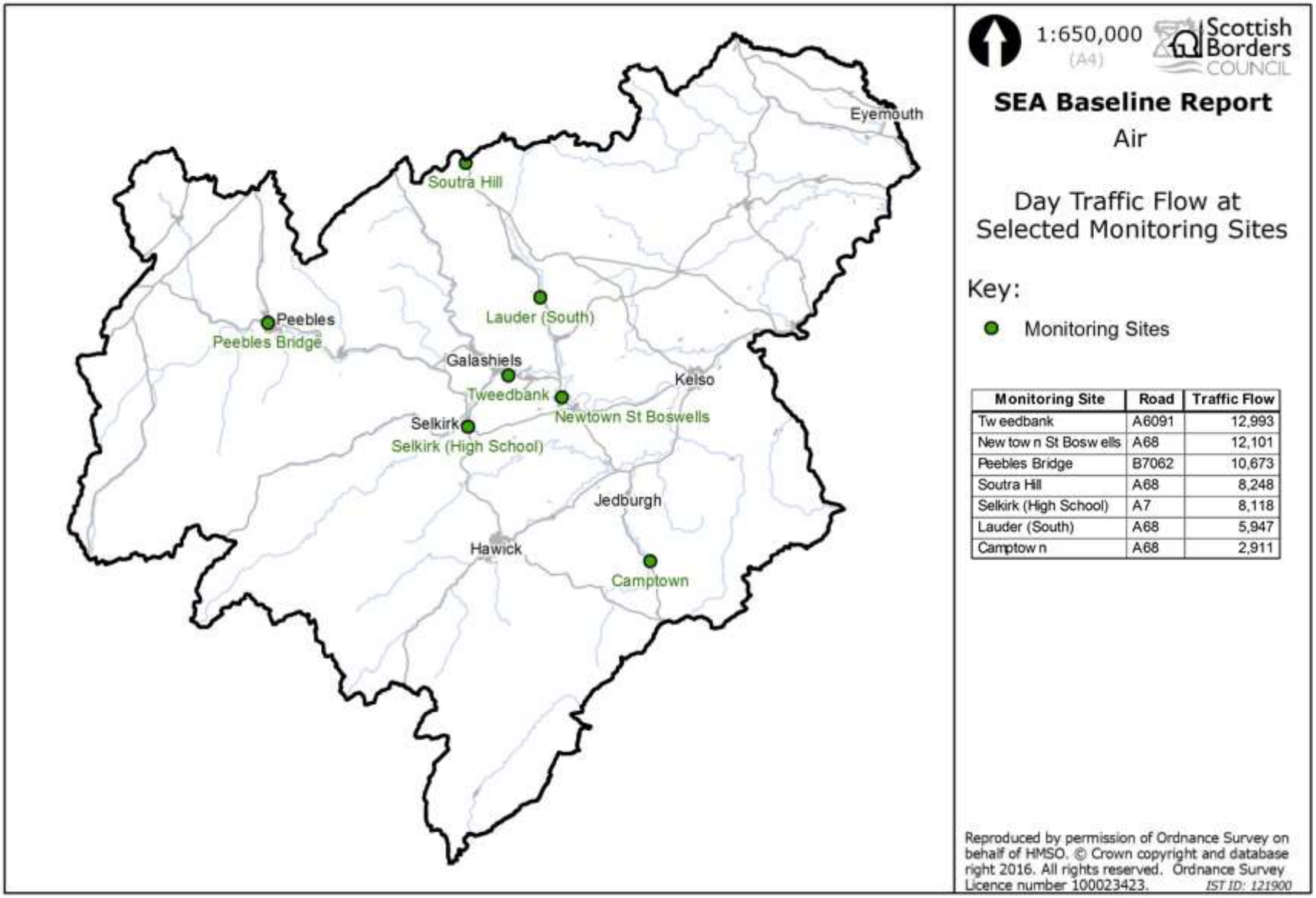
Map 23: Gardens & Designed Landscapes



Map 24: Battlefields



Map 25: Day Traffic Flow at Selected Monitoring Sites



Monitoring Site	Road	Traffic Flow
Tweedbank	A6091	12,993
Newtown St Boswells	A68	12,101
Peebles Bridge	B7062	10,673
Soutra Hill	A68	8,248
Selkirk (High School)	A7	8,118
Lauder (South)	A68	5,947
Camptown	A68	2,911

Appendix D: Detailed Environmental Assessment of Preferred Plan and Alternatives

1. ASSESSMENT OF REASONABLE ALTERNATIVE OPTION:

<table>
<tr><th colspan="4">A revised LBAP incorporating new objectives and actions, continuing the focus on habitats and species</th></tr>
<tr><td colspan="4">An alternative option to the preferred ecosystems approach for the LBAP would be a revised LBAP for the Scottish Borders offering an ongoing focus on habitats and species, with actions updated from the previous LBAP. The habitats and species referred to throughout are those taken from the original LBAP and outlined in Appendix E. This option was discussed at a high level with partners, however detailed action planning was not undertaken. Therefore assessment of proposed actions is based on the actions that would follow a similar approach to the existing LBAP that is being renewed and updated. Actions are considered relevant to SEA Topic Area.</td></tr>
<tr><th colspan="2">SEA Topic</th><th colspan="2">Objectives</th></tr>
<tr><td colspan="2">Biodiversity, Flora & Fauna</td><td colspan="2">Protect, enhance, create and restore biodiversity, and encourage habitat connectivity in the Scottish Borders:
• Protect and enhance species/habitats
• Avoid damage to designated sites/protected species
• Conserve and enhance natural heritage</td></tr>
<tr><th colspan="2">Linked Ecosystem Services</th><th>Commentary Relevant to LBAP Proposed Actions</th><th>Effect</th></tr>
<tr><td rowspan="2">Supporting</td><td>Nutrient cycling</td><td rowspan="2">A focus on biodiversity conservation and protection in isolation, without reference to wider ecosystem service considerations, may have a beneficial impact on supporting services at a site-specific level. There is no framework for supporting wider beneficial impacts on supporting services across landscapes and at a regional level, and, whilst no negative impacts would be anticipated, it is not considered that there would be positive impacts for supporting services at a landscape scale.</td><td>0</td></tr>
<tr><td>Primary production</td><td>0</td></tr>
<tr><td rowspan="3">Regulating</td><td>Pollination</td><td rowspan="3">Actions to support pollinator species, or increase pollinator habitat would have a beneficial impact on regulating services, and targeted action to tackle INNS across the region would also provide positive effects. It is not considered likely that there would be any significant beneficial impact on hazard regulating services such as flood risk, as no targeted action to tackle natural flood management would result. However, there would be likely to be ongoing efforts to increase and restore woodland habitats, which may have beneficial, though less targeted impacts on flood regulation.</td><td>✓</td></tr>
<tr><td>Disease & pest (INNS)</td><td>✓</td></tr>
<tr><td>Hazards</td><td>0</td></tr>
<tr><td rowspan="2">Provisioning</td><td>Wildlife diversity</td><td rowspan="2">It is likely that efforts to support specific species and habitats of importance throughout the Scottish Borders would have a positive effect on wildlife diversity. Supporting biodiversity in the region would be the primary of aim of the plan, under this option. There may also be potential for enhancing trees, vegetation and peat through habitat-specific actions to restore peatlands and woodland habitats. These enhancements may be less targeted across the landscape, without the adoption of an ecosystems approach, which would incorporate findings from the LUS Pilot mapping exercise.</td><td>✓✓</td></tr>
<tr><td>Trees, vegetation, peat</td><td>✓</td></tr>
<tr><th colspan="4">Overview</th></tr>
<tr><td colspan="2">What significant effects will this Plan have on the</td><td colspan="2">It is not considered that this option would result in significant effects, either negative or positive, upon the</td></tr>
</table>

identified ecosystem services in the Scottish Borders?		identified ecosystem services on the whole, with the exception of wildlife diversity. It would still be reasonable to consider that this option would result in significant positive impacts on wildlife diversity, taken.	
Does the Plan address identified pressures on these ecosystem services?		This option does not address the pressures on ecosystem services directly, but there may be some benefits for example in relation to flood risk regulation and encouraging species diversity.	
How does the Plan perform against SEA objectives?		It is considered that this option would meet the SEA objectives for this topic, to protect and enhance biodiversity. There may be indirect benefits in terms of habitat connectivity, although this option does not incorporate a strategic approach to enhancing ecological networks, rather focussing on habitat and species-specific focussed actions to support biodiversity.	
SEA Topic		**Objectives**	
Soil		Help maintain soil and peat quality and avoid exacerbating pollution; conserve geodiversity: • Minimise soil and peat contamination and disturbance, maintaining high soil quality Protect and enhance the geology of the Scottish Borders, including natural landforms and peatland	
Linked Ecosystem Services		**Commentary Relevant to LBAP Proposed Actions**	**Effect**
Supporting	**Nutrient cycling**	This option may provide benefits in terms of soil formation supporting services, through habitat protection and enhancements linked to peatlands and, potentially, grassland and enclosed farmland habitats. It is not considered that negative effects on these services would ensue. However, it is envisaged that any beneficial impacts would again be at a site-specific level, and would be unlikely to have any positive effect on ecosystems at a landscape scale.	**0**
	Soil formation		**0**
Regulating	**Hazards**	Improvements in services such as soil quality and carbon storage may be achieved through the protection and enhancement of habitats such as peatlands, blanket bog and raised bog, with linked benefits for climate regulation. However, it would reasonable to consider that enhancements will be area-specific, as this option does not adopt an approach that looks at ecosystems across the region and beyond and therefore benefits are likely to be localised, and not significant. It is not considered that this option would lead to negative impacts on regulating ecosystem services.	**0**
	Soil quality		✓
	Carbon storage		**0**
Overview			
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?		It is not considered likely that this option would have significant positive or negative impacts on the identified ecosystem services. A positive impact may be considered reasonable in relation to improvements to soil quality, albeit site-specific	
Does the Plan address identified pressures on these ecosystem services?		The limited scope of this option, with a focus on habitat-specific actions is likely to mean that the potential for wider benefits for ecosystem services may not be realised, with a failure to assist in relieving pressures on hazard regulating services across the region. However, there may be some positive localised results.	
How does the Plan perform against SEA objectives?		This option may result in maintenance of soil and peat quality and conservation measures at a site-specific level for certain habitats. The option does not fully meet the SEA objectives to protect and enhance natural landforms and peatland across the region.	
SEA Topic		**Objectives**	

Water		Help protect the status of the water environment • Protect and enhance inland and coastal waters • Protect and enhance water quality Avoid flood risk and protect flood-risk areas	
Linked Ecosystem Services		**Commentary Relevant to LBAP Proposed Actions**	**Effect**
Supporting	**Nutrient cycling**	There may be some locally beneficial impacts on aquatic ecosystems, including marine and freshwater systems through targeted efforts to support these habitats. It is not considered that this option would be at a scale to result in positive or negative impacts on these supporting ecosystem services.	**0**
	Water Cycling		**0**
Regulating	**Pollution control**	Targeted efforts on specific water courses, standing water, fens, marshes or bogs would support regulating services in terms of working with land managers to reduce pollution and increase the quality of aquatic habitats. There may be beneficial impacts in the case of both freshwater and marine habitats. However, these would be site-specific actions not necessarily as effectively co-ordinated across the region's landscapes as would actions that adopt an ecosystems approach at a landscape scale.	✓
	Water quality		✓
	Hazards		✓
Provisioning	**Fresh Water Supply**	It is considered that actions to improve the water environment for key aquatic habitats would support provisioning systems in terms of fresh water supply, although again, at a site-specific scale. Specific actions may not be at a large enough scale to positively impact the region's fresh water supply, although no detrimental impact would be predicted.	**0**
Overview			
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?		It is not considered that this option for the plan would have significant effects on the identified ecosystem services, although adverse impacts would not be predicted for ecosystem services. Positive impacts may be reasonably expected in relation to pollution control, water quality and hazard regulation, but given that this option would have a site-specific focus, it is not thought likely that there would be significant impacts on regulating ecosystem services across the region.	
Does the Plan address identified pressures on these ecosystem services?		This plan may help to address impacts on regulating services at a site-specific level. It is not considered that there would be a tangible impact on reducing pressures relating to supporting or provisioning ecosystem services, which would in any case be more indirectly affected by any actions at a site-specific level under this plan.	
How does the Plan perform against SEA objectives?		This plan would meet all SEA objectives in terms of helping to protect and enhance inland and coastal waters, improve quality and protect flood-risk areas.	
SEA Topic		**Objectives**	
Landscape		Help protect and restore landscape character, local distinctiveness and scenic value • Encourage biodiversity projects that will help enhance the landscape and visual amenity • Contribute to and enhance local distinctiveness in the Scottish Borders • Protect and enhance landscape designations • Seek to improve habitat connectivity	
Linked Ecosystem Services		**Commentary**	**Effect**
Provisioning	**Wildlife diversity**	The plan will support notable Borders species and habitats so that wild species diversity as a provisioning service would be positively impacted by this plan. Actions would include support for species such as red squirrel, black grouse, golden eagle, notable invertebrates, bats, as well as	✓

		marine species and protected / designated sites and habitats. It is considered that the plan would have a positive overall impact on wild species diversity. The plan would operate at a site-specific level however, rather than at a landscape scale, therefore some opportunities to consider interactions with other services and to ensure they are optimised, may not be realised. However, improving habitats and the diversity of species will indirectly contribute to and enhance distinctiveness and improve habitat connectivity.	
Cultural	**Sense of place**	As above, under this plan, actions would be more species and habitat / site focussed, therefore there may not be significant impacts on cultural services in terms of a sense of place or aesthetic values at a landscape scale. However, the plan would include protection of Local Biodiversity Sites as well as other designations, and include protection and enhancement of other habitats, with species-specific management plans. These may positively impact on cultural services in relation to enhancements of landscapes, encouraging a positive sense of place and satisfaction with aesthetic values.	✓
	Aesthetic values		✓
Overview			
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?		It is unlikely that this plan would have significant effects on the identified ecosystem services, given that the focus would be on specific sites, species and habitats rather than on actions at a landscape scale.	
Does the Plan address identified pressures on these ecosystem services?		The plan would address pressures on wild species, including for example habitat connectivity, through actions to improve habitat and sites for the benefit of wild species. It would also contribute to supporting a strong sense of place and ensure that important sites and habitats are protected in the face of development or other land uses.	
How does the Plan perform against SEA objectives?		It is considered that the plan would meet the objectives for this SEA topic, in terms of encouraging projects that support biodiversity, which will also have a beneficial impact on landscape and visual amenity and enhance local distinctiveness. By supporting specific habitats and species, connectivity between habitats could be enhanced.	
SEA Topic		**Objectives**	
Population and Human Health		Support improvements in human health and community wellbeing • Safeguard the natural environment for the benefit of communities	
Linked Ecosystem Services		**Commentary Relevant to LBAP Proposed Actions**	**Effect**
Regulating	**Noise**	There may be indirect benefits for regulating services such as coastal defence and hazard regulation (e.g. flood regulation) through this plan, which will seek to protect and enhance specific habitats, protected sites and wild species across the Scottish Borders. It is considered unlikely that there would be any impact on noise regulation, although no negative impacts would be anticipated. The plan would include specific actions to deal with INNS, which are a direct pressure on particular habitats and species, and it is considered that targeted action at specific sites may have a positive impact on INNS reduction and therefore help to support disease and pest regulating services.	**0**
	Hazards		✓
	Coastal defence		**0**
	Disease & pest (INNS)		✓✓
Cultural	**Health benefits**	The plan focuses on habitats and species actions that will protect and enhance biodiversity, which may result in indirect positive impacts on cultural ecosystem services, by enhancing a	**0**

	Education	sense of place and adding to aesthetic values and appreciation of the wildlife and habitats of the local area. This may encourage people to be more active in nature and to appreciate being in nature, however there are no actions that directly encourage or raise awareness of the health benefits of nature for people, and it is not considered that the plan would result in a positive impact from the types of actions proposed. There may be indirect positive impacts in terms of education, relating to increased understanding about species and habitats, which could be linked in to specific projects targeting particular wildlife, protected areas, habitats or places.	✓
	Sense of place		✓
	Aesthetic values		✓
Overview			
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?		It is not considered that this plan would have significant positive or negative effects on the identified ecosystem services, with the exception of potentially Disease & Pest (INNS) regulating service. Indirect positive effects may ensue, or there may be neutral effects, due to the closer focus and scale of actions under this option on particular sites, habitats and species.	
Does the Plan address identified pressures on these ecosystem services?		The plan directly identifies pressures on regulating services in relation to control of INNS and may indirectly address other pressures faced by regulating services through, for example, habitat improvements that bolster flood hazard regulating services. It is considered that the plan would have neutral impact on pressures relating to health benefits and noise overall, but that there may be opportunities to address other pressures on cultural services, by adding to the overall enhancement of landscapes through specific actions for habitats and species at a site level.	
How does the Plan perform against SEA objectives?		Overall, the plan does contribute to safeguarding of the natural environment, although this is more as a result of indirect impacts, rather than due to actions that are specifically targeted to achieve these objectives.	
SEA Topic		**Objectives**	
Climatic Factors		Support reduction of greenhouse gas emissions and promote climate change adaptation • Contribute to the mitigation of and adaptation to climate change • Assist with less greenhouse gas emissions being released into the atmosphere	
Linked Ecosystem Services		**Commentary Relevant to LBAP Proposed Actions**	**Effect**
Regulating	**Hazard**	Habitat and species protection and enhancement at a site-specific level are likely to indirectly benefit regulating services such as hazard e.g. flood regulation and climate regulating services For example, actions to protect and enhance peatlands, woodland ecosystems and to support healthy marine environment may all indirectly support services relating to hazard and climate regulation and carbon storage. The site-specific approach may have less significant positive effect compared with a coordinated ecosystems approach at a landscape scale. The plan would be likely to indirectly support the ability of species to adapt to climate change, by through undertaking of management approaches to support species and enhance the habitat on which they rely.	✓
	Climate		✓
	Carbon Storage		✓
Overview			
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?		It is not considered likely that the plan would have any significant effect on the identified ecosystem services. Negative impacts on greenhouse gases or climatic factors are not predicted. A positive impact may occur indirectly through actions relating to habitat and species protection and enhancement.	

Does the Plan address identified pressures on these ecosystem services?		The plan will indirectly address pressures through actions related to habitat enhancement and protection, for example in relation to wetlands, peatland and woodland habitats, or protection of the marine environment, which may all positively impact on carbon storage services, and regulating services relating to hazards such as flood risk and climate.	
How does the Plan perform against SEA objectives?		Indirectly, the plan would support the outlined SEA objectives.	
SEA Topic		**Objectives**	
Material Assets		Encourage adequate protection and sustainable use of material assets • Protect and enhance natural assets of economic and recreational value, including tourism, food and drink • Support Core Paths and green networks by supporting bid for a new Tweed walk • Maintain consideration of Zero Waste Plan objectives in the delivery of all actions	
Linked Ecosystem Services		**Commentary Relevant to LBAP Proposed Actions**	**Effect**
Regulating	**Pollination**	There are likely to be positive impacts on pollinating services through the plan, which will target action at key species and habitats, as well as protected sites, in order to enhance the natural environment of the Scottish Borders. It is unlikely that there would be a significant impact on pollination regulating services, without a broader approach that considers the interplay of other ecosystem services such as provisioning, therefore it is felt that whilst this plan would result in some positive impacts on pollination services, they are unlikely to be significant due to the site-specific nature of the plan.	✓
Provisioning	**Food (crops, livestock, wild fish, game)**	Actions to protect specific wild species, particularly highly mobile species, or to preserve particular habitats, such as grasslands or heathlands, may have negative impacts on provisioning services such as food, fibre or timber production. Such actions may result in constraints to the production of crops or management of game. Actions to preserve woodlands may have negative implications for timber provisioning services. However, it is not considered that the level and intensity of actions within the plan would lead to significant negative effects. In the case of fuel and pharmaceuticals provisioning, there is likely to be no impact. The main aim of the plan would be to protect biodiversity and to enhance species and habitats. Whereas the ecosystems approach of the preferred option would more broadly consider land uses across the Scottish Borders and endeavour (as far as possible) to find solutions in order to benefit biodiversity and other beneficial systems, the site or species-specific approach of this plan will be more restricted in its aims and applications.	x
	Fibre (crops, trees, wool)		x
	Timber		x
	Fuel		0
	Pharmaceuticals		0
Cultural	**Employment**	There may be some positive benefits in relation to job creation, as some specific actions may lead or result from projects that would require management and administration in order to deliver. The plan aims to enhance and protect species and sites, and by extension, the wider landscape, which is likely to have a positive impact in terms of the food and drink and tourism industries, which rely on the high quality natural environment of the Scottish Borders, in order to attract visitors to the region, and encourage them to return.	✓
Overview			
What significant effects will this Plan have on the identified ecosystem services in the Scottish		It is not considered that there would be significant positive or negative impacts from the implementation of this plan within the Scottish Borders in terms of the identified ecosystem services. There are some	

<table>
<tr><td colspan="2">Borders?</td><td colspan="2">possible negative, as well as positive impacts, and some services where effects would be considered to be neutral.</td></tr>
<tr><td colspan="2">Does the Plan address identified pressures on these ecosystem services?</td><td colspan="2">The plan addresses some of the pressures on cultural services, by positively impacting on employment and having the potential for job creation. Pollinating services face pressures in terms of intensive land management uses, that may be relieved through actions to enhance and protect sites and habitats. However, in relation to provisioning services some pressures may intensify, although without significant effects.</td></tr>
<tr><td colspan="2">How does the Plan perform against SEA objectives?</td><td colspan="2">The plan meets the sub-objective of protecting and enhancing natural assets of economic and recreational value, in relation to cultural services for employment. The plan does not meet the other sub-objective relating to core paths as there is no provision for meeting this objective within the plan, which focuses on site and habitat enhancements and protection. The plan does not fully meet the over-arching objective to protect material assets, as the plan, pursued in isolation, may have some negative impacts on provisioning services, although not considered to be significant. (It should be highlighted that the impacts of providing or delivering material assets, where undertaken intensively, have a far greater impact on biodiversity than the protection of biodiversity would ever be likely to have on such assets).</td></tr>
<tr><th colspan="2">SEA Topic</th><th colspan="2">Objectives</th></tr>
<tr><td colspan="2">Cultural Heritage</td><td colspan="2">Help protect the character, quality and diversity of the Scottish Borders' landscape
• Promote visits to enjoy cultural as well as natural heritage assets of the Scottish Borders</td></tr>
<tr><th colspan="2">Linked Ecosystem Services</th><th>Commentary Relevant to LBAP Proposed Actions</th><th>Effect</th></tr>
<tr><td rowspan="3">Cultural</td><td>Sense of place</td><td rowspan="3">In a similar vein to the comments under the topic of Landscape, it is likely that this plan would have a positive impact on the cultural services relating to the sense of the Scottish Borders being a special place, with special, and designated, landscapes. The emphasis on protecting and enhancing biodiversity at a site and species-specific level will lead to indirect benefits for the overall quality and diversity of the Scottish Borders' landscapes and seascapes, the biodiversity of which is an integral part. This is likely to have a positive impact on cultural services, which rely on a high quality natural environment. There is potential for a significant positive impact on these services, as much of the natural environment has inspired artists and writers and is reflected on cultural traditions and heritage of the Scottish Borders. Protecting and enhancing biodiversity therefore has potential to enhance cultural services for both visitors and residents of the area.</td><td>✓✓</td></tr>
<tr><td>Aesthetic values</td><td>✓✓</td></tr>
<tr><td>Cultural heritage</td><td>✓✓</td></tr>
<tr><th colspan="4">Overview</th></tr>
<tr><td colspan="2">What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?</td><td colspan="2">It is considered that the plan may have a significant positive effect on cultural ecosystem services as outlined above.</td></tr>
<tr><td colspan="2">Does the Plan address identified pressures on these ecosystem services?</td><td colspan="2">The plan will address pressures on services through creation and enhancement of high quality habitats, supporting people's interest in and appreciation of the natural environment of the Scottish Borders and its landscapes and seascapes.</td></tr>
<tr><td colspan="2">How does the Plan perform against SEA objectives?</td><td colspan="2">The plan addresses the objectives in terms of protecting the character, quality and diversity by investing in biodiversity and natural heritage, which in turn is an inspiration for cultural activity, aesthetic appreciation and creation of cultural heritage. It may also indirectly promote visits to cultural heritage</td></tr>
</table>

		assets, as people visiting the area will be more likely to visit if the Scottish Borders continues to have a high quality natural environment.	
SEA Topic		**Objectives**	
Air		Help protect current air quality • Increase woodland creation to support high quality air in the Scottish Borders • Promote health and wellbeing benefits of biodiversity and encourage more walking and cycling	
Linked Ecosystem Services		**Commentary Relevant to LBAP Proposed Actions**	**Effect**
Regulating	**Hazard**	The plan includes protection and enhancement of native woodland habitat, with a focus on specific sites. Other habitats which may have a bearing on the protection of air quality and that would be addressed by this plan include urban habitats, for which the focus would be to increase native tree planting. There may be a positive benefit on regulating services. Actions for improving urban habitats may indirectly benefit regulating services by encouraging people to spend more time in nature, or walk/cycle rather than using private cars as transport.	✓
	Air quality		✓
Cultural	**Health benefits**	Since there is no ecosystems approach with consideration of linked services, there is less of a focus in this plan on encouraging people to use more active transport. However, there may be indirect benefits on cultural services through action for improving and enhancing habitats. It is not considered that there would be any negative impacts.	**0**
Overview			
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?		It is not considered that the plan would have significant effects on hazard or air quality regulating services, or on health benefits in relation to cultural ecosystem services. The plan would operate at a site-specific level and therefore not have significant effect across the region.	
Does the Plan address identified pressures on these ecosystem services?		The plan would address pressures in relation to air quality through increasing woodland provision at some specific sites. It is unlikely that there would be a significant effect on addressing pressures related to these, or cultural ecosystem services.	
How does the Plan perform against SEA objectives?		The plan will meet the SEA objectives in part, by increasing woodland creation to support high quality air. However, it will not directly promote health and wellbeing benefits and encourage active travel.	

OVERALL PREDICTED EFFECTS OF REASONABLE ALTERNATIVE OPTION ON ECOSYSTEM SERVICES WITHIN THE SCOTTISH BORDERS											
Ecosystem Service: Supporting											
Nutrient Cycling		Primary Production		Water Cycling		Soil Formation					
0		0		0		0					
Ecosystem Service: Regulating											
Hazard	Air Quality	Pollination	Climate	Carbon Storage	Noise	Coastal Defence	Pollution	Water	Soil Quality	Disease & Pest	
✓	✓	✓	✓	0 to ✓	0	0	✓	✓	✓	✓✓	
Ecosystem Service: Provisioning											
Wildlife Diversity	Trees, Vegetation, Peat	Fresh Water Supply	Food	Timber	Fibre	Fuel	Pharmaceuticals				
✓ to ✓✓	✓	0	x	x	x	0	0				
Ecosystem Service: Cultural											
Sense of Place	Health Benefits	Aesthetic Value	Cultural Heritage	Employment	Education						
✓✓	0	✓✓	✓✓	✓	✓						
Mitigation Required				**Enhancement Opportunities**							
• Care will be taken to encourage responsible access to the countryside to avoid increased visitor impacts in terms of recreational disturbance, erosion or other impacts on ecosystem services, through awareness raising as well as promotion of health benefits											

2. ASSESSMENT OF PREFERRED OPTION:

<table>
<tr><th colspan="4">A new LBAP that adopts an ecosystems approach to action planning (preferred option)</th></tr>
<tr><td colspan="4">

LBAP actions are organised under six key themes in this option. These themes are directly linked to the overarching Scottish Biodiversity Strategy Routemap to 2020, which is itself based upon an ecosystems approach. The themes are also linked to Scotland's Land Use Strategy, which also promotes an ecosystems approach. These six themes, which are discussed in the below commentary section, are:

Theme 1 - Ecosystems Restoration
Theme 2 - Natural Capital
Theme 3 - Greenspace
Theme 4 - Wildlife & Habitats
Theme 5 - Land & Freshwater Management
Theme 6 - Marine & Coastal Ecosystems

For each SEA Topic, actions are considered by thematic area and discussed in relation to their likely environmental effect on each of the four ecosystem service types overall (reference is made within commentary to specific and relevant ecosystem services sub-types for the SEA Topic in question (as outlined in the Environmental Report, Section X, Table X).
Overall effects of all actions are considered and scored per ecosystem service sub-type for the SEA Topic area.
Any required mitigation and enhancement opportunities are presented.

</td></tr>
<tr><th colspan="2">SEA Topic</th><th colspan="2">SEA Objectives</th></tr>
<tr><td colspan="2">Biodiversity, Flora & Fauna</td><td colspan="2">Protect, enhance, create and restore biodiversity, and encourage habitat connectivity in the Scottish Borders:
Protect and enhance species/habitats
Avoid damage to designated sites/protected species
Conserve and enhance natural heritage</td></tr>
<tr><th>Topic-Linked ES</th><th>ES Sub-Type</th><th>Effect Per Sub-Type</th><th colspan="2">Discussion of Anticipated Overall Effects of Thematic Actions on Topic-Linked ES</th></tr>
<tr><td rowspan="3">Supporting</td><td rowspan="3">Nutrient Cycling</td><td rowspan="3">✓</td><td colspan="2">Overall Effects on Supporting Services</td></tr>
<tr><td>Theme 1</td><td>Actions under Theme 1 will support ecosystem health and restoration, which will in turn support services like photosynthesis and nutrient cycling. For example, actions include awareness raising about reducing pollution in aquatic ecosystems through use of the Scottish Borders Pilot Regional Land Use Framework maps (LUS Pilot maps), which identify opportunities for effective pollution prevention throughout priority catchments. In addition, actions under this theme including ongoing assessment and reduction of development impacts on ecosystems and enhancing the ecological network, as well as woodland and farmland habitat restoration. Such actions to improve the health of ecosystems will have indirect benefits for supporting ecosystem services.</td></tr>
<tr><td>Theme 2</td><td>Actions under Theme 2 include restoration of peatland ecosystems and degraded sites, which will protect soils and support nutrient cycling. Natural flood management approaches under Theme 2 will have the added benefit of increasing native tree planting, with multiple benefits for supporting ecosystems.</td></tr>
</table>

			Theme 3	Within urban environments, actions under Theme 3 seek to encourage supporting ecosystems in towns through increased awareness of SUDS use and green infrastructure and under Theme 5, creative land and freshwater management projects will be encouraged, to enhance supporting services.
	Primary Production	✓	Theme 4	It is anticipated that the efforts of the LBAP actions to maintain and enhance biodiversity, including in soil and water, through the action under theme 4 to support the ecological network will promote the health of supporting ecosystem services indirectly and enhance nutrient cycling. In addition the actions to support a strong ecological network and may indirectly support primary production by maintaining the health of the network.
			Theme 5	Actions include awareness raising about land use implications using the LUS Pilot maps, and to encourage tree-planting in appropriate areas to avoid damaging important grassland, heathland or wetland sites, and to monitor riparian environments which will promote a robust ecosystem with indirect benefits for supporting services.
			Theme 6	Support for Marine Protected Areas, which this plan seeks to promote, could help with greater protection of marine supporting services and sustainable use of resources.
Regulating	**Pollination**	✓✓	**Overall Effects on Regulating Services**	
			Theme 1	The LBAP actively seeks to support pollinators and to tackle INNS, thus enhancing regulating ecosystem services. For example, actions under Theme 1 include restoration of farmland habitats and species-rich hedgerows.
			Theme 2	Under Theme 2, pollinator habitat will also be supported through monitoring projects as well as other habitat enhancements and promotion of improved habitat management techniques. The LBAP does not have actions directly aimed at hazards such as wildfire, although efforts to restore peatland ecosystems and improve ecosystem health may assist in supporting the protection of natural capital indirectly, however there are actions specifically aimed at reducing the risk of floods through natural flood management (NFM), tree planting – and again, peatland restoration. It should be noted that NFM on its own may be insufficient to support hazard regulating services, but there may be indirect benefits on hazard regulating services.
	Disease & Pest (INNS)	✓✓	Theme 3	Under Theme 3, there is emphasis on supporting biodiversity in urban areas, through improving green networks around towns and wildlflower planting to support more pollinators in amenity areas.
			Theme 4	Theme 4 actions also seek to improve habitats across the landscape, which will support pollinators and actions also encourage citizen science and dissemination of good practice to raise awareness of biodiversity and how to look after it, which can extend to pollinator species, and benefit them indirectly. Actions under Theme 4 include thinking in advance about the potential for beaver to colonise the region, and how they may support flood risk management, (as well as general thinking about how to respond to and manage their integration within ecosystems in the Scottish Borders).
	Hazards	✓	Theme 5	As well as actions across all themes that seek to restore and enhance ecosystem health, enabling robust ecosystems that respond better to regulating disease and pests, there are specific actions to manage INNS under Theme 5, with a focus on maintaining biosecurity

				within the Scottish Borders. Partners are also working to raise awareness of biodiversity and how to protect it, which will include actions such as managing visits to areas where INNS may be present (such as plants) in order to prevent their spread.
			Theme 6	Actions include establishing a marine biosecurity project to tackle INNS. There are no actions within Theme 6 that will specifically effect hazards such as coastal erosion, which is not an issue for the rocky coasts of the Scottish Borders but may impact other sandy coasts of the Scottish Borders. However, other PPS are better placed to tackle this, such as Scottish Borders Council Shoreline Management Plans.
Provisioning			**Overall Effects on Provisioning Services**	
	Wildlife Diversity	✓✓	Theme 1	Theme 1 actions will support wildlife diversity through creation of increased ecological network connectivity and ecosystem restoration such as woodland creation and farmland habitat restoration, which will also support the provisioning services of trees, vegetation and peat.
			Theme 2	Support for the provisioning services of trees, vegetation and peat will be delivered through actions under Theme 2 to increase woodland diversity and integration of woodland types and land uses, in accordance with the principle of multiple benefit land use outlined in the LUS Pilot. Actions also include peatland restoration, including long-term monitoring. Vegetation enhancements include increasing grassland margins and hedgerow habitat with benefits for pollinators. Actions under this theme are anticipated as having a significant positive effect on wildlife diversity as well as trees, vegetation and peat.
			Theme 3	Actions include native tree species selection and management in community woodlands, streets and settlements as well as biodiversity projects for communal land and encouragement of green infrastructure, including planting and suds, as well as wildlife friendly management of greenspace, all of which will have a significantly positive effect on provisioning services.
	Trees, Vegetation, Peat	✓✓	Theme 4	Actions under Theme 4 include direct support for wild species, with some notable species for which funds and resources exist given particular attention. Other direct actions including ongoing identification and promotion of Local Biodiversity Sites, which will add and enhance the networks between national and internationally protected areas, by recognising the regional and local value of distinctive and important habitats across the Borders. Indirect actions supporting provisioning services of wildlife diversity including communications about the protection and enhancement of biodiversity through awareness raising, to encourage observation, recording, monitoring and feedback, as well as appreciation and care for biodiversity throughout the region. Encouraging citizen science and disseminating information to show good practice, will have positive indirect impacts under Theme 4.
			Theme 5	Actions for trees include herbivore management and encouragement of natural regeneration as well as consideration of proposals for tree planting and potential impacts on other habitats, such as grasslands. Measures to respond to invasive non-native species will also support biodiversity. As well as use of the LUS maps, National Stream Temperature monitoring will assist in identifying the most effective areas for riparian tree planting in order to control water temperature, with benefits for aquatic biodiversity.

			Theme 6	In addition, actions under Theme 6 aim to demonstrate the pressures facing marine biodiversity and will support provisioning services in terms of wildlife diversity specifically. Encouragement of wildlife recording will also result in positive effects on biodiversity, as will awareness raising about pressures on biodiversity, which could help indirectly to lower pressures and benefit wildlife diversity provisioning services.

Overview Commentary				
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders connected with this SEA Topic?	**Significant Negative Environmental Effects?**	None predicted	**Significant Positive Environmental Effects?**	**Pollination** **Disease & Pests** **Wildlife Diversity** **Trees, Vegetation, Peat**
	It is considered that the LBAP will have significant positive impacts on regulating services relating to pollination and control of disease and pests, as well as wildlife diversity, trees, vegetation and peat, if implemented. Indirect benefits are anticipated for other supporting, provisioning and regulating ecosystem services.			
Does the Plan address identified pressures on these ecosystem services?	INNS are increasing in number and abundance across the region and threatening other species, and by extension, wild species diversity. However, the actions within the plan seek to target pressures from INNS and support disease and pest regulating services directly, and to address overall pressures on regulating ecosystems through management of land e.g. intensive agriculture. The LBAP provides a framework for action, looking to promote more sustainable and considered approaches to land use, through the application of the LUS Pilot maps to decision-making.			
How does the Plan perform against SEA objectives?	The primary aim of the LBAP is to protect and enhance biodiversity and the implementation of LBAP actions will, through an ecosystems approach, enable the enhancement and protection of biodiversity on both land and sea. The adoption of the LBAP will provide a framework, through which partner organisations, land managers and the public can be encouraged to support biodiversity flora and fauna. It is considered that the plan fully meets the SEA objectives. The themes of the plan and their related actions, are specifically designed to conserve and enhance natural heritage and to protect the diversity of species.			

SEA Topic		SEA Objectives	
Soil		Help maintain soil and peat quality and avoid exacerbating pollution; conserve geodiversity: • Minimise soil and peat contamination and disturbance, maintaining high soil quality • Protect and enhance the geology of the Scottish Borders, including natural landforms and peatland	
Topic-Linked ES	**ES Sub-Type**	**Effect Per Sub-Type**	**Discussion of Anticipated Effect of Thematic Actions on Topic-Linked ES**
Supporting	**Nutrient**	✓	**Effects on Supporting Services**

	cycling		Theme 1	Actions encouraging woodland restoration should also have an indirect positive effect on soil formation and nutrient cycling by assisting with flood prevention and encouraging healthy soils
			Theme 2	The plan includes actions under Theme 2 that aim to protect and enhance natural capital, such as peatland ecosystems and support their restoration, leading to high quality soil formation, (with other positive impacts for climate change adaptation, through increased carbon storage capacity).
			Theme 3	Actions to promote awareness and increased potential of SUDS and green infrastructure may have an indirect positive effect on nutrient cycling in urban environments, as would projects to enhance the urban tree resource and improve green networks, strengthening the overall ecological network.
	Soil formation	✓	Theme 4	Actions under Theme 4 do not directly benefit supporting services, however actions to develop a stronger ecological network through identification and adoption of Local Biodiversity Sites may have an indirect benefit for supporting services such as nutrient cycling and soil formation.
			Theme 5	Supporting services such as soil formation and nutrient cycling will be considered in actions relevant to Theme 5, regarding land and freshwater management. Lessons from the LUS Pilot have been incorporated to action planning, for example with actions relating to farmland management and incorporating ecosystem services into farm accounting. The actions do not directly seek to influence supporting services such as soil formation or nutrient cycling, however it is reasonable to consider that maintaining and enhancing soil biodiversity through effective land management will support biodiversity within the soil, formation and cycling of nutrients.
			Theme 6	Theme 6 actions may indirectly support nutrient cycling, by promoting healthy and robust marine environment, including protection of marine biodiversity and promotion and support for MPAs.
Regulating			**Effects on Regulating Services**	
	Hazards	✓	Theme 1	Theme 1 actions to invest in woodland ecosystem restoration and tree diversity to enhance woodland ecosystems will add to the potential for woodlands to store carbon and assist in climate change adaptation. There may also be indirect benefits such as mitigating flood risk, stabilising soils and reduce erosion.
			Theme 2	The plan includes actions under Theme 2, Natural Capital, aimed specifically at increasing carbon storage within the Scottish Borders through restoration and enhancement of peatland ecosystems as carbon stores, flood mitigation systems and sites of geological importance. Actions include adoption of the Peatland Code and long-term monitoring projects in previously restored and existing degraded peatland sites. This is also directly linked to enhancing quality soils. There are also additional actions specifically aimed at reducing flood risk and thereby directly supporting regulating services, including use of the LUS Pilot project maps to identify likely suitable areas for natural flood management, helping stabilise soils and reduce erosion.
	Soil quality	✓	Theme 3	Actions to promote use of SUDS for biodiversity and their effective use may have indirect benefits for hazard regulating services within urban/suburban environments. Other actions to improve urban greenspace for the benefit of biodiversity may have indirect benefits for soil quality.

			Theme 4	Actions to extend the Local Biodiversity Site network, thereby creating areas where biodiversity is protected, the ecological network is strengthened, may have positive indirect impacts on soil quality. Hazard regulation services may indirectly benefit through actions considering the potential arrival of beaver in the region, and the role they may play in natural flood management.
	Carbon storage	✓	Theme 5	Actions under Theme 5 indirectly support improved soil quality, with emphasis on support for improving farmland management. Actions related to strategic woodland creation and management may also have a positive indirect impact on hazard regulation linked to flood risk and increased woodland resource will result in indirect benefits for carbon storage ecosystem services.
			Theme 6	Actions to encourage awareness of the pressures facing the marine environment, responsible management of recreational and economic activities such as fishing, and promotion of the importance of Marine Protected Areas, may all have an indirect positive impact on the carbon storage potential of the marine environment, by helping to strengthen marine ecosystems.

Overview Commentary			
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?	**Significant Negative Environmental Effects?**	None predicted.	**Significant Positive Environmental Effects?** None predicted.
	The actions within the LBAP under Themes 1, 2 and 5 in particular, will overall have a positive impact on regulating and supporting services within the Scottish Borders, in relation to soil formation and quality, carbon storage, regulation of hazards such as flood and nutrient cycling. It is considered unlikely that the implementation of the LBAP actions will have significant effects in isolation, however the overall effects of these actions if well targeted and funded may cumulatively have a significant positive impact on supporting and regulating ecosystem services in the longer term.		
Does the Plan address identified pressures on these ecosystem services?	Pressures such as soil erosion and acidification through reduced level and quality of soil biodiversity may be indirectly alleviated through the implementation of the plan, with benefits in terms of counteracting peat loss, improving drainage for reducing flood risk (which has been of particular concern in the Scottish Borders in recent years due to flood events) and supporting climate change adaptation.		
How does the Plan perform against SEA objectives?	The plan includes actions that offer potential to enhance geological features such as peatlands and improve soil quality through promotion and implementation of improved land management.		

SEA Topic		**SEA Objectives**	
Water		Help protect the status of the water environment • Protect and enhance inland and coastal waters • Protect and enhance water quality • Avoid flood risk and protect flood-risk areas	
Topic-Linked ES	**ES Sub-Type**	**Effect**	**Discussion of Anticipated Effect of Thematic Actions on Topic-Linked ES**

Supporting	**Nutrient cycling**	✓	**Effects on Supporting Services**	
			Theme 1	LBAP actions seek to enhance and protect ecosystems and natural capital, which it is considered reasonable to believe will have at least a positive indirect impact on supporting ecosystems such as nutrient and water cycling. There are specific, direct actions under Theme 1 to support aquatic ecosystems and raise awareness about the Water Framework Directive (WFD) requirements – and any future requirements of new legislation that may be transposed into UK law after the UK leaves the EU. The actions under Theme 1 aim to support aquatic ecosystems and by encouraging reduction of pollution in priority catchments across the Scottish Borders.
			Theme 2	Under Theme 2, actions aim to support soil biodiversity and quality through restoration of peatlands, with potential indirect benefits for nutrient cycling, as would be the case for actions to increase planting of native trees and use of different woodland types to enhance and support woodland ecosystems and by extension, their functions and role in the cycling of nutrients.
			Theme 3	Theme 3 actions have a focus on urban drainage systems and the encouragement of SUDS, which will support water cycling services.
	Water Cycling	✓	Theme 4	Actions under Theme 4 do not directly benefit supporting services, however actions to develop a stronger ecological network through identification and adoption of Local Biodiversity Sites may have an indirect benefit for supporting services such as nutrient cycling and water cycling
			Theme 5	Theme 5 incorporates actions to improve farmland management and encourage creative projects relating to land and freshwater management.
			Theme 6	Direct actions to support water cycling in the marine environment link to beach cleaning and marine biosecurity, which may have positive impacts on the water environment of the marine area.
Regulating	**Pollution control**	✓✓	**Effects on Regulating Services**	
			Theme 1	As above, there are specific actions under Theme 1 to reduce pollution in freshwater aquatic ecosystems and raise awareness of pollution prevention measures and reporting. SEPA is a lead partner for this action. In the marine environment, water quality will be assisted by efforts to reduce pollution in priority catchments, for example such as the Eye Water.
			Theme 2	Hazards such as flooding are a particular concern in the Scottish Borders, due to fluvial or surface water flooding. Theme 2 actions include specific natural flood management schemes and woodland ecosystem enhancement and restoration, which may assist in alleviating pressure on flood regulation services provided by ecosystems, in combination with awareness raising about land management approaches that may reduce flood risk.
	Water quality	✓✓	Theme 3	Theme 3 actions include a focus on urban drainage systems and the encouragement of SUDS, which will support regulating services in urban areas, such as hazard regulation in the context of flood risk avoidance. Actions to enhance biodiversity including green spaces and networks in an urban context will also support pollution control and water quality.
			Theme 4	Actions to improve ecological network connectivity will support regulating services indirectly, the consideration of beavers and their potential role in flood management may also indirectly raise awareness of the importance of regulating services and dissemination of good practice will highlight work from partners across a wide range of fields to enhance the water environment,

				with benefits for ecosystems and biodiversity.
	Hazards	✓	Theme 5	Freshwater management is a key focus of this theme and includes consideration of creative freshwater projects, with an emphasis on community-led involvement, in order to assist with regulation of the water environment particularly in priority catchments and urban zones vulnerable to flooding. Monitoring of stream temperatures will assist in water quality and hazard regulation. INNS action will include awareness raising of the clean, check, dry system for the protection of the biodiversity of the riparian and water environment.
			Theme 6	Actions under Theme 6 for the marine environment also seek to establish codes of conduct to protect the water environment in relation to Marine Protected Areas and there will be indirect benefits to water quality through actions under Theme 6 to raise awareness of factors that threaten the marine environment, such as diffuse pollution. There are also actions to support participation in plastic bead monitoring, and to raise awareness of this new and increasing type of pollution.
Provisioning	**Fresh Water Supply**	✓	**Effects on Provisioning Services**	
			Theme 1	The actions under Theme 1 are not directly linked to provision of fresh water, rather the focus is on meeting WFD, or equivalent legislation, requirements. However, it is reasonable that efforts to reduce pollution and raise awareness of land management than can enhance water quality should also have positive impacts on fresh water supply.
			Theme 2	Supporting retention of peatlands under this Theme will assist in keeping water stored on the land, with benefits in reducing flooding, but also with benefits for provision of water and its use in food and drink, such as whiskey production.
			Theme 3	Key actions under this theme that may benefit provisioning services indirectly link to awareness raising of SUDS potential to maintain fresh, clean water, as well as information sharing concerning good practice in relation to urban development.
			Theme 4	The actions relating to awareness raising and dissemination of good practice are the main link for this Theme and impacts on fresh water supply, with the potential for indirect benefits through application of good practice.
			Theme 5	Raising awareness of good practice in freshwater management to benefit biodiversity under this Theme will have indirect benefits for provisioning services by supporting clean fresh water. The promotion of the LUS pilot mapping tool for targeting management activity will also assist in indirectly benefiting this service.
			Theme 6	Raising awareness of the pressures facing the marine environment and supporting Marine Protected Areas through promotion of codes of conduct may indirectly benefit this service.

Overview Commentary				
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?	Significant Negative Environmental Effects?	None predicted.	Significant Positive Environmental Effects?	**Pollution control** **Water quality**

	Climate change may mean that flooding becomes more severe and more frequent in certain areas, which is a challenge for the Scottish Borders, where many settlements are in a vulnerable zone for flooding events. The plan will help to support flood risk management through NFM in freshwater systems, however it is unknown as the significance of this positive effect, weighed against hard engineering techniques. It is considered likely that there will be a significant positive effect on regulating systems such as water quality, through efforts to tackle diffuse pollution and INNS, and to promote improved and integrated land management at a catchment scale through the application of learnings from the LUS Pilot mapping project, to support these ecosystems.
Does the Plan address identified pressures on these ecosystem services?	The plan addresses pressures such as diffuse pollution and protection from INNS, which impact on regulating and supporting ecosystem services. It should also help to support climate change adaptation as there are actions connected with management of flood risk through natural flood management techniques and increased tree planting / enhancement of woodland ecosystems.
How does the Plan perform against SEA objectives?	The plan addresses the SEA objectives for this topic. The plan will seek to enhance the water environment, both freshwater and marine, linking in with river basin management planning and SEPA's objectives and helping to tackle pollution impacts from source to sea.

SEA Topic		SEA Objectives		
Landscape		Help protect and restore landscape character, local distinctiveness and scenic value • Encourage biodiversity projects that will help enhance the landscape and visual amenity • Contribute to and enhance local distinctiveness in the Scottish Borders • Protect and enhance landscape designations • Seek to improve habitat connectivity		
Topic-Linked ES	**ES Sub-Type**	**Effect**	**Discussion of Anticipated Effect of Thematic Actions on Topic-Linked ES**	
Provisioning	**Wildlife diversity**	✓✓	**Effects on Provisioning Services**	
			Theme 1	Actions include restoration of farmland habitats across the landscape and of woodland ecosystems, with a focus on juniper and montatne / heathland scrub in upland areas and to enhance the Forest Habitat Network. Actions will contribute to local distinctiveness, improve connectivity and in so doing, support wildlife diversity through enhancement of a robust ecological network.
			Theme 2	Enhancing woodland diversity through inclusion of native species and integration with different woodland types and land uses, along with enhancing roadside and hedgerow habitats will all have beneficial impacts on landscape and encourage a range of wildlife, for example pollinators.
			Theme 3	Enhancements to the urban environment through green infrastructure such as living walls, promotion of use of SUDS as well as actions to link Local Biodiversity Sites and Protected Areas and enhance countryside around towns will contribute to an ecological network that beneficially impacts landscape and supports wildlife diversity.
			Theme 4	LBAP actions under Theme 4 seek to enhance both habitats and native species diversity across

				the landscape, including actions to support black grouse, golden eagle, northern brown argus butterfly as well as actions to raise awareness of species diversity and the importance of recording wildlife. Actions for wildlife are considered at a landscape scale, with priority and most relevant areas for action highlighted in the plan, organised in accordance with the 5 key landscape types in the Borders (Map shown in Appendix C). Actions under Theme 4 also include dissemination of good practice across the region to promote wild species diversity, in order to inform partner, land managers, developers and the public about good practice and how to support native species.
			Theme 5	Land and freshwater management actions will both directly enhance landscapes through actions to integrate woodland types and indirectly benefit the landscape through actions to raise awareness of effective land use for multiple benefits, through promotion of the LUS pilot maps for land management decisions. These actions are planned with ecosystem health and by extension, protection and enhancement of biodiversity in mind.
			Theme 6	Actions under Theme 6 will aim to support species diversity within seascapes, through recording, awareness raising and action to improve habitats for native species diversity, such as by tackling INNS.
Cultural	**Sense of place**	✓✓	**Cultural Services**	
			Theme 1	LBAP actions under Theme 1 include restoration of ecosystems to improve habitat connectivity and enhance habitats, (for example, via planting of native woodland and montane scrub species, and expanding/enhancing habitats around Local Biodiversity Sites). LBAP actions will therefore assist in the retention and enhancements of landscapes which give residents and visitors to the area a sense of place.
			Theme 2	Use of the Scottish Borders Land Use maps will help in planning land use and management to protect ecosystems and in turn look after the special landscapes of the Borders. Actions aim to enhance and protect the high quality natural environment through investment in Natural Capital and establish long-term monitoring projects to maintain it. The aesthetic appeal of local landscapes is therefore supported by the LBAP actions.
			Theme 3	Actions under Theme 3 seek to enhance urban landscapes, through promotion of green infrastructure (e.g. SUDS) and networks, community woodlands and the urban tree resource. There are also actions under Theme 3 to develop a local walk along the River Tweed, which will promote the sense of the Scottish Borders being a special place both for residents and for visitors, and to celebrate the historic environment and land use, which will support recognition of the history of landscapes within the Borders and the meaning they provide.
	Aesthetic values	✓✓	Theme 4	Actions include identification, adoption and promotion of Local Biodiversity Sites, which will highlight the biodiversity rich landscapes around the region and have positive impact on people's sense of place and appreciation of the aesthetic value of the Scottish Borders. All actions under this Theme seek to promote wildlife diversity, which requires projects that seek to enhance habitats at a landscape scale and through application of the LUS Pilot maps, which will add to the distinctiveness of the local area.

			Theme 5	Actions under this Theme are likely to indirectly benefit cultural services linked to sense of place and aesthetic value, by promoting actions to manage land and freshwater sustainably, for the benefit of biodiversity and ecosystem health.
			Theme 6	Actions under Theme 6 seek to raise awareness and appreciation of the marine and coastal environment and encourage actions that protect it, with indirect benefits for seascapes and positive impacts on cultural services.

Overview Commentary				
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?	**Significant Negative Environmental Effects?**		**Significant Positive Environmental Effects?**	**Wildlife Diversity** **Sense of Place** **Aesthetic Values**
	Implementation of this plan is likely to have significantly positive effects on the outlined cultural services, particularly through Theme 1 actions (Ecosystem Restoration) and actions to protect and enhance natural capital (Theme 2). There are specific actions that focus on marine environment and seascapes. The plan aims to support wild species diversity through a number of actions across thematic areas, which will support provisioning ecosystem services. The actions of the LBAP should have a particularly positive impact on cultural ecosystem services relevant to Landscape, with other related benefits for biodiversity and for human health and wellbeing.			
Does the Plan address identified pressures on these ecosystem services?	The plan includes actions to address identified pressures through support for ecological connectivity and habitat enhancement at a landscape scale, information gathering and monitoring and actions to tackle pressures such as invasive non-native species.			
How does the Plan perform against SEA objectives?	The proposed actions within the six LBAP thematic areas will address the outlined SEA objectives and sub-objectives for landscape.			

SEA Topic		**SEA Objectives**		
Population and Human Health		Support improvements in human health and community wellbeing • Safeguard the natural environment for the benefit of communities		
Topic-Linked ES	**ES Sub-Type**	**Effect**	**Discussion of Anticipated Effect of Thematic Actions on Topic-Linked ES**	
Regulating	**Noise**	✓	**Regulating Services**	
			Theme 1	Actions under Theme 1 include a commitment to assessing and developing an approach to offsetting development impacts for biodiversity net gain, with indirect benefits for human health and wellbeing, particularly in urban areas. It is considered reasonable to think that regulating ecosystem services such as noise, disease and pest and hazard regulation would indirectly benefit from this action and so, as a result, would the human population.
	Hazards	✓	Theme 2	Actions under Theme 2 relate to the hazard regulation of flooding, which would result in positive benefits for the local population in areas vulnerable to flooding, although there is a requirement for flood defence and mitigation measures to include hard engineering, in addition to the soft engineering of Natural Flood Management outlined in the LBAP actions.

			Theme 3	Development of business and biodiversity initiatives for green spaces and urban habitats is considered likely to have positive indirect impacts on regulating services, as would actions to enhance urban greenspace and communal land.
	Coastal defence	**0**	Theme 4	Citizen science projects to raise awareness of issues affecting biodiversity and ecosystems, such as INNS and the links with healthy ecosystems and well-functioning ecosystem services are predicted to have indirect positive benefits on services such as hazard regulation and INNS control.
			Theme 5	Actions aiming to reduce INNS will allow greater wild species diversity, adding to and enhancing landscapes that are found to be beneficial for human wellbeing – not just in the terrestrial environment, but also in the marine environment. Since some of the INNS include those harmful to human health (e.g. Giant Hogweed), actions to control them will directly benefit the human population. It should be noted that actions to improve green networks may result in greater ability of species to spread. However, where INNS are capable of being controlled by human management, the LBAP will promote robust action to prevent their spread.
	Disease & pest (INNS)	✓	Theme 6	Actions aiming to reduce INNS in the marine environment will also enhance seascapes, with benefits for human wellbeing. There are no specific actions focussed on coastal defence within the plan, although indirectly, other actions within the plan may support coastal defence in vulnerable areas, also increasing the overall resilience of ecosystems to climate change effects. However, it is not considered that there would be any negative, or significantly negative effect on this regulating service. Other PPS will be better placed to deal with coastal defence regulating systems, e.g. Scottish Borders Council Shoreline Management Plans and Local Development Plan.
Cultural	**Health benefits**	✓✓	**Cultural Services**	
			Theme 1	It is considered that ecological network enhancements through ecosystem restoration are likely to have indirect positive benefits for cultural ecosystem services, particularly sense of place, aesthetic value and health benefits.
	Education	✓	Theme 2	Likewise actions under Theme 2 focus on enhancements to natural capital, and it is reasonable to consider that such actions would indirectly benefit cultural ecosystem services.
			Theme 3	There are focussed and dedicated actions under Theme 3 to improve health and wellbeing, to add to a sense of the Scottish Borders spirit of place, through promotion of green networks, green space enhancement, active travel across the landscape, and sustainable management, increased SUDS potential for biodiversity and supporting business initiatives to enhance biodiversity. These actions are likely to have positive impacts on the urban environment, with beneficial impacts on the aesthetic values of town environments, and ensuing health benefits in terms of mental and physical wellbeing as well as positive impacts in terms of the local economy. Actions under Theme 3 also encourage exploration of links between recreation, learning and greenspace.
	Sense of place	✓✓	Theme 4	Under Theme 4, it is reasonable to assume that the support for protected areas, wild species diversity and important habitats will help in enhancing cultural ecosystem services, such as through protection of charismatic species that arouse people's interest in nature, and through encouragement of citizen science projects to record biodiversity, raising interest and awareness about nature on people's doorsteps.

	Aesthetic values	✓✓	Theme 5	Actions to improve land and freshwater management are likely to indirectly benefit cultural ecosystem services, by improving the health of the ecological network at a landscape scale.
			Theme 6	Across the wider landscape, including marine (Theme 6) actions include increasing education and interest in biodiversity, particularly through citizen science biological monitoring projects, which it is reasonable to consider would have benefits to the population, through spending more time out of doors, and learning and experiencing nature. This also taps into the educational services that time learning about nature can offer, with positive benefits for increasing learning and knowledge, in this area

Overview Commentary			
	Significant Negative Environmental Effects?	**Significant Positive Environmental Effects?**	**Health Benefits Sense of Place Aesthetic Values**
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?	It is considered that overall the LBAP actions will result in significant positive effects on cultural ecosystem services, with positive benefits, or, at least, neutral effects, on regulating ecosystem services. By protecting and enhancing biodiversity and supporting ecosystems the LBAP will have a positive impact on the landscapes in which people enjoy living, and will encourage cultural services like promotion of health benefits, by encouraging active interest in nature. Together with enhancement of green spaces through dedicated walks and promotion of green networks and paths, such actions may have resultant benefits for special landscapes, and potentially positive impacts on the local economy through increasing tourism or food and drink industry sales. These actions may assist in increasing a positive sense of place in the special character of the Scottish Borders amongst the local population as well as having benefits for the economy.		
Does the Plan address identified pressures on these ecosystem services?	Actions directly address pressures on cultural ecosystem services, such as improving aesthetics and combating health issues, as well as seeking to remove disconnects between people's lives and their experiences of nature. Actions encourage people to be active in nature, to learn about biodiversity, to enhance landscapes, to support a greener urban environment, with attention to decreasing pressures from development, balancing development pressures with biodiversity considerations. As well as the benefits of the LBAP actions resulting from their undertaking, the LBAP seeks to actively raise awareness of the benefits of well-functioning ecosystem services, particularly in terms of cultural ecosystem services, and conversely, to draw attention to the impacts and pressures that result when humans live detached from nature and ecosystems are degraded.		
How does the Plan perform against SEA objectives?	It is considered that the plan meets the SEA objectives fully, since its overarching aim is to protect biodiversity through specific actions, that will also have a benefit for the human population and wellbeing and communities. Where Scottish Borders Council is a lead partner for actions, the Council will seek to work collaboratively, including with communities' department, in the delivery of actions that benefit the human population and health and wellbeing.		

SEA Topic		Objectives		
Climatic Factors		Support reduction of greenhouse gas emissions and promote climate change adaptation • Contribute to the mitigation of and adaptation to climate change • Assist with less greenhouse gas emissions being released into the atmosphere		
Topic-Linked ES	**ES Sub-Type**	**Effect**	**Discussion of Anticipated Effect of Thematic Actions on Topic-Linked ES**	
Regulating	**Hazard**	✓✓	**Regulating Services**	
			Theme 1	LBAP actions include approaches to improve ecosystem health under Theme 1 by reducing pressures, improving connectivity and managing habitat declines. Improving ecosystem health through restoration of ecosystems will support regulating services in general with clear links to services such as climate regulation.
			Theme 2	In some areas of the Scottish Borders, improvements to ecosystem health and investment in natural capital, such as peatland and woodland ecosystems, will benefit services in terms of reducing flood risk, increasing carbon sinks and erosion control, resulting in less release of greenhouse gases into the atmosphere.
	Climate	✓✓	Theme 3	Actions under Theme 3 include promotion of active travel and raising awareness of the benefits of being in nature, which may have a resultant impact on reduced car use, with reduced greenhouse gas emissions ensuing.
			Theme 4	Actions to enhance Local Biodiversity Sites across the region may have indirect positive benefits for climatic factors, increasing the overall health of ecosystems across the Scottish Borders. In addition, actions for species will consider the likelihood of northern shifts in species' ranges, in response to climate change.
	Carbon storage	✓✓	Theme 5	Theme 5 promotes improved land and freshwater management to support a robust ecological network with improved resilience to climate change.
			Theme 6	Action to support the marine environment and to raise awareness of supporting the health of marine biodiversity will indirectly benefit regulating services such as climate regulation and carbon storage.

Overview Commentary				
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?	**Significant Negative Environmental Effects?**	None predicted.	**Significant Positive Environmental Effects?**	**Hazard** **Climate** **Carbon Storage**
	It is felt that overall the LBAP actions can be reasonably considered to be capable of having an overall positive effect on regulating services in relation to climatic factors. In terms of flood risk hazard regulation, as aforementioned, natural flood management (NFM) techniques are only part of the picture, alongside hard engineering. However, the longer-term benefits of using such techniques may be more beneficial in terms of cost, compared to expensive hard engineering, with longer term benefits for climate regulation and carbon storage. In order to have a significant effect, a large investment in NFM would need to be made, which may be beyond the scope of the LBAP. Similarly, with peatland restoration, woodland ecosystem enhancement, large-scale action is required. Actions under Theme 5 include a substantial woodland regeneration project and the positive benefits of targeting action across the landscape, making use of the LUS Pilot maps to coordinate action could have a significant			

	positive effect on regulating services overall, across the Scottish Borders
Does the Plan address identified pressures on these ecosystem services?	The Plan actively seeks to reduces pressures on regulating services in relation to climatic factors, through support for flood risk management, reduction of greenhouse gases and storage of carbon, locking this up in peatlands and woodland ecosystems. These actions should more broadly support provisioning and cultural services to better withstand pressures linked to climate change.
How does the Plan perform against SEA objectives?	The LBAP supports reduction of greenhouse gas emissions and promotes the importance of actions that will assist in climate change adaptation, therefore it meets these objectives.

SEA Topic		**Objectives**		
Material Assets		Encourage adequate protection and sustainable use of material assets • Protect and enhance natural assets of economic and recreational value, including tourism, food and drink • Support Core Paths and green networks by supporting bid for a new Tweed walk • Maintain consideration of Zero Waste Plan objectives in the delivery of all actions		
Topic-Linked ES	**ES Sub-Type**	**Effect**	**Discussion of Anticipated Effect of Thematic Actions on Topic-Linked ES**	
Regulating	**Pollination**	✓✓	**Regulating Services**	
			Theme 1	Improving ecosystem health will support regulating services in general, such as actions outlined under Theme 1 (ecosystem restoration) and under Theme 4, which aims to promote and enhance biodiversity of wild species in general.
			Theme 2	The LBAP includes specific actions aimed at enhancing pollination regulating services under Theme 2 through habitat improvements, targeted with the aid of the LUS Pilot mapping tools.
			Theme 3	As above, direct actions to enhance pollinator services are also included under Theme 3.
			Theme 4	Enhancements for wildlife such as Northern Brown Argus and identification and adoption of Local Biodiversity Sites under Theme 4 are likely to have positive impacts on pollination regulating services.
			Theme 5	There are no specific actions for pollinators under Theme 5, however land management actions will include enhancements to farmland habitats, urban habitats and will indirectly benefit pollination services.
			Theme 6	Actions for pollinators are not relevant to the marine environment, but enhancements to coastal ecosystems e.g. in relation to management for butterflies will have beneficial impacts for pollination regulating services.
Provisioning	**Food (crops, livestock, wild fish, game)**	✓	**Provisioning Services**	
			Theme 1	Actions to restore ecosystems under Theme 1 may have indirect positive impacts on food such as fish, game and livestock and arable crops. Stronger and more coherent ecosystems will

				support land uses that seek to harness provisioning services in a more sustainable fashion and therefore are considered likely to support the provisioning services identified in this assessment.
	Fibre (crops, trees, wool)	✓	Theme 2	Actions under Theme 2 to enhance natural capital may have indirect positive impacts on food such as fish, game and livestock and arable crops. It is considered that there would be neutral benefits on timber, as actions seek to promote strategic native woodland creation over the longer term, for the benefit of biodiversity.
			Theme 3	The provisioning services may not be supported in a commercial sense directly as a result of LBAP actions being implemented
	Timber	**0**	Theme 4	There is potential for tension between actions to protect and enhance biodiversity and provisioning services particularly for food, fibre and timber. Actions for biodiversity will be considered against the information contained within the LUS Pilot maps, in order to ensure multiple benefits are maximised whilst maintaining awareness of and reducing potential tensions.
	Fuel	**0**	Theme 5	Actions to improve land and freshwater management may have indirect positive effects on production of food, fibre and timber. The actions outlined in the LBAP are designed to be collaborative, bearing in mind the lessons of the LUS Pilot in terms of optimising land use as well as enhancing biodiversity, in order to minimise tensions between productive land use and biodiversity protection and enhancement. Therefore, it is reasonable to consider that there may be indirect positive benefits on provisioning services through these actions.
	Pharmaceuticals	**0**	Theme 6	Actions to enhance and marine and coastal ecosystems, through promoting healthy seas, may have indirect positive impacts on food production services, e.g. wild fish.
Cultural	**Employment**	✓	**Cultural Services**	
			Theme 1	Actions linked to ecosystem restoration aim to promote ecosystem health, with potential indirect benefits for employment sectors such as food and drink, tourism and provisioning services, though a healthy well-functioning ecosystems that add to the high quality natural environment of the region, as an attraction to tourists and visitors.
			Theme 2	It is possible that some of the actions within the LBAP, resources permitting, may directly relate to employment opportunities, for example in relation to projects to create new woodland across the region.
			Theme 3	Actions to establish a new walking route along the River Tweed, with the related promotional tasks and publicity that such an enterprise may involve, have potential for indirect positive benefits to employment in food and drink and tourism sectors.
			Theme 4	Actions to support wildlife may in some cases result in direct employment opportunities if posts are required and funded for their delivery. However, it is considered that indirect benefits are most likely, for the food and drink and tourism services, and in provisioning service production areas, through contributions of actions under this theme to protect and enhance biodiversity and ecosystem health.
			Theme 5	No direct benefits for cultural services in terms of employment are predicted through the implementation of actions under Theme 5, however promotion of land use that supports ecosystems holistically will contribute to ecosystem health, with benefits for provisioning services and ensuing indirect benefits for those working in their production.

			Theme 6	Whilst no direct benefits for cultural services in terms of employment are predicted through the implementation of actions under Theme 6, the promotion of healthy seas may have an indirect benefit on industries such as food and drink and recreation/tourism in a marine context.

Overview Commentary			
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?	**Significant Negative Environmental Effects?**	None predicted.	**Significant Positive Environmental Effects?** **Pollination**
	It is considered that there will be significant positive effects on pollination services, through the direct action as outlined in the LBAP. It is considered that there will be other positive effects on provisioning and cultural services, but these are likely to be less significant, as they are more indirectly enhanced by LBAP actions. Neutral effects are predicted on pharmaceuticals, fuel and timber provisioning services.		
Does the Plan address identified pressures on these ecosystem services?	The positive benefits of the LBAP on regulating, provisioning and cultural services will help to address pressures on reduction in pollinator habitat and encourage land use techniques that support biodiversity, as well as reduce pollution. The LBAP actions consider that support for provisioning services, is important not only for a high quality natural environment, but also for regional prosperity. In some ways, provisioning services in the commercial sense will not be directly supported, however the LBAP actions support sustainability of provisioning services, through healthy ecosystems, which will have beneficial impacts for the local economy.		
How does the Plan perform against SEA objectives?	The LBAP, in supporting the protection and enhancement of biodiversity and ecosystem services across the Scottish Borders, is directly aiming to protect and enhance natural assets of economic and recreational value, including tourism, food and drink, and in addition to support core paths, green networks and walks – with additional multiple benefits relating to improved habitats and enhancement of regulating services. It is considered that the LBAP meets all the outlined objectives in relation to this Topic. The LBAP includes actions that may indirectly lead to positive benefits for the employment sector, for example in relation to land management for food or timber production, or in relation to tourism. Whilst there may be some linked benefits for employment through the LBAP actions linked to the protection and enhancement of biodiversity and ecosystem services, it is considered that the scale and significance of this is likely to be low, in comparison to other opportunities linked, for example, to farming or forestry.		

SEA Topic		SEA Objectives	
Cultural Heritage		Help protect the character, quality and diversity of the Scottish Borders' landscape • Promote visits to enjoy cultural as well as natural heritage assets of the Scottish Borders	
Topic-Linked ES	**ES Sub-Type**	**Effect**	**Discussion of Anticipated Effect of Thematic Actions on Topic-Linked ES**
Cultural	**Sense of**	✓✓	**Cultural Services**

	place		Theme 1	LBAP actions under Theme 1 that promote healthy and connected ecosystems might reasonably be considered to have the potential to improve sense of place and aesthetic value services.
			Theme 2	The plan does not include specific references to cultural service benefits under Theme 2, which deals with enhancement of natural capital, however it is recognised that there are indirect benefits for cultural services through appreciation of a healthy and vibrant natural environment, which the LBAP seeks to support.
	Aesthetic values	✓✓	Theme 3	Under Theme 3, there are actions that encourage exploration of links between recreation, learning and greenspace, and the expansion on the Historic Land Use Value Project will explore links with greenspace and historic/contemporary land use to support health and wellbeing. Other actions such as adding to the community woodland and urban tree resource will link to improving and enhancing countryside around towns, with not just health benefits, but potentially benefits for the local economy, in terms of increasing the attractiveness and aesthetic value of the area for visitors and tourists.
			Theme 4	The Scottish Borders features notable species that are iconic to Scotland and important as charismatic species that people actively wish to protect, such as bird species and mammals. Whilst there are other less-known, but equally important species that the LBAP will seek to protect and support, the actions under Theme 4 to conserve wild species diversity and protect special and designated sites. The opportunity to be in nature and observe charismatic species benefits a sense of place and aesthetic value.
	Cultural heritage	✓✓	Theme 5	Theme 5 actions will assist in enhancing ecosystems at a landscape scale, indirectly benefiting cultural ecosystem services.
			Theme 6	Theme 6, relating to enhancement of the marine environment is likely to have positive benefits in relation to aesthetic value, sense of place, and cultural heritage, although these are not direct objectives for the Theme.

Overview Commentary			
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?	**Significant Negative Environmental Effect?**	None predicted.	**Significant Positive Environmental Effect?** **Sense of place** **Aesthetic values** **Cultural heritage**
	The LBAP is likely to have a significantly positive effect on cultural ecosystem services such as cultural heritage, aesthetic values and a sense of place, aiming to reconnect with nature and the land, improving understanding that will lead to greater appreciation of the complexity of our environment, ecosystems and the services they provide, and the importance of protecting and enhancing the biodiversity of the Scottish Borders, which also has benefits for the population through enhanced cultural ecosystem services. The assessment of impacts on cultural services is difficult since these are subjective concepts; however, there is scientific research that experience of nature can lead to health benefits in terms of mental health wellbeing, which can only be enhanced by people having a positive sense of place, a feeling of belonging and of being in touch with their cultural heritage, and an appreciation of the aesthetic value of the landscapes. The evidence from research undertaken by Scottish Borders Council in relation to why people		

	enjoy living in the Borders, suggests that a high quality natural environment and the history of the place are key factors – both of which LBAP actions will directly seek to enhance
Does the Plan address identified pressures on these ecosystem services?	Some of the pressures on cultural ecosystem services relate to the fact that they are difficult to quantify via financial metrics, therefore their validity and importance may be overlooked in terms of beneficial impacts on people and nature. The LBAP aims to highlight the links between health, recreation, greenspace, nature, ecosystems and cultural services, and in other areas, will seek to support actions that reduce pressures on cultural ecosystem services (for example through advice on biodiversity in relation to development planning, and through supporting sensitive and sustainable land management, for benefits to landscapes and nature).
How does the Plan perform against SEA objectives?	The LBAP actively seeks to help protect the character, quality and diversity of the Scottish Borders' landscape through its actions, linking this to appreciation of biodiversity and beneficial ecosystem services. It includes actions dedicated to the encouragement of an appreciation of cultural heritage, set in the context of greenspace and nature, which invites residents and visitors to consider the region at a landscape scale, and in the context of vital ecosystem services that are a part of the distinctive cultural heritage of the Scottish Borders.

SEA Topic		**SEA Objectives**		
Air		Help protect current air quality • Increase woodland creation to support high quality air in the Scottish Borders • Promote health and wellbeing benefits of biodiversity and encourage more walking and cycling		
Topic-Linked ES	**ES Sub-Type**	**Effect**	**Discussion of Anticipated Effect of Thematic Actions on Topic-Linked ES**	
Regulating	**Hazard**	✓	**Regulating Services**	
			Theme 1	Actions under Theme 1 includes the restoration of woodland ecosystems, including approaches to resting woodland in montane habitats and in riparian habitats, with indirect benefits for air quality as well as hazard regulation.
			Theme 2	The actions under Theme 2 of natural capital enhancements, encourage land managers and farmers to manage in ways that optimise ecosystems and the beneficial services they provide, with consideration of opportunities to have a positive impact on hazards such as flooding, as well as to reduce soil erosion and increase carbon capture, which may also have indirect benefits for the quality of our air.
			Theme 3	Actions under Theme 3 seek to encourage more active modes of transport and reduce reliance on private car journeys, and to promote awareness of the global footprint network to help encourage individual action that may help reduce impacts on our air quality
	Air quality	✓	Theme 4	Indirectly, Theme 4 actions will support and benefit regulating services, through actions which promote wildlife and habitat diversity and a healthy well-functioning ecological network.
			Theme 5	Under Theme 5, there are further actions to encourage native woodland creation. Planting of trees can be beneficial for improving air quality through removal of pollutants from the soil and in the air, and may contribute to carbon capture assets
			Theme 6	Theme 6 actions are not considered to have a direct link to regulating services linked to air.

Cultural	**Health benefits**	✓✓	**Cultural Services**	
			Theme 1	As above, restoration of ecosystems to support ecosystem health will have indirect benefits for human health, for example via woodland creation resulting in benefits to air quality.
			Theme 2	As above, enhancements of natural capital may lead to indirect human health benefits through enhancement of regulating services.
			Theme 3	Leading people to take responsibility for undertaking more active travel as outlined under regulating services will also have added health benefits. Actions under Theme 3 seek to encourage more active modes of transport and reduce reliance on private car journeys, and to promote awareness of the global footprint network to help encourage individual action that may help reduce impacts on our air quality, by leading people to take responsibility for undertaking more active travel. It is considered that the LBAP is one plan amongst other PPS (e.g. Local Development Plan) that can support improved air quality across the Scottish Borders and have a positive impact on reduced greenhouse gas emissions.
			Theme 4	There may be indirect benefits for health in relation to air through actions that seek to enhance a range of habitats such as Local Biodiversity Sites, and dissemination of good practice and news that raises awareness of the importance of healthy ecosystems for air quality – and human health.
			Theme 5	Woodland creation projects may result in indirect benefits for human health related to air quality.
			Theme 6	Theme 6 actions are not considered to have a direct link to cultural services linked to air

Overview Commentary				
What significant effects will this Plan have on the identified ecosystem services in the Scottish Borders?	**Significant Negative Environmental Effects**	None predicted.	**Significant Positive Environmental Effects**	**Health benefits**
	It is considered that the LBAP actions will lead to positive effects on air quality and hazard regulation, however it is not considered that these may be significant, as concerted effort is needed across the region to fully address issues around air quality and regulation of hazards that put pressure on our air quality. However, it is considered that the plan offers the opportunity for significant positive effects on health benefits and cultural ecosystem services, through promotion of activity in nature that will benefit wellbeing.			
Does the Plan address identified pressures on these ecosystem services?	Pressures include impacts from traffic emissions. In the Scottish Borders, traffic volumes are increasing, therefore this plan directly attempts to address these pressures through promotion of active travel, with a focus on promoting reduced car use and more cycling and walking, as well as actions that include strategic woodland creation, with multiple benefits as a result of strengthened ecosystems, including support for ecosystem services that help to regulate air quality.			
How does the Plan perform against SEA objectives?	It is considered that the LBAP meets the objectives and sub-objectives for this topic, including increase in woodland creation that will support quality air across the region, and promotion of the health and wellbeing benefits of being active in nature, gaining appreciation of biodiversity and the ecosystems that both support our wellbeing and can be supported by our lifestyle choices, helping to improve our environment.			

OVERALL PREDICTED EFFECTS OF PREFERRED OPTION ON ECOSYSTEM SERVICES WITHIN THE SCOTTISH BORDERS										
Ecosystem Service: Supporting										
Nutrient Cycling		**Primary Production**		**Water Cycling**		**Soil Formation**				
✓		✓		✓		✓				
Ecosystem Service: Regulating										
Hazard	**Air Quality**	**Pollination**	**Climate**	**Carbon Storage**	**Noise**	**Coastal Defence**	**Pollution**	**Water**	**Soil Quality**	**Disease & Pest (INNS)**
✓	✓	✓✓	✓✓	✓✓	✓	0	✓✓	✓✓	✓✓	✓✓
Ecosystem Service: Provisioning										
Wildlife Diversity	**Trees, Vegetation, Peat**	**Fresh Water Supply**	**Food**	**Timber**	**Fibre**	**Fuel**	**Pharmaceuticals**			
✓✓	✓✓	✓	✓	0	✓	0	0			
Ecosystem Service: Cultural										
Sense of Place	**Health Benefits**	**Aesthetic Value**	**Cultural Heritage**	**Employment**	**Education**					
✓✓	✓✓	✓✓	✓✓	✓	✓					

Mitigation Required	Enhancement Opportunities
• Care will be taken to encourage responsible access to the countryside to avoid increased visitor impacts in terms of recreational disturbance, erosion or other impacts on ecosystem services, through awareness raising as well as promotion of health benefits. • Potential tensions between farmland restoration and other provisioning services will be resolved through application of information gathered during the LUS Pilot mapping process, which identifies areas of mutual benefit for land use and seeks to avoid negative impacts, or seek to reduce their impact.	• Consider whether to include actions that may directly or indirectly support coastal erosion prevention under Theme 6 • Consider potential actions to enhance carbon storage potential in the marine environment

Appendix E: Important Habitats of the Scottish Borders

This appendix summarises information from existing Habitat Action Plans (HAPs) for priority habitats in the Scottish Borders. It is updated with details of the Scottish Biodiversity List species present in each habitat, and with land cover estimates from the Tweed Aerial Survey Phase 2[i]. Land cover totals include habitats that were mapped as part of the aerial survey, but not originally included in HAPs (e.g. Gorse Scrub under Grassland/Enclosed Farmland). The new LBAP adopts an ecosystems approach and aims to deliver action at a landscape scale; therefore, all habitats in the Scottish Borders have been considered during action planning for biodiversity.
The original HAPs continue to provide useful background information and can be downloaded at:
https://www.scotborders.gov.uk/downloads/download/423/habitat_action_plans.

***NVC – National Vegetation Classification** **Species on Scottish Biodiversity List**

WETLAND HABITATS

Fens, marsh, swamp & reedbed (Including Flush & Lowland Fen) **(17582ha / 4.73% of Scottish Borders Land Cover)[10]**

- These habitats include vegetation that is ground water fed, and occur on permanently, seasonally or periodically waterlogged peat, peaty or mineral soils where grasses do not predominate.
- They also include emergent vegetation or frequently inundated vegetation occurring over peat or mineral soils

Associated NVC* Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
M25 *Molinia caerula-Potentilla erecta*mire S4 *Phragmites australis* swamp and reedbeds S9 *Carex 116quatic116* swamp W1 *Salix cinerea-Galium palustre* woodland Other fen, marsh, swamp and reedbed NVC Communities found in Scottish Borders include: M4, M6, M7, M8, M9, M10, M13, M23, M26, M27, M32, S3, S5, S7, S8, S10, S11, S25, S26, S27, S28, W2, W3, W4, W5	**Mammals:** Otter *Lutra lutra* **Birds:** Reed bunting *Emberiza schoeniclus;* Grasshopper warbler *Locustella naevia* **Invertebrates:** a reed beetle *Donacia aquatic*, and a large number of red data and nationally notable beetles Cranefly, hoverfly and moths **Plants:** Greater tussock sedge *Carex paniculata;* Alpine rush *Juncus alpinus;* Tall bog sedge *Carex magellanica;* Cowbane *Cicuta virosa;* Coralroot orchid *Corallorhiza trifida;* Holygrass *Hierochloe odorata;* Narrow small reed *Calamagrostis stricta*	• Drainage • Nutrient enrichment & diffuse pollution Inappropriate or lack of management • Habitat loss and fragmentation • Grazing and poaching • Natural succession

Blanket Bog **(25393ha / 5.36% of Scottish Borders Land Cover)[i]**

- Blanket bog applies only to that portion of a blanket 'mire' which is exclusively rain-fed, mainly the watershed summits of upland areas. However, these areas are generally part of a landscape scale complex of peat-based habitat types (blanket mire) fed also by ground waters.
- Areas of blanket bog supporting semi-natural blanket bog vegetation, may be defined as 'active' i.e. still peat forming or exclusively rain-fed.
- Blanket bog occurs over 23% of the land area in Scotland, which represents a significant amount of the European and world resource.
- In addition to supporting biodiversity peatland and blanket bogs perform vital roles within our environment, include flood management, carbon storage, and water supply.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures

[10] Scottish Borders Council & Tweed Forum Consortium (2010) *Tweed Aerial Survey Phase 2: Aerial Photography Interpretation Land Cover Classification & Habitat Mapping.* Produced by Environment Systems.

M18 *Erica tetralix-Sphagnum papillosum* raised and blanket mire M19 *Calluna vulgaris-Eriophorum vaginatum* mire M20 *Eriophorum* mire M25 *Molinia caerulea-Potentilla erecta* mire	**Birds:** **Golden plover *Pluvilais apricaria;* Dunlin *Calidris alpine*** **Plants:** Golden bog-moss *Sphagnum pulchrum;* Rugged collar-moss *Sphagnum vasculosum;* Bog bilberry *Vaccinum uliginosum;* Cloudberry *Rubus chamaemorus;* Slender Green Feather Moss *Hamatocaulis vernicosus* **Invertebrates:** A ground beetle *Carabus nitens;* Marsh oblique-barred *Hypenodes humidialis;* **Swamp lookout spider *Notioscopus sarcinatus***	• Overgrazing • Fragmentation/isolation • Afforestation • Inappropriate burning • Drainage • Erosion • Recreation • Wind farms • Access tracks • Climate change • Peat cutting

Lowland Raised Bog (409ha / 0.09% of Scottish Borders Land Cover)[i]

- These habitats are typically isolated domes of peat in an otherwise non-peat landscape.
- Lowland Raised Bogs occur below an altitude of 300 metres. This differentiates them from blanket bog, which occurs in the uplands.
- Bogs that share characteristics of raised and blanket bogs do occur in the uplands and are termed "intermediate" bogs. They are considered within the blanket bog habitat type.
- The surface of a "natural" lowland raised bog is waterlogged, acidic and low in plant nutrients. This supports a range of specialised plant assemblages dominated by mosses of the genus *Sphagnum* that are able to store large amounts of water. The surface of a healthy bog is a mosaic of pools, hummocks and Sphagnum 'lawns'.
- The wet and acidic conditions slow down the decomposition process and allows peat to accumulate. When a raised bog functions naturally it accumulates peat and is said to be active. If undamaged, it is described as unmodified. If damage has stopped the bog functioning naturally it is said to be inactive and modified.
- Around 94% of the raised bogs in Britain have been destroyed since the beginning of the 19th century. Of those remaining only a small percentage are active and unmodified
- The main threats to the remaining lowland raised bogs in Scottish Borders are internal and peripheral drainage and tree colonisation.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
M1 *Sphagnum auriculatum* M2 *Sphagnum cuspidatum / recurvum* M3 *Eriophorum angustifolium* (Bog pool communities) M18 *Erica tetralix – Sphagnum papillosum* raised and blanket mire.	**Fungi:** **A lichen *Absconditella sphagnorum;*** **Plants:** Slender cow-horn bog moss *Sphagnum subsecundum;* Coralroot orchid *Corallorhiza trifida;* Cranberry *Vaccinium oxycoccos;* **Invertebrates:** **A water-beetle *Cyphon kongsbergensis*; Dark-bordered beauty *Epione vespertaria*; Large Heath Butterfly *Coenonympha tullia*** **Reptiles:** **Adder *Vipera berus***	• Landfill development that utilises bogs where peat extraction has occurred • Afforestation and associated drainage • Drainage for agriculture and water abstraction • Air pollution • Nutrient enrichment from catchment, livestock and game management (draingage, trampling, burning and enrichment from feed/droppings) • Land reclamation for development • Climate Change

Standing Open Water (1576ha / 0.34% of Scottish Borders Land Cover)[i]

- This habitat type includes natural systems and man-made waters such as reservoirs, canals, ponds and gravel pits. It includes the open water zone which may contain submerged, free floating or floating-leaved vegetation, and water fringe vegetation. It also includes adjacent wetland habitats with contiguous water levels that are

less than 0.25ha.

- Ponds are defined as standing open water bodies of <2ha size.
- Ditches with open water for at least the majority of the year should also be included in this type.
- Small areas of open water in a predominantly terrestrial habitat such as bog pools or temporary pools on heaths should be included in the appropriate terrestrial broad habitat type
- The Scottish Borders contains a wide variety of standing open waters from the large natural lochs and water supply reservoirs characteristic of the west and south of the area to the networks of small ponds and fishing pools scattered throughout the Borders region.
- These bodies of water have many uses ranging from fire ponds, cattle drinking, potable water, sailing, angling to aesthetic.
- Standing open water is a relatively rare habitat in the Scottish Borders, particularly in the eastern part of the region.
- Many of the larger bodies of water are either completely artificial or have been modified to allow control of water levels.
- Marl lochs are notable in the Scottish Borders, which are base rich through the gradual accumulation of minerals over a long period of time. These include a rare example of a deep, glacially excavated loch in the south of Scotland, and several glacially relict networks of ponds and small pools.
- The habitat is characterised by a large diversity of morphological and trophic types of standing open water, for example:
  - Eutrophic: *High levels of plant nutrients and turbidity caused by high plankton levels. Coarse fish are generally dominant. In a natural state high levels of biodiversity are supported. Often important wildfowl sites. (Scottish Borders examples include Yetholm Loch SSSI, Hoselaw Loch SSSI/RAMSAR, Coldingham Loch).*
  - Mesotrophic: *High biodiversity, characteristic ecology, intermediate nutrient status. Can become important marl lochs important in a local/national context, where geology provides a source of basic chemicals (e.g. lime). (Scottish Borders examples include Faldonside Loch, Megget and Talla reservoirs, Branxholme Easter and Wester Lochs, St Mary's Loch/Loch of the Lowes).*
  - Oligotrophic: *Low levels of plant nutrients, clear water, sparse plankton. Salmonid fish generally dominant. (Scottish Borders examples include Cauldshiels Loch, Portmore Loch, Stantling Craig reservoir)*
  - Dystrophic: *Highly acidic, brown-stained water due to peat drainage, low productivity. (In the Scottish Borders, includes Gameshope Loch)*

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
Not applicable	**Plants:** Several Stonewort species: *Chara spp.; Nitella spp.;* Clustered Stonewort *Tolypella glomerata* Several Pincerwort species: ***Cephalozia spp.*** **Fragile frillwort *Fossombronia fimbriata*** Slender Smoothcap *Atrichum tenellum* Several moss species: *Ephemerum serratum serratum; Cinclidium stygium; Pseudobryum cinclidioides; Drepanocladus vernicosus;* Northern Yellow-cress *Rorippa islandica sens. Str.* Cowbane *Cicuta virosa* Pondweed species: **Potamogeton spp.** **Amphibians:** *Rana temporaria;* ***Triturus cristatus****; Triturus vulgaris; Triturus helveticus; Bufo bufo* **Invertebrates:** including mud beetles, rove beetles, weevils, cranefly, hoverfly **Fish: Arctic Charr *Salvelinus alpinus*; Eel *Anguilla Anguilla*** **Birds: Slavonian grebe *Podiceps auritus;* Black-necked grebe *Podiceps nigricollis***	• Hydrological alteration • Diffuse pollution • Invasive Non-Native Species (INNS) • Introduced (native) fish • Climate change • Habitat fragmentation

Rivers and Burns **(1950ha / 0.42% of Scottish Borders Land Cover)**[i]

- Rivers and burns are by nature dynamic systems. Associated features include shingle beds and sand bars as well as marginal and bankside vegetation.

- The River Tweed is classed as a "Lowland Eutrophic" or nutrient rich river and is a rare example of this type. It shows the full characteristic range of flow patterns from relatively turbulent sections to more sluggish, meandering sections and reaches of alternating deep pools and shallow riffles. This, coupled with a range of water chemistry, offers a wide diversity of river habitats for wildlife.
- Under the Habitats Directive, the Tweed and a number of its tributaries have been designated a Special Area of Conservation (SAC) in recognition of their importance for Atlantic salmon, brook, river and sea lamprey, otter and water crowfoot (*Ranunculus*) populations.
- As a result of its distinctive water chemistry, the Tweed system is notable for its diversity of invertebrate species. A number of the invertebrate species found in the area are rare both in European and Scottish terms, For example, IUCN (World Conservation Union) red-list dipteran fly and beetle populations occur in exposed sediments throughout the catchment and in the upper catchment, the Northhope Burn supports a population of rare aquatic beetles.
- The distinctive water chemistry of the Tweed system also produces a range of plant communities different from that found in other larger rivers in Eastern Scotland and North eastern England. The area also represents the edge of UK distribution for a number of plants including species of Water Crowfoots and Horned Pond Weed.
- The Tweed system now represents approximately 15% of all the spawning water available to salmon in Scotland with the Ettrick Water being an important spawning area for spring salmon. The Eden in its upper reaches supports a naturally isolated trout population while in its lower reaches it has notable eel and lamprey populations.
- Otters have a healthy and expanding population on the lower and middle Tweed and their presence is the subject of ongoing research into their distribution and breeding habits

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
A17 *Ranunculus penicillatus spp. Pseudofluitans*	**Fungi:** **River Jelly Lichen *Collema dichotomum*; Ear-lobed Dog-lichen *Peltigera leucophlebia;*** Water Rock-bristle *Seligeria carniolica* **Plants:** **Yellowish Fork-moss *Dichodontium flavescens***; Beck Pocket-moss *Fissidens rufulus;* Short Pottia *Hennediella macrophylla;* **Water Grimmia *Schistidium agassizii;* Spruce's Bristle-moss *Orthotrichum sprucei;* Twist-tip Feather-moss *Eurhynchium schleicheri;*** Kelso Water-Crowfoot *Ranunculus x kelchoensis;* Globe-Flower *Trollius europaeus;* Great Water-Parsnip *Sium latifolium;* Lesser Water-Parsnip *Berula erecta;* Green Figwort *Scrophularia umbrosa;* Northern Spike-Rush *Eleocharis austriaca* **Fish:** **Sea Lamprey *Petromyzon marinus;* River Lamprey *Lampetra fluviatilis;* Brook Lamprey *Lampetra planeri;* Allis Shad *Alosa alosa;* Atlantic Salmon *Salmo salar;* Sea Trout *Salmo trutta;*** Grayling *Thymallus thymallus* **Birds**: Oystercatcher *Haematopus ostralegus;* Redshank *Tringa tetanus;* Kingfisher *Alcedo atthis;* Sand Martin *Riparia riparia;* Dipper *Cinclus cinclus;* Reed Bunting *Emberiza schoeniclus* **Mammals:** Water Vole *Arvicola terrestris*; **Otter *Lutra lutra;*** Daubenton's bat *Myotis daubentonii* **Invertebrates:** An extensive list, including important river and shingle beetles and flies, notable caddis fly / mayfly species.	• Diffuse pollution • Engineering and drainage operations • INNS • Climate change • Bankside management • Development • Abstraction • Genetic integrity

WOODLAND HABITATS

Productive Woodland (Including Coniferous & Broadleaved Plantation; Felled Woodland; Mixed Woodland) **(67530ha / 14.14% of Scottish Borders Land Cover)**[i]

- This type of woodland includes all coniferous stands where broadleaved trees make up less than 20% cover with the exception of yew woodlands.
- Areas of recently felled coniferous woodland are also included in this type, along with other integral features of woodland such as glades and rides.
- Coniferous woodland also includes shelter belts and small farm woodland plots. A large proportion of coniferous woodlands are located in the uplands in the south west of the Borders.
- The priority areas for red squirrel in Scottish Borders are all large scale coniferous plantations in the south-west of the region.

- Areas of important wetlands, grasslands and upland heath remain within some of the coniferous plantations.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
Not applicable	**Mammals:** **Red squirrel *Sciurus vulgaris*; Pine marten *Martes martes*** **Birds:** Goshawk *Accipiter gentilis;* Goldcrest *Regulus regulus;* **Tree pipit *Anthus trivialis*;** Redpoll *Carduelis flammea* **Plants:** **Twinflower *Linnaea borealis;* Creeping ladies tresses *Goodyera repens*** **Invertebrates:** Several nationally notable beetles; a red data pyralid moth; a nationally notable hoverfly; a money spider.	• Ongoing forestry management • Lack of investment • Siting of wind farms • Herbivore control (deer & grey squirrel) • Lack of certification / sustainable management in private forestry • Priority areas for red squirrel and control of greys • Management and ownership of FCS estate • Restoration of priority wetland habitats within forests • Management for black grouse • Restructuring • Grazing by goats

Native Woodland (including Native Wet Woodland) **(1111ha / 0.24% of Scottish Borders Land Cover)**[i]

- Native woodlands are defined as 'woodlands composed wholly or largely of the tree species which occur naturally in the Scottish Borders; including both woodlands with a continuous history of natural regeneration and those where either the current or a previous generation of trees has been planted within their natural range'.
- Throughout Great Britain there has been a gradual decline in the remaining native woodland, with a reduction of approximately 30 - 40% over the last 60 years. The issues causing decline are outlined below. Declines extend to ground flora and fauna, as well as the ability to regenerate young trees.
- The Scottish Borders possesses one of the lowest percentages of native woodland compared to total land area of any Scottish region. However, there are opportunities for improved management of the existing native woodlands, and for native woodland expansion.
- Native woodlands have been classified into several categories: Ancient Woodland (present on maps pre-1750); Long-established woodland (present on maps pre 1850); Semi-natural woodland (established through self-seeding).
- Semi-natural woodland in the Borders is sparse and totals approximately 6,790ha. Berwickshire contains the largest hectarage of ancient and semi-natural woodland with 298ha (0.4% of land area), Ettrick and Lauderdale contain 225ha (0.2% of land area), Roxburgh has 180ha (0.1%of land area) and Tweeddale has only 35ha (<0.1% of land area) (Walker & Badenoch 1988, 1989 and 1991).
- The Planted Ancient Woodland Site (PAWS) component consists of 0.3% (1,355ha) of the land area. The broader definition of the native woodland framework which includes ancient, long established and semi-natural and high native component of the Scottish Semi-Natural Woodland Inventory (SSNWI) covers 1.4% of the land area (6,790ha) (Ray et al. 2003).
- The Borders has many small remnant woodlands, many of which have been visited by woodland surveyors and a few of which are safeguarded by Scottish Natural Heritage as Sites of Special Scientific Interest (SSSI) and registered as Scottish Wildlife Trust Wildlife Sites.
- The UK Biodiversity Action Plan (UKBAP) details six different native woodland types as priority habitats, five of which are represented in the Borders. These are: upland oakwoods; upland ashwoods; wet woodlands; upland birchwoods; lowland mixed deciduous woodland.
- However, few remnants of Borders native woodland can be 'fitted' in to a particular native woodland type; either because the woodlands have been heavily grazed and only the tree species remain, or because remnant ground flora remains beneath an overstorey of trees containing non-native species, such as beech and sycamore.
- Much of the native woodland of the Borders woodland is characterised by its small size and fragmented nature, with few significant ancient semi-natural woodlands

and with large distances between the woodland fragments. The majority of these woodlands are long and thin, and as a result of exposure to the influence of 'drying' winds, are not as humid and shady as less linear native woodlands. This lack of woodland conditions e.g. humidity and shade, means that the range of woodland plant and animal diversity in many Borders native woods is low.

- Although scattered, small and often poor in numbers of plants and animals, native woodlands in the Borders are significant in nature conservation value. The most apparent features of this conservation value can often be seen in the ground flora.
- Some of our native woods are rich in dead wood and associated fauna and flora - a few are known to have internationally important populations of fungi and invertebrates that make a living from feeding on dead wood.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
W7 *Alnus glutinosa- Fraxinus excelsior- Lysimachia nemorum,* W9 *Fraxinus excelsior – Sorbus aucuparia- Oxalis acetosella* woodland W11 *Quercus petraea – Betula pubescens- Oxalis acetosella*	**Lichens:** a lichen *Cyphelium inquinans* **Bryophytes:** **Fragile frillwort *Fossombronia fimbriata*** **Plants:** Ash *Fraxinus excelsior;* Hard Shield Fern *Polystichum aculeatum;* Yellow Star-of-Bethlehem *Gagea lutea;* Rock Whitebeam *Sorbus rupicola;* Lesser Hairy-brome *Bromopsis benekenii;* Sessile oak *Quercus petraea;* Common cow-wheat *Melampyrum pratense;* Common figwort *Scrophularia nodosa;* False brome *Brachypodium sylvaticum;* Alder *Alnus glutinosa;* Bay willow *Salix pentandra;* Wood stitchwort *Stellaria nemorum;* Coral-root Orchid *Corallorhiza trifida;* Greater Tussock-sedge *Carex paniculata*; **Chickweed wintergreen *Urocystis trientalis;*** Green figwort *Scrophularia umbrosa;* Herb Paris *Paris quadrifolia;* **Juniper *Juniperus communis;* Twinflower *Linnaea borealis***; Tea-leaved willow *Salix phylicifolia;* Downy birch *Betula pubescens;* Silver birch *Betula pendula;* Rowan *Sorbus aucuparia;* Wood anemone *anemone nemorosa;* Slender St John's-wort *Hypericum pulchrum;* Greater stitchwort *Stellaria holostea;* Pendunculate oak *Quercus robur;* Primrose *Primula vulgaris;* Tufted hair-grass *Seschampsia cespitosa;* Wavy hair-grass *Deschampsia flexuosa* **Mammals:** **Invertebrates:** **Dark bordered beauty *Epione paralellaria;*** a sawfly *Nematus monticola* **Birds:** Redstart *Phoenicurus phoenicurus; Pied flycatcher Ficedula hypoleuca* **Black grouse *Tetrao tetrix***; Jay *Garrullus glandarius;* **Wood warbler *Phylloscopus sibilatrix;* Spotted flycatcher *Muscicapa striata;* Tree sparrow *Passer montanus;* Bullfinch *Pyrrhula pyrrhula;* Kingfisher *Alcedo atthis***; **Willow Tit *Poecile montanus;*** Redpoll *Carduelis flammea*	• Historical loss of woodlands • Loss of traditional management • "Coniferisation" • Overgrazing • Inappropriate burning • Agricultural intensification • Habitat fragmentation • Invasive non-native species • Climate change

Upland Cleuch and Scrub Woodland (126ha / 0.03% of Scottish Borders Land Cover)[i]

- This habitat includes juniper scrub, upland montane dwarf-shrub communities (Krummholz) and upland birchwoods.
- This latter community may be dominated by stands of downy birch, and/or silver birch with consitutents such as rowan, willow, juniper and aspen.
- On more acidic soils, rowan is a prominent component. It includes areas of hill marginal ground containing hawthorn, blackthorn or gorse stands.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures

W7 *Alnus glutinosa-Fraxinus excelsior-Lysimachia* woodland W9 *Fraxinus excelsior-Sorbus aucuparia-Mercurialis perennis* woodland W11 *Quercus petraea-Betula pubescens-Oxalis acetosella* woodland W17 *Quercus petraea-Betula pubescens-Dicranum majus* woodland W19 *Juniperus communis-Oxalis acetosella* woodland W20 *Salix lapponum-Luzula sylvatica* scrub W23 *Ulex europeaus-Rubus fruticosus* scrub	**Birds:** **Ring ouzel *Turdus torquatus*** **Plants:** **Juniper *Juniperus communis;*** a lady's mantle *Alchemilla wichurae;* Globeflower *Trollius europaeus;* Pale forget-me-not *Mysotis brevifolia;* **Chickweed wintergreen *Urocystis trientalis*;** Mountain melic *Melica nutans;* Green spleenwort *Asplenium viridis;* Hairy stonecrop *sedum villosum;* Wilson's filmy-fern *Hymenophyllum wilsonii*; Saxifrages; nationally scarce mosses	• Over/undergrazing • Scrub clearance • Excessive burning • Inappropriate planting including afforestation • Lack of information • Illegal collecting of rare plants • Inappropriate bracken spraying

Wood Pasture and Parkland **(1812ha / 0.39% of Scottish Borders Land Cover)**[i]

- Lowland wood-pastures and parkland are the products of historic land management systems and represent a vegetation structure rather than being a particular plant community.
- Typically this structure consists of large, open-grown or high forest trees (often pollards) at various densities, in a matrix of grazed grassland, heathland and/ or woodland floras.
- Veteran trees may be a feature of this habitat and may date from medieval forests and parks and old commons.
- Policy woodlands and designed landscapes are included in this habitat.
- The Borders holds some important wood pasture sites that can be identified as existing at the time of the 1st edition Ordnance Survey maps (1850).

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
W10 *Quercus robur-Pteridium aquilinim- Rubus fruticosus* woodland W16 *Quercus spp-Betula spp-Deschampsia flexuosa* woodland.	**Mammals:** **Common pipistrelle *Pipistrellus pipistrellus;* Brown long-eared bat *Plecotus auritus*** **Birds:** **Song thrush *Turdos philomelos;* Spotted flycatcher *Muscicapa striata*; Tree sparrow *Passer montanus;*** Green woodpecker *Picus viridis* **Plants:** **Northern hawk's-beard *Crepis mollis*** **Invertebrates:** Several nationally scarce and UKBAP priority beetles – e.g. lesser stag and rhinoceros beetles **Fungi:** lichens e.g. *Calaplaca luteoalba;* **Sap-groove Lichen *Bacidia incompta*** • Loss of and lack of protection for veteran trees • Lack of pollarding • Fragmentation of habitat • Over/undergrazing • Agricultural improvements • Removal of deadwood • Lack of long-term replacement • Importance as a landscape feature.

UPLAND AND LOWLAND HABITATS

Upland Heathland (including Mosaic Habitats with Upland Heath) **(54620ha / 11.53% of Scottish Borders Land Cover)**[i]

- Heathland vegetation occurs widely on mineral soils and thin peats (<0.5 m deep) throughout the uplands and moorlands of the UK.
- It is characterised by the presence of dwarf shrubs at a cover of at least 25%.
- It is typically dominated by a range of dwarf shrubs such as heather *Calluna vulgaris* bilberry *Vaccinium myrtillus*, crowberry *Empetrum nigrum*, and bell heather *Erica cinerea*.
- Blanket bog is distinguished from heathland by its occurrence on deep peat (>0.5 m).

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
H12 *Calluna vulgaris-Vaccinium myrtillis* heath H18 *Vaccinium myrtillus-Deschampsia flexuosa* heath M16 *Erica tetralix-Sphagnum compactum* wet heath And: H4, H8, H9, H10, H15, H16, H21	**Birds:** **Black grouse *Tetrao tetrix;*** **Hen harrier *Circus cyaneus;*** **Twite *Carduelis flavirostris*** **Reptiles:** **Adder *Vipera berus*** **Plants:** **Sword-grass *Xylena exsoleta;*** Heath dog-violet *Viola canina*; Bog bilberry *Vaccinium uliginosum;* **Chickweed wintergreen *Urocystis trientalis*** **Invertebrates:** Nationally notable moths and ground beetles; mountain bumblebee *Bombus Monticola*	• Overgrazing • Undergrazing (bracken and purple moor grass) • Inappropriate muirburn • Increased predation • Persecution of key species • Climate change • Agri-environment/forestry schemes

Grasslands and Enclosed Farmland (Including Acid/Calcareous/Neutral Grassland/Semi-Improved Grassland; Arable Field; Arable Field Margin; Purple Moor Grass and Rush Pasture; Scrub/Gorse Scrub; Bracken/Scattered Bracken) **(146221ha / 30.85% of Scottish Borders Land Cover – plus 5377.70km of hedgerow)**[i]

- This is the dominant habitat type of the Scottish Borders. Around 85% of the land is agricultural and a diverse range of habitats exist within this farmed landscape.
- Grasslands of highest biodiversity value tend to be areas of long established pasture, which have been managed traditionally for generations with low levels of input.
- With changing agricultural practices and intensification, up to 95% of the UK's species rich meadows have been lost since World War II. The estimated area of unimproved, species rich grasslands in the Borders, is less than 2,000ha.
- Though it is possible to create wildflower grasslands under agri-environment schemes, these grasslands are not readily recolonised by rarer plants and insects because of habitat isolation and fragmentation. Created grasslands may also pose a threat to the genetic integrity of the remaining natural grasslands as there is no requirement to use seed of local provenance.
- Therefore it is important to retain old unimproved grasslands and to continue their traditional management such as controlled grazing or mowing in late summer.
- Unimproved grasslands occurring in Scottish Borders can be broken down into four broad types; acid grassland, purple moor grass and rush pasture, unimproved neutral grassland and calcareous grassland, which conform to UK Biodiversity Action Plan priority habitat types.
- It is estimated that 10% of the known species-rich hedgerows occur in Scottish Borders. Other grassland boundary features include dykes, grass margins, beetle banks, shelter belts, field corner plantings, and water margins.
- Modern, intensive farming practices, particularly in the arable areas of the east e.g. the Merse, have led to loss of such boundary features and their intrinsic biodiversity value as corridors and networks for wildlife, as well as their ability to act as seed banks.
- Ironically, sympathetic management can positively impact agriculture. For example, beetlebanks provide habitat for predatory insects, reducing the need for pesticides. Game birds can seek cover in grassland margins and corner plantings.
- Much of the acid grassland in Scottish Borders occurs on Silurian siltstones and shales and Devonian sandstones and lavas and on superficial deposits such as sands and gravels – geological features that are generally acid to neutral in composition. Due generally to high levels of rainfall, soils readily leach to form an acidic substrate. Large expanses occur in the uplands.
- Acid grassland is often the result of poor management of other priority habitats such as upland heath and may be of low biological interest. However, locally base rich deposits occur, which give rise to calcareous soils and flushes which are more species rich. It is an important component of birds such as curlew and golden plover.
- Purple moor grass and rush pasture occur in the wettest areas of hill ground, usually on acidic soils on flatter tops and less steep slopes of western hills, in areas of highest rainfall. It is particularly localised around the headwaters of the Yarrow, Ewes Water and Upper Tweed.
- The vegetation types associated with this habitat can form diverse mosaics of wet grasslands, dry grasslands, and, in the Scottish Borders, upland heath.
- The mosaic of vegetation types associated with this habitat and the often very wet nature of the sites provide rich feeding and breeding areas particularly for insects. These insects in turn form the basis of an important food supply for chicks of several of our upland bird species such as black grouse, snipe and curlew.

- Purple moor grass is particularly susceptible to over-grazing. Rush pasture, because it occurs on lower lying slopes and semi-improved enclosed agricultural land, can be at risk from reclamation work such as drainage, ploughing, liming and reseeding.
- Unimproved or species rich grasslands are those that are unaffected by agricultural improvement (extensive fertiliser use and reseeding).
- These grasslands are mainly managed as traditional hay meadows or areas of permanent pasture and occur throughout the Borders on a variety of rock types; from the sea cliffs of Berwickshire, through the basin mires and rocky knolls of the central Borders, to the hill slopes of Tweeddale. Such sites can contain high proportions of native wild flowers and grass species.
- Most neutral grasslands (meadows) survive as isolated habitat fragments often enclosed by linear field margins or woodlands. In the uplands they can be bounded by drystone dykes or occur on the lower slopes of unimproved hill ground. They provide feeding areas for moorland birds in the summer and support woodland edge species.
- Calcareous grasslands occur where underlying rock types are base rich. Most commonly these are found on Silurian greywacke rocks in the uplands. locally however, rocks rich in lime can outcrop almost anywhere and that is where small pockets of this grassland type can be found.
- Calcareous grasslands in the Borders are generally found on steep, south facing slopes with thin soils and basic rocks. Very small areas now remain in the Borders and are of high nature conservation interest.

Associated NVC Communities*	Species of Conservation Concern (SoCC)	Issues / Pressures
U1 *Festuca ovina-Agrostis capillaris-Rumex acetosella* grassland U2 *Deschampsia flexousa* grassland U4 *Festuca ovina-Agrostis capillaris-Galium saxatile* grassland M25 *Molinia caerulea- Potentilla erecta* mire M26 *Molinia caerulea-Crepis paludosa* mire MG1 *Arrhenatherum elatius* grassland *MG3 Anthoxanthum oderatum-Geranium sylvaticum* grassland MG5 *Centaurea nigra- Cynosurus cristatus* grassland. CG2 *Festuca ovina- Avenula pratensis* grassland CG7 *Festuca ovina-Hieracium pilosella-Thymus praecox* grassland CG10 *Festuca ovina-Agrostis capillaris-Thymus polytrichus* grassland.	**Plants:** Mat grass *Nardus stricta*; Common bent *Agrostis capillaris;* Stiff sedge *Carex bigelowii*; Butterwort *Pinguicula vulgaris*; Purple moor grass *Molinia caerulea;* Wavy hair grass *Deschampsia flexuosa;* Viviparous fescue *Festuca vivipara;* Jointed rush *Juncus articulates;* Soft rush *Juncus effuses*; Bell heather *Erica cinerea;* Crested hair grass *Koeleria macanthra*; Soft brome *Bromus hordeaceus*; **Annual knawel *Scleranthus annus***; Maiden pink *Dianthus deltoids*; Rock rose *Helianthemum chamaecistus*; Kidney vetch *Anthyllis vulneraria;* Autumn gentian *Gentianella amarelle;* Crested dogstail *Cynosurus cristatus*; Quaking grass *Briza media;* Harebell *Campanula rotundifolia;* Thyme *Thymus polytrichus*; Yarrow *Achillea millefolium*; Yellow rattle *Rhinanthus minor;* Meadow cranesbill *Geranium pratense;* Hawthorn *Crataegus monogyna*; Blackthorn *Prunus spinose*; Ash *Fraxinus excelsior;* Purple ramping fumitory *Fumaria purpurea*; **Wild pansy *Viola tricolor***; **Charlock *Sinapis arvensis*.** **Birds: Short eared owl *Asio flammeus;* Golden plover *Pluvialis apricaria;* Curlew *Numenius arquata***; Snipe *Gallinago gallinago;* **Barn owl *Tyto alba;* Grey partridge *Perdix perdix***; **Tree sparrow *Passer montanus*** **Invertebrates:** Common hawker dragonfly *Aeshna juncea;* Emperor moth *Saturnia pavonia*; Northern brown argus *Aricia Artaxerxes*; Common blue butterfly *Polyommatus Icarus;* Yellow meadow ant *Lasius fiavus* **Mammals: Brown hare *Lepus europaeus***	• Inappropriate grazing • Afforestation – including native woodland • Abandonment • Fertilising, ploughing and reseeding • Increased slurry use • Silage (rather than hay) cropping • Agricultural intensification • In-filling of gullies or quarrying • Lack of information on distribution and condition of habitats • Lack of awareness of grassland habitat value

Montane **(141ha / 0.03% of Scottish Borders Land Cover)**[i]

- This habitat lies above the natural tree line (above 600m) and nationally includes montane heath and snow bed communities that are dominated by stiff sedge and three leaved rush, and dwarf forb communities of alpine lady's mantle, moss campion, Sibbaldia and saxifrage species.
- It also includes moss and lichen dominated heaths of mountain summits.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
W20 *Downy willow Salix lapponum-greater woodrush Luzula sylvatica* And: U7, U10, U14, U17, U23, H14, H20, cG12	**Mammals:** **Mountain hare *Lepus timidus*** **Birds:** **Golden eagle *Aquila chrysaetos;*** **Dotterel *Charadrius morinellus***; Raven *Corvus corax;* **Ring ouzel *Turdus torquatus;*** **Twite *Carduelis flavirostris*** **Plants:** **Oblong woodsia *Woodsia ilvensis;*** **Downy willow *Salix lapponum;*** Pale forget-me-not *Myosotis stolonifera;* Hairy stonecrop *Sedum villosus;* **Mossy saxifrage *Saxifraga hypnoides***; Sheathed sedge *Carex vaginata;* Black alpine sedge *Carex atrata;* Alpine foxtail *Alopecurus borealis;* nationally scarce mosses **Fungi**: Nationally scarce lichens	• Overgrazing • Fragmentation and isolation • Recreation • Wind farms • Climate change Agri-environment/forestry schemes

MARINE AND COASTAL HABITATS

Maritime Cliff and Slope (Includes Inland and Coastal Rock) **(872ha / 0.19% of Scottish Borders Land Cover)**[i]

- This habitat comprises sloping to vertical faces on the coastline where a break in slope is formed by slippage and/or coastal erosion. It includes cliff tops influenced by salt spray deposition and shore areas above the intertidal zone.
- Around 4,000km of the UK coastline has been classified as cliff of which approximately one half occurs in Scotland. 1% of the UK total (c.40km) lies in Scottish Borders.
- In Scottish Borders, the habitat is mainly made up of hard cliffs. These are formed in rocks that are resistant to weathering and tend to support few higher plants except on ledges. Soft cliffs, which are formed in less resistant rocks, have less steep slopes that are more easily colonised by vegetation. Good examples of soft cliffs occur around Burnmouth.
- Lichens are the predominant vegetation on exposed hard cliffs with plant species such as thrift and sea campion on ledges. Variations occur where there is water seepage or enrichment from seabird guano. Scrub and bracken occur on soft cliffs and there is a small remnant of semi-natural woodland.
- Maritime grasslands have red fescue, thrift, sea and buck's-horn plantain together with species of more inland grassland such as bird's-foot trefoil, common restharrow and various grasses.
- Calcareous grassland communities, with common rock-rose and crested hair-grass occur on thin soils with underlying mineral-rich rock while areas on acidic rocks support maritime heath characterised by ling. Associated with these grassland habitats are invertebrates of nationally restricted distribution such as the northern brown argus butterfly.
- There are colonies of breeding seabirds with nationally important numbers of guillemot and kittiwake. Other breeding species are cormorant, shag, razorbill, fulmar and puffin. There are also breeding peregrine and raven, cliff nesting house martins and an abundance of rock pipits and linnets.

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
CG2 *Festuca ovina- Avenula pratensis* grassland CG7 *Festuca ovina-Hieracium pilosella- Thymus praecox* grassland CG10 *Festuca ovina-Agrostis capillaris-Thymus polytrichus* grassland.	**Plants:** Common rock-rose *Helianthemum chamaecistus;* Thrift *Armeria maritima;* Scots lovage *Ligustum scoticum;* Roseroot *Sedum rosea;* Carline thistle *Carlina vulgaris;* Bloody cranes-bill *Geranium sanguineum;* Spring squill *Scilla verna;* Sea campion *Silene maritima;* **Purple milk-vetch *Astragalus danicus***; Kidney vetch *Anthyllis vulneraria;* Buck's-horn plantain *Plantago coronopus;* Crested hair-grass *Koeleria macrantha;* Ling *Calluna vulgaris* **Birds:** **Peregrine falcon *Falco peregrinus***; Raven *Corvus corax;* Rock	• Inappropriate grazing, cultivation and abandonment • Overgrazing (sheep, cattle, rabbits) • Scrub encroachment • Reduction of natural zonation at cliff edges • Local eutrophication • Pesticide applications • Dumping of rubble and rubbish

	pipit *Anthus petrosus;* House martin *Delichon urbicum*, Atlantic puffin *Fratercula arctica*; Herring gull *Larus argentatus;* Razorbill *Alca torda;* Shag *Phalacrocorax aristotelis;* Kittiwake *Rissa tridactyla;* Guillemot *Uria aalge* **Invertebrates: Northern brown argus *Aricia artaxerxes;*** Common blue butterfly *Polyommatus icarus*	• Recreational impacts in easily accessible places • Development too close to cliff-top ecological communities • Coastal erosion (e.g. Lower Burnmouth, Cove, Hilton Bay) • Local erosion, trampling and disturbance • Introduced species and INNS • Climate change

Marine (Coastal Sea and Shore) **(435ha / 0.19% of Scottish Borders Land Cover)**[i]

- The marine environment did not feature in previous Habitat Action Plans for the Scottish Borders, however actions for marine habitats were undertaken by the Berwickshire and North Northumberland Marine Nature Partnership (now extended to southern coastal areas in Northumberland).
- There are internationally important populations of breeding seabirds and marine mammals; the grey seal population is part of a larger colony centred around Fast Castle, thought to be the fourth largest in the UK, and fifth largest in the world.
- Sea caves, rocky reefs and rich marine life are

Associated NVC Communities	Species of Conservation Concern (SoCC)	Issues / Pressures
Not applicable.	**Plants:** Narrow-leaved eelgrass *Zostera angustifolia*; Dwarf eelgrass *Z. noltei* **Crustaceans:** Mussel *Mytilus edulis;* Burrowing heart-urchins *Echinocardium cordatum;* small crustaceans; polychaete worms; bivalve molluscs. **Fish:** Sand-eels *Ammodytes spp*. **Birds**: Herring gull *Larus argentatus;* Razorbill *Alca torda;* Shag *Phalacrocorax aristotelis;* Kittiwake *Rissa tridactyla;* Guillemot *Uria aalge* **Mammals:** Grey seal *Halichoerus grypus;* **Otter *Lutra lutra***	• Pollution • Climate change • Recreational activities • Intensive

OTHER HABITATS

Urban Habitats (Including Amenity Grassland, Gardens, Ruderal Communities, Bare Ground habitats) **(11676ha / 2.49% of Scottish Borders Land Cover)**[i]

- The Scottish Borders has a long history of human settlement, throughout which the urban environment has been developed in response to the needs and well-being of the inhabitants.
- Over 80% of the Borders population live and work in Borders towns and villages and the need for a healthy and green built environment is therefore particularly important.
- The character of the built environment is dynamic, continually changing through the landscaping and management of public and private space, changes or additions to the building stock and the changing demands on land.
- Urban wildlife habitats can be defined as greenspaces and the associated ecological niches found within built up areas. Types of greenspace include public parks and gardens, private gardens and grounds, amenity greenspace, play areas, sports areas, green corridors, natural and semi natural greenspaces (including Common Good Land, Community Woodlands and Designed Landscapes), cemeteries, allotments and public utility land, derelict land and civic space.
- Tree lined avenues between settlements, weirs and river corridors and walkways are often recognised as having aesthetic and wildlife value. Even existing buildings, derelict buildings, old farmsteads and former industrial sites can all have a high biodiversity value.

• Recording urban wildlife and identifying priorities and projects to support biodiversity within urban habitats may help to protect and enhance it, with benefits for human health and wellbeing.		
Associated NVC Communities	**Species of Conservation Concern (SoCC)**	**Issues / Pressures**
Not applicable	Mammals: Otter *Lutra lutra;* Common pipistrelle *Pipistrellus pipistrellus*; Soprano pipistrelle *Pipistrellus pygmaeus;* Brown long eared bat *Plecotus auritus;* Whiskered bat (scarce) *Myotis mystacinus;* Natterer's bat *Myotis nattereri;* Hedgehog *Erinaceus europaeus;* Mole *Talpa europaea;* Red fox *Vulpes vulpes* Fish: Atlantic salmon *Salmo salar* Birds: Swift *Apus apus;* House martin *Delichon urbicum;* Linnet *Linaria cannabina*; Spotted flycatcher *Muscicapa striata;* Song thrush *Turdus philomelos;* Peregrine falcon *Falco peregrinus;* House Sparrow *Passer domesticus;* Black-headed gull *Larus ridibundus* Amphibians: Common Frog *Rana temporaria;* Common Toad *Bufo bufo;* Smooth Newts *Lissotriton vulgaris* Invertebrates: Large white *Pieris brassicae*; Small Tortoiseshell *Aglais urticae*; Red admiral *Vanessa atalanta*; Peacock butterfly *Aglais io*; Ladybird species *Coccinellidae spp.*	

Appendix F: Scoping Report Responses

HISTORIC SCOTLAND		
Issue	**Comment**	**How addressed in SEA**
Environmental Baseline Data	*Inventory Battlefields, non-designated heritage assets identified by your Historic Environments Record and the Historic Land Use map (Http://hlamap.org.uk) should be included under cultural heritage*	Included within Environmental Baseline Data under cultural heritage.
Reasonable Alternatives	*The scoping report helpfully sets out the high level alternatives for delivering (or not) the LBAP, and confirms that these will be assessed. You will also need to identify and assess reasonable alternatives within the selected delivery model will be identified and assessed, e.g. alternatives content, objectives and actions.*	High level alternatives have been assessed in terms of their deliverability and suitability in Section 5. A second option to the preferred plan has been subject to a detailed assessment (Appendix D). This is considered to be the only other viable alternative to the preferred plan and incorporates content, objectives and actions that are an alternative approach to the ecosystems approach adopted in the preferred plan. The preferred option has been assessed in detail in relation to proposed thematic areas and their correlated actions. It is considered that this approach has considered all aspects of the PPS that could have significant environmental effects and is in line with approaches taken for the SEA of similar (and related) PPS.
SEA objectives	*We have assumed that the key objective aims to test the effects of outcomes of the action plan on the features that form the cultural and historic landscape of the Scottish Borders. You may wish to consider adding a sub-objective or sub-objectives which focus on the protection of cultural heritage to support this intention more explicitly*	The intention or aim of this key objective was to support cultural ecosystem services via protection of natural heritage assets, with a focus on indirect or secondary benefits to people (both residents and visitors to the Scottish Borders) in terms of cultural services. This is felt to be most appropriate in the context of the LBAP, since the enjoyment of nature is a key driver for its protection. The existing sub-objective includes promoting visits to enjoy both cultural and natural heritage assets. Commentary incorporates the consideration that this must include promotion of responsible access to such assets. Other PPS may be more appropriate for objectives which focus on the direct protection of cultural heritage assets.
SCOTTISH NATURAL HERITAGE		
Issue	**Comment**	**How addressed in SEA**
Content with scope and level of detail proposed for the environmental report and proposed consultation period		
SEPA		
Issue	**Comment**	**How addressed in SEA**
Relationship	*Some of the PPS included have themselves been subject to SEA. Where this*	Environmental baseline information makes reference to

with other Plans, Policies and Strategies (PPS)	*is the case you may find it useful to prepare a summary of the key SEA findings that may be relevant to the LBAP. This may assist you with data sources and environmental baseline information and also ensure the current SEA picks up environmental issues or mitigation actions which may have been identified elsewhere.*	relevant PPS that have also addressed similar environmental issues to the LBAP. The baseline has been compiled with reference to issues from the SEAs of related PPS.
	Add the Clear Air for Scotland, Scottish Borders Land Use Strategy, Zero Waste Strategy to Appendix 1. Make reference to the Flood Risk Management (Scotland) Act (not Bill).	The list of PPS has been updated accordingly in Appendix A.
Baseline information	*SEPA has environmental data; local information and topic guidance that are relevant to SEA Topics and may be of use.*	Considered and consulted in the preparation of the environmental baseline.
Environmental Problems	*Forestry is an issue / opportunity that should be considered. Note SEPA's advice on forestry.*	Noted and referenced in the baseline information
Alternatives	*We are satisfied with the alternatives. These should be assessed and findings should inform the choice of the preferred option and documented in the Environmental Report*	Alternatives considered and discussed, preferred and alternative options chosen and assessed in detail and the rationale for the choice of the preferred option has been outlined.
Methodology for assessing environmental effects	*Including a commentary section within the matrices in order to state, where necessary, the reasons for the effects cited and the score given helps to fully explain the rationale behind the assessment results. This allows the Responsible Authority to be transparent and also allows the reader to understand the rationale behind the scores given*	Commentary section included within assessment matrices.
	Where it is expected that other plans, programmes or strategies are better placed to undertake more detailed assessment of environmental effects this should be clearly set out in the Environmental Report.	This has been indicated where applicable, in the Environmental Report and assessment.
	We would expect all aspects of the PPS which could have significant effects to be assessed.	A detailed and thorough assessment of all aspects of the PPS which could have significant effects has been undertaken to the best of ability.
	When it comes to setting out the results of the assessment in the Environmental Report please provide enough information to clearly justify the reasons for each of the assessments presented. It would also be helpful to set out assumptions that are made during the assessment and difficulties and limitations encountered.	Justification for the assessments has been provided in the commentary section of the detailed assessment. Details of any assumptions made and difficulties and limitations encountered have also been included in the Environmental Report.
	It is helpful if the assessment matrix directly links the assessment result with proposed mitigation measures.	Commentary on mitigation and enhancement measures has been included to explain the rationale and links to the assessment matrix.
	We note the intention to undertake an ecosystem services approach. We would request that in presenting the findings: *It is demonstrated how the requirements of the SEA legislation have been met, in particular, the requirements of Schedule 3 of the Act* *The Environmental Report is a separate and easily identified component of the wider assessment.*	Commentary has been provided in the introduction to the assessment methodology which explains how the assessment approach complies with the requirements of the 2005 Act and compliance with the 2005 Act is signposted throughout the report. The assessment is included as a separate appendix to the Environmental Report, and is

		referenced within the report.
	We understand that some effects will be assessed through a GIS map methodology and we are content with this approach, making sure that the legend will be clear and consider the aspects mentioned in the SEA objectives.	A detailed assessment has been undertaken however it has been decided to focus primarily on assessment via matrices in order to ensure a manageable assessment process. (The proposed matrix approach to assessment having been deemed appropriate by all Consultation Authorities at scoping stage).
	We would recommend that the wording of the following SEA objectives be revised as follows: *WATER- change 'protect flood risk areas' to 'avoid flood risk and protect flood risk areas'. The LBAP should aim to avoid flood risk, however if may be that some aspects of the LBAP may help protect areas of flood risk. Please refer to the most recent Natural Flood Risk Management guidance for details.* *MATERIA ASSETS- one sub-objective could be added to say 'help meeting the objectives of the Zero Waste Plan* *CLIMATIC FACTORS – substitute CO2 emissions with greenhouse gases emission as CO2 is not the only gas that causes climate change.*	Changes made, with the exception of Material Assets. An exploration of including a sub-objective to maintain consideration of the Zero Waste Plan was considered, but it was felt that other PPS also exist, for example Scottish Borders Local Development Plan, which directly aim to help meet the Zero Waste Plan objectives.
Mitigation and enhancement	*We would encourage you to use the assessment as a way to improve the environmental performance of individual aspects of the final option; hence we support proposals for enhancement of positive effects as well as mitigation of negative effects.*	Where enhancements are considered possible, this has been indicated within the assessment matrices.
	It is useful to show the link between potential effects and proposed mitigation / enhancement measures in the assessment framework.	This has been undertaken in the assessment.
	We would encourage you to be very clear in the Environmental Report about mitigation measures which are proposed as a result of the assessment. These should follow the mitigation hierarchy (avoid, reduce, remedy or compensate).	Commentary on mitigation and measures is included in the the Environmental Report.
	One of the most important ways to mitigate significant environmental effects identified through the assessment is to make changes to the plan itself so that significant effects are avoided. The Environmental Report should therefore identify any changes made to the plan as a result of the SEA.	No significant negative effects are predicted following the assessment, and therefore do not need to be avoided. However, opportunities for further enhancement of the plan have been identified and commented up in the Environmental Report, following the detailed assessment.
	Where the mitigation proposed does not relate to modification to the plan itself then it would be extremely helpful to set out the proposed mitigation measures in a way that clearly identifies: (1) the measures required, (2) when they would be required and (3) who will be required to implement them. The inclusion of a summary table in the Environmental Report such as that presented below will help to track progress on mitigation through the monitoring process.	Detail of mitigation measures in the Environmental Report Section 5 reflects this recommendation.

Monitoring	*Although not specifically required at this stage, monitoring is a requirement of the Act and early consideration should be given to a monitoring approach particularly in the choice of indicators. It would be helpful if the Environmental Report included a description of the measures envisaged to monitor the significant environmental effects of the plan.*	Although not specifically required at this stage, commentary on initial thoughts for a monitoring approach has been provided in Section 5 of the report. Indicators have been suggested in Section 4, Table 8 of the report.
Outcomes of the Scoping exercise	We would find it helpful if the Environmental Report included a summary of the scoping outcomes and how comments from the Consultation Authorities were taken into account.	See next comment.
	We welcome proposals for the inclusion of a summary of how the comments provided by the Consultation Authorities at the Scoping stage have been taken into account in the preparation of the Environmental Report.	This Appendix F provides the summary of comments and how they have been taken into account in the preparation of the Environmental Report.

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PLANNING APPEALS & REVIEWS

Briefing Note by Chief Planning Officer

PLANNING AND BUILDING STANDARDS COMMITTEE

3rd September 2018

1 PURPOSE

1.1 The purpose of this briefing note is to give details of **Appeals** and **Local Reviews** which have been received and determined during the last month.

2 APPEALS RECEIVED

2.1 Planning Applications

2.1.1

Reference:	17/01348/FUL
Proposal:	Erection of 2 No wind turbines 11.8m high to tip
Site:	Land South West of 6 Lamberton Holding, Lamberton
Appellant:	Mr William Mykura

Reason for Refusal: Appeal against imposition of conditions 5 and 6 which state:

Condition 5 - The turbine(s) hereby consented and any ancillary equipment or structures associated with them (including any foundations) shall be removed from the site, and the site restored to its former condition, within 25 years of the date of this planning permission unless a further planning permission is achieved that allows for the retention of the turbine(s) on the site beyond this period. Reason: In the interests of the amenity of the area so that the turbine(s) hereby consented will be removed to avoid any unnecessary environmental impact resulting from the retention of turbine on the site beyond 25 years. Condition 6 - When either or both of the wind turbines hereby consented cease(s) to be required for the purposes of electricity generation, the wind turbine(s) concerned, and any ancillary equipment or structures no longer required for the purposes of electricity generation, shall be dismantled and removed from the site, and the site, or that part of the site no longer in use for electricity generation, shall then be restored to its former condition within 12 months of the cessation of operation of the turbine(s) concerned. Reason: In the interests of the amenity of the area so that in the event of the turbines reaching the end of their operational life, these will be removed within a reasonable period of time to avoid any unnecessary environmental impact resulting from the retention of non-operational turbines on the site.

Grounds of Appeal: Condition 5 - The turbines may still be in full working condition in 25 years time. It is the remit of the owner to decide whether the turbines should be removed or retained. Furthermore, the reason given, 'to avoid unnecessary environmental impact' is not valid. Retention of working wind turbines beyond 25 years would not cause unnecessary environmental impact. In addition, the impact of removing working wind turbines would cause negative environmental impact in terms of carbon emissions and loss of renewable energy. Condition 6 - While the applicant accepts the condition to remove the wind turbines when no longer required, the wording of the condition to include 'structures' may be construed to require removal of the turbine foundations. Clarification that removal of the turbine foundations is not required, or removal of this planning condition entirely, is requested. The reason given, 'to avoid unnecessary environmental impact' is not valid if applied to the turbine foundations. Removal of the turbine concrete foundations would cause negative environmental impact in terms of carbon emissions.

2.2 Enforcements

Nil

2.3 Works to Trees

2.3.1 Reference: 18/00621/TPO
Proposal: Works to trees
Site: Land West of Glenkinnon Lodge Peelburnfoot, Clovenfords
Appellant: Adam Elder

Reason for Refusal: Part Refusal - The application is not consistent with the previous woodland management recommendations. Minimal tree removal was proposed in the original surveys to ensure the existing tree cover was retained and that it makes a positive contribution to the landscape and amenity of the locality.

The report highlights 14 trees (13 Sycamore and 1 Ash). The BS5837 categories are 1 Sycamore (A Category), 8 Sycamore, 1 Ash (C Category) and 4 Sycamore (Category U). Of the 4 U categories they are all around the existing building structure on the site. The Sycamores and Ash contribute to the existing tree cover. While long term management of a woodland is supported, the complete removal of a single species in this instance is not. There are many silvicultural systems to allow continuous cover on a site while sensitive planting of alternative species could be undertaken to diversify species. The proposed planting could be undertaken over a phased period to allow successful establishment and age distribution.

There are presently no agreed plans for future development, and so there is no reason that the four Category U trees could not be retained within the woodland setting.

The woodland could be managed without the complete removal of single species.

Grounds of Appeal: This application was rejected, save for works to 4 trees on the woodland boundary as recommended for safety reasons alone. The remainder of the application concerned an area of self seeded sycamore trees which have populated an area open glade within the woodland, due to the woodland being unmanaged for fifty years. A significant number of the sycamores are of poor quality and low amenity value. The appellant understands that the existing tree cover should be maintained but this does not mean that there are no grounds for selective removal, thinning and maintenance of trees especially concerning a dominant species which is a recognised threat to the regeneration of other species.

3 APPEAL DECISIONS RECEIVED

3.1 Planning Applications

3.1.1 Reference: 17/00010/FUL
Proposal: Construction of wind farm comprising 7 No turbines up to 149.9m high to tip, 5 No turbines up to 130m high to tip and associated infrastructure
Site: Land South West of Lurgiescleuch (Pines Burn), Hawick
Appellant: Energiekontor UK Ltd

Reasons for Refusal: 1. The proposal is contrary to Policy ED9 of the adopted Scottish Borders Local Development Plan in that it would have unacceptable significant adverse impacts that cannot be mitigated and that are not outweighed by the wider economic, environmental and other benefits that would be derived from its operation. In particular: The scale, form and location of the development would represent a significant and harmful change to the existing landscape character and visual amenity of the immediate locality and the wider area; and The development would give rise to an unacceptable and dominating impact upon the residential properties at Langburnshiels. 2. The proposal is contrary to Policies ED9 and EP8 of the adopted Scottish Borders Local Development Plan in that the development would give rise to significant and unacceptable impacts upon the setting and appreciation of known archaeological assets, including the Scheduled Monuments of Penchrise Pen fort and earthwork, as well as to other designated and undesignated sites of archaeological importance in the area. The wind farm would also introduce large-scale industrial structures on the fringes of an historic landscape.

Grounds of Appeal: Due to the topographic landscape from surrounding hills visibility of the scheme from surrounding areas is limited. There would be no significant cumulative effects from the proposal with operational and consented baseline schemes. The proposed development is consistent in principle with the vision and aims of the LDP. The evidence available confirms that the proposal accords with the development plan, and policies ED8 and 9 which are the principal relevant policies in this case. In terms of policy ED9, there are some significant adverse effects arising but these are not considered to be unacceptable in terms of relevant landscape and visual and cultural heritage effects arising, the wider economic and environmental and other benefits of the proposal, such as its contribution to the UK renewable energy targets, net economic benefits both locally and nationally and local recreational and heritage enhancements outweigh the "potential damage" that would arise from the proposal.

Method of Appeal: Written Representations & Site Visits

Reporter's Decision: Sustained

Summary of Decision: The Reporter, Michael Mahony, found that the proposal would accord with Policies ED8 and ED9 of the current local development plan. It would have localised and limited impacts on landscape and visual amenity and on archaeological assets. Cumulative visual impacts would not be sufficient to reject the proposal. There would be impacts on the amenity of nearby residential properties, but not to an extent which would breach the test which has been applied by Scottish Ministers in a similar case. Evidence of significant adverse effects on tourism generally in this part of the Borders or specific tourism businesses is not persuasive. Nor has it been demonstrated that the viability of falcon breeding businesses would be threatened. Other potential impacts could be appropriately managed through planning conditions and other control regimes. The proposal would have some economic benefits. It is supported by national policies for wind energy. Finally, but importantly, the reporter stated that it would generate renewable energy and contribute to carbon emission reduction targets, thereby supporting the Scottish Government's objectives for renewable energy and a low carbon economy. The reporter therefore grants planning permission subject to 35 conditions and 4 advisory notes.

3.2 Enforcements

Nil

3.3 Works to Trees

Nil

4 APPEALS OUTSTANDING

4.1 There remained 3 appeals previously reported on which decisions were still awaited when this report was prepared on 23rd August 2018. This relates to sites at:

• Land South West of Easter Happrew Farmhouse, Peebles	• Hutton Hall Barns, Hutton
• Land North West of Gilston Farm, Heriot	•

5 REVIEW REQUESTS RECEIVED

5.1 Reference: 18/00270/PPP
Proposal: Erection of dwellinghouse with associated access road, parking area and combined entrance/layby
Site: Land West of Langton Birches, Duns
Appellant: Mrs Clare Fleming

Reasons for Refusal: 1. The proposed development of a single dwellinghouse at this site would be contrary to policy HD2 of the Scottish

Borders Local Development Plan (2016), and contrary to the guidance within the adopted New Housing in the Borders Countryside Supplementary Planning Guidance Note (2008), in that the proposed development would not form part of or be well related to an existing building group, would not reflect the character of the building group and would lead to ribbon development along a public road. 2. The proposed development of a single dwelling at this site would be contrary to the access requirements of policies HD2 (Housing in the Countryside) and PMD2 (Quality Standards) of the Local Development Plan 2016, in that the development would result in an unacceptable access arrangement with the public road to the detriment of road safety.

5.2 Reference: 18/00764/FUL
Proposal: Change of use from retail (Class 1) to mortgage shop (Class 2) and external re-decoration
Site: 37 Bank Street, Galashiels
Appellant: Robin Purdie

Reason for Refusal: The proposed development would not comply with Policy ED4 of the Local Development Plan 2016 in that it does not comprise a Class 1 (retail) or Class 3 (food and drink) use. It would also not comply with the types of uses encouraged by the Council's Town Centre Core Activity Area Pilot Study. The proposed development would potentially positively contribute to the town centre but, on balance, its contribution would not be sufficient to override its conflict with policy and potentially adverse effect on the town centre's core retail function.

6 REVIEWS DETERMINED

6.1 Reference: 16/01371/FUL
Proposal: Change of use of agricultural buildings and alterations to form 12 No dwellinghouses
Site: Agricultural Buildings, South East of Merlewood, Hutton Castle Barns, Hutton
Appellant: Mr Geoffrey Bain

Reasons for Refusal: 1. The application is contrary to Policy PMD2 (Quality Standards) and HD3 (Residential Amenity) of the Scottish Borders Local Development Plan 2016 in that the proposed development would not be compatible with neighbouring uses, with a reasonable likelihood of unacceptable residential amenity impacts arising for the future occupants of the proposed dwelling units. 2. The application is contrary to the Supplementary Planning Guidance: New Housing in the Borders Countryside 2008 in that the proposed development would conflict with the operations of a working farm. 3. The application is contrary to Policy IS2 (Developer Contributions) of the Scottish Borders Local Development Plan 2016 and Supplementary Planning Guidance: Affordable Housing and Development Contributions in that the applicant has not committed to paying the necessary development contributions towards deficiencies in infrastructure and services which will be created or exacerbated as a result of the development. 4. The application is contrary to Policies EP1 (International Nature Conservation Sites), EP2 (National Nature Conservation Sites and Protected Species) and EP3 (Local Biodiversity) of the Scottish Borders Local Development Plan 2016 and the Supplementary Planning Guidance on Biodiversity 2005 in that the potential impact on protected species is unknown as the required ecological surveys have not been carried out. 5. The application is contrary to Policies PMD2 (Quality

Standards) in that the proposed parking and access arrangements would result in an adverse impact on road safety.

Method of Review: Review of Papers

Review Decision: Decision of Appointed Officer Overturned (Subject to conditions, informatives and a Section 75 Legal Agreement)

6.2 Reference: 17/01362/FUL
Proposal: Part change of use of paddock to form new access and drive to dwellinghouse, erection of gates and summerhouse and formation of new parking area and tennis courts
Site: Southbank and Paddock South East of Southbank, Bowden, Melrose
Appellant: Mrs Sarah Wilkinson

Reasons for Refusal: 1. The proposal would be contrary to policy PMD4 of the Local Development Plan 2016 in that the change of use of the paddock to domestic garden ground and the erection of the tennis court, fencing and summerhouse and the formation of the access and driveway would be outwith the village's Development Boundary, resulting in inappropriate encroachment into the open countryside. There is no justification for this development in terms of the exceptions listed within policy PMD4 and approving this proposal would set an undesirable precedent for similar developments outwith the village that would further erode the Development Boundary. 2. The proposal would be contrary to policies PMD2 and EP9 of the Local Development Plan 2016 as the development would be out of keeping with the rural character of the area and edge-of-village location. The proposal would be prominent in the landscape, with inappropriate boundary treatments that do not help to integrate the development into its surroundings and the wider environment, and would adversely affect the setting of the village, the character and appearance of this part of the Conservation Area and the visual amenities of the area.

Method of Review: Review of Papers

Review Decision: Decision of Appointed Officer Overturned (Subject to conditions and informatives)

6.3 Reference: 17/01734/PPP
Proposal: Erection of dwellinghouse
Site: Land South West of 1 Hill Terrace, Stow
Appellant: Susan Aitchison

Reason for Refusal: The access road serving the site is unsuitable for further traffic and is not capable of being improved to a standard that is adequate to support the additional traffic generated by the proposed development. The development would, therefore, be contrary to Policies PMD2 and PMD5 of the Local Development Plan 2016. This conflict would potentially lead to serious risk to road and pedestrian safety. There are no other material considerations that would outweigh this conflict with the development plan.

Method of Review: Review of Papers

Review Decision: Decision of Appointed Officer Upheld

6.4 Reference: 18/00287/FUL
Proposal: Erection of dwellinghouse
Site: Land North West of Doonbye, Smith's Road, Darnick
Appellant: Mr I Maxwell

Reasons for Refusal: 1. The proposed development would not comply with policies PMD2, PMD5 or IS7 of the Local Development Plan 2016 as no off-street parking would be provided and the resulting implications on Smith's Road would have potential adverse impacts on road and pedestrian safety. Other material considerations do not outweigh these conflicts with policy. 2. The proposed development would be contrary to policies PMD2, PMD5 and HD3 as it would constitute overdevelopment of the site in a manner that would have an adverse impact on the residential amenities of future occupants of the dwellinghouse and an intrusive and overbearing impact on neighbouring properties. Other material considerations do not outweigh these conflicts with policy.

Method of Review: Review of Papers

Review Decision: Decision of Appointed Officer Upheld

7 REVIEWS OUTSTANDING

7.1 There remained no reviews previously reported on which decisions were still awaited when this report was prepared on 23rd August 2018.

8 SECTION 36 PUBLIC LOCAL INQUIRIES RECEIVED

Nil

9 SECTION 36 PUBLIC LOCAL INQUIRIES DETERMINED

Nil

10 SECTION 36 PUBLIC LOCAL INQUIRIES OUTSTANDING

10.1 There remained 3 S36 PLI's previously reported on which decisions were still awaited when this report was prepared on 23rd August 2018. This relates to sites at:

• Fallago Rig 1, Longformacus	• Fallago Rig 2, Longformacus
• Birneyknowe Wind Farm, Land North, South, East & West of Birnieknowe Cottage, Hawick	•

Approved by

Ian Aikman
Chief Planning Officer

Signature .....

Author(s)

Name	Designation and Contact Number
Laura Wemyss	Administrative Assistant (Regulatory) 01835 824000 Ext 5409

Background Papers: None.
Previous Minute Reference: None.

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