

Borderlands Inclusive Growth Deal:
Programme Business Case for a Scottish
Natural Capital Programme

A Final Report
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Borderlands Inclusive Growth Deal: Programme Business Case for a Scottish Natural Capital Programme

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Executive Summary

- 1.1 The Borderlands Partnership¹ put forward the unique Borderlands Inclusive Growth Deal to the UK Government and Scottish Government which outlines a cross border and strategic approach to the challenges and opportunities of the region.
- 1.2 The signed Deal defined a package of activities that the governments will support which includes the Natural Capital Programme, part of the Green Growth them. This theme underpins the development of the rural economy and supports clean growth.
- 1.3 The Business Case for a Natural Capital Programme, made up of several natural capital pilot projects, is about delivering innovation across a blend of revenue- and capital-based activities to support a new way of working that reflects the role of natural capital in underpinning regional economic development, community development, and land-use planning and management at a landscape scale. As such, it represents an enabling investment that will help to transform current practices, influence an emerging economic policy area post-Brexit, and support a series of long term and sustainable economic, environmental, and social outcomes. The argument for this economic business case is fundamentally about the direct economic benefit and broader socio-economic and environmental additionality it can bring to the Borderlands region in Scotland.
- 1.4 The Borderlands region has a wealth of unique and diverse natural capital assets which yield a wide range of economic, environmental, and social benefits for the region, on a spectrum from core economic activities delivering jobs and GVA, through to wider non-market benefits that themselves support further important parts of the economy. Yet much of the management of this natural capital currently relied on EU subsidy to survive. As a result, there is a need to adapt to a new approach to land and marine management practices in a post Brexit context, making the natural capital proposals highly important to the region's future economic resilience.
- 1.5 The principle of the Natural Capital Programme that the Scottish authorities of the Borderlands Partnership want to take is that the environment is no longer regarded as incidental or an obstacle to economic development, but that a healthy environment is the basis of developing a wellbeing economy and future resilience, thereby directly contributing to the strategic objectives for the Borderlands Inclusive Growth Deal. This principle is explained in detail in the Strategic and Economic Cases.
- 1.6 This Programme will be led by a cross border Programme Board, to join up the Natural Capital work across the Borderlands region and champion the work across the wider Natural Capital policy space.
- 1.7 The proposed programme, with six pilot projects in the South of Scotland, is aimed at demonstrating the impact of investment in natural capital assets to support long-term economic benefit. This will be achieved by supporting jobs and business growth and provide learning for embedding natural capital considerations into future investment. The six pilot projects are summarised on the following pages Project final design and delivery, including confirmed outputs, will be further developed, and agreed during their business case stage

¹ Bringing together the five cross-border local authorities of Carlisle City Council, Cumbria County Council, Dumfries and Galloway Council, Northumberland County Council and Scottish Borders Council

Table 1 Borderlands Natural Capital Programme for the South of Scotland: Pilot Projects	
Agri-Environment Pilot: Embedding Agricultural Resilience for a Productive Future – Farmers, Landowners and Species-rich Grassland	
Lead	South of Scotland Enterprise and Scottish Borders Council
(Potential) Partners	<ul style="list-style-type: none"> • South of Scotland Enterprise • Butterfly Conservation • Project farmers
Funding Required	<ul style="list-style-type: none"> • £727,160 Borderlands funding • Potential additional or follow-on funding of £4,783,024
Key Objective	To develop a more ecologically sustainable approach to hill livestock farming by supporting and promoting the rural economy and sustainable land management, focussing on Species-rich Grassland (SRG) and the conservation of the Northern Brown Argus (NBA) in the Scottish Borders, and Dumfries and Galloway.
Key Deliverables	<ul style="list-style-type: none"> • Develop an effective outcomes based agri-environment scheme for SRG & NBA, including establishing two farmer led Natural Capital groups to help develop, trial, and review the pilot scheme • Habitat restoration trials across both scrub removal and species rich grassland • Northern Brown Angus – Co-ordinate an NBA survey across both the Borders and Dumfries and Galloway, establish monitoring of NBA population, and develop an NBA landscape metric to determine the impact of the project • Support educational outreach / promotion through the establishment of two demonstration sites, online talks to local colleges, host undergraduate projects, and assist a PhD student
Key Outputs	<ul style="list-style-type: none"> • 400ha of species rich grassland under restoration management • 10 work placements achieved through short-term work experience • 2 local community liaison or volunteer groups established • 2 farmer-led Natural Capital groups established • 2 demonstration sites • At least 36 volunteer work parties undertaken to restore SRG • 90 volunteers engaged, contributing around 1000 days, worth £140,000 • Engage with 50 farmers
Agri-Environment Pilot: Whole Farm Audits and Natural Capital Advisory	
Lead	Dumfries and Galloway Council
(Potential) Partners	<ul style="list-style-type: none"> • Galloway and Southern Ayrshire Biosphere • Scottish Environmental Protection Agency • National Farmers Union Scotland • Scottish Land and Estates

	<ul style="list-style-type: none"> • Academic institutions • NatureScot POBAS trials
Funding Required	<ul style="list-style-type: none"> • £612,460 Borderlands funding
Key Objective	To test out a new Natural Capital centred approach to whole farm auditing that will identify synergies between management interventions that deliver public goods and a modern sustainable farm business.
Key Deliverables	<ul style="list-style-type: none"> • Conduct whole farm audits for 12 land holdings by 2026 and provide each with a menu / combination of options (including management technique changes and enhanced capital menu) to support modern sustainable farm business.
Key Outputs	<ul style="list-style-type: none"> • 12 landholdings in pilot project by 2026 and approximately 1,200 hectares of land in the scheme • 250 hectares of habitats improved within 6 years and 20 hectares of new woodland including Riverwoods within 6 years • Increase in farm energy efficiency by 5% on each farm unit within 12 months of the efficiency measures being implemented • Reduction in use of artificial fertilisers on audited farms by a minimum 10% within 3 years of an alternative grassland management system being implemented • Increase in sward diversity on a minimum 10% of land on each holding within 4 years • 1.5 FTE jobs created within the first year and retained through the first five years of the project • Minimum of 6 landholding awarded Biosphere Certification Scheme within 5 years • Undertake training programme in natural capital land management techniques for 2 development roles • Sharing of best practice and a platform for continued sharing of best practice through peer to peer group of a minimum of 20 landowners within 12 months of third audit
Woodland Pilot: Integrated Land Use and Woodland Creation	
Lead	Tweed Forum
(Potential) Partners	<ul style="list-style-type: none"> • South of Scotland Enterprise • Scottish Forestry • Scottish Environmental Protection Agency • NatureScot • Landowners
Funding Required	<ul style="list-style-type: none"> • £1,136,467 Borderlands funding • £3,115,350 Forestry Grant Scheme • £422,215 private finance • £225,000 charitable (Woodland Trust, National Lottery Heritage Fund, LIFE WADER other)
Key Objective	To pioneer a more integrated approach to Farming, Forestry and Conservation, that will use the SMART approach to promote the case for land use change

Key Deliverables	<ul style="list-style-type: none"> • Up to 700ha of integrated and targeted mixed woodland, (approximately 60% Productive- largely conifer forestry- & 40% Native- largely broadleaf woodland) • Demonstrate the multiple benefits of planting a wide range of different woodland types in the landscape • Encourage farmer uptake of different woodland types
Key Outputs	<ul style="list-style-type: none"> • Up to 700ha of new woodland • 20 work placements • 2 FTE jobs created / protected (through local forestry, fencing, and tree planting contractors) • 4 community liaison groups (to feedback local issues and opportunities) • 4 demonstration site (to act as focus areas where facilitated/organised visits by interested groups can take place) • Monitoring programmes (consisting of fixed-point photography, drone fly over coverage, and basic tree condition survey) to demonstrate change over time
Marine Pilot: A Sustainable Solway Economy	
Lead	Dumfries and Galloway Council with delivery partner, Solway Firth Partnership
(Potential) Partners	<ul style="list-style-type: none"> • Scottish Blue Carbon Forum • University of Glasgow • Candidate Biosphere Extension
Funding Required	<ul style="list-style-type: none"> • £1,998,973 Borderlands funding • ~£40,000 match funding from the Scottish Blue Carbon Forum for the employment of a PhD student
Key Objective	To achieve a 'Sustainable Solway' economy through the restoration and expansion of coastal, intertidal, and marine habitats in support of key economic fishery species, water quality, key coastal tourism locations, climate mitigation and adaptation, and carbon sequestration. The project will also forge links with and help other Borderlands themes maximise natural capital benefits of the Solway e.g., opportunities associated with the development plans at Stranraer Marina and the wider Loch Ryan area. Taking a place-based approach, integrating natural capital interventions with wider regeneration initiatives, and focus on building sustainable economic outputs from across the Solway.
Key Deliverables	<ul style="list-style-type: none"> • A number of interrelated interventions will be undertaken to deliver improvements in natural capital assets of the Solway Firth in a minimum of Four defined locations. • Research and develop innovative ways to reinstate coastal and marine habitats around the Solway • Investigate and pilot reintroduction of native oysters in historically known native oyster areas • Stranraer marketed as the 'Oyster Capital of Scotland' increasing research and tourism interest • Develop a 'Centre of Excellence' for Stranraer for research into practical restoration and host academic research and local training opportunities. • Undertake a training programme in reintroduction techniques and share best practice and build capacity in the region.

	<ul style="list-style-type: none"> • Trial of saltmarsh restoration techniques and investigate marketing of sustainably produced lamb and beef from restored saltmarsh • Where possible capture data to support the development of a Marine Carbon Code • Partnerships with universities formed to further Solway regional research • Attract private investment to further the restoration of natural capital assets • Oyster Spat trials for the capture, sale and supply of native oyster spat for Loch Ryan oyster beds and the supply to other oyster restoration projects • Streamlined or innovative methods for seagrass propagation tested and analysed for successful seagrass bed restoration • Local oyster depuration to assist in the development of local and Scottish markets • Partnership opportunities within the Candidate Biosphere Extension to use the Biosphere certification to boost the exclusivity, sustainability and accreditation of food fished, and reared within this extended area.
Key Outputs	<ul style="list-style-type: none"> • 1 Centre for Excellence • A sustainable business model for the Centre for Excellence providing long-term practical restoration in the Solway Firth • New collaborative working and partnerships • One PhD opportunity/opportunities through partnerships or universities • Increased training opportunities (including 5+ work experience placements, 1,280 internship hours, 40+ volunteers, lecture sessions education 100+ people) • 2.2 FTE jobs created • 50% increase in sales of Loch Ryan oysters • 4 hectares saltmarsh expansion • 1 hectare expanded seagrass • 2 hectares expanded native oyster bed • Research evidence to support the establishment of a marine carbon code • A body of research and proven new restoration techniques for seagrass, native oysters, and saltmarsh • A commercial oyster spat production for restoration project elsewhere
Investment Pilot: Borderlands Natural Capital Investment Plan	
Lead	South of Scotland Enterprise
(Potential) Partners	<ul style="list-style-type: none"> • South Uplands Partnership • Public sector agencies (e.g., NatureScot, Scottish Environmental Protection Agency, Crown Estates Scotland etc.) • National and regional capital authorities (e.g., Borders Forest Trust, Bug Life, Butterfly Conservation, Crichton Carbon Centre, Galloway and Southern Ayrshire Biosphere, RSPB, Scottish Wildlife Trust, Solway Firth Partnership, The Rivers Trusts, Tweed Forum and the Wildfowl and Wetlands Trust) • Scottish Government Responsible investment in Natural Capital Programme

Funding Required	<ul style="list-style-type: none"> • £156,750 Borderlands funding • Any additional funding will be sourced out with the Borderlands budget to deliver additional opportunities that may arise (e.g., from SOSE, local authorities, or public sector agencies working in this policy area)
Key Objective	To explore how we can unlock blended and innovative finance opportunities to enhance our Natural Capital assets and deliver ecosystems services projects across the South of Scotland Borderlands programme and beyond.
Key Deliverables	<ul style="list-style-type: none"> • Phase 1 – an initial rapid appraisal of natural capital in the Scottish side of Borderlands, which would involve working closely with the Data pilot on: <ul style="list-style-type: none"> ○ Identify biodiversity and natural capital investment priorities across Borderlands ○ Identify natural capital dependencies and opportunities associated with various themes of the whole Borderlands Programme ○ Align D&G and SBC areas with regards to data and knowledge base on Natural Capital assets – SBC already have quality baseline data from the pilot Land Use Strategy (LUS). ○ Create a broad map of biodiversity opportunity areas built on previous work and knowledge within the stakeholder group ○ Package up and prioritise opportunities at scale, identifying potential funding mechanisms for delivery, including consideration of capital and operational costs • Phase 2 – the financial mechanisms would be further developed and applied to deliver portfolios of projects in the following 5 years, including blended finance to stimulate New Market opportunities.
Key Outputs	<ul style="list-style-type: none"> • Phase 1 – production of an Investment Plan highlighting opportunities in the Borderland area and the creation of linkages and contacts in the financial sector, working in collaboration with the Responsible Investment in Natural Capital Programme. • Phase 2 – build on the Investment Plan offers discreet packages of investment for various sectors and locations.
Data Pilot: Natural Capital Data Audit and Mapping	
Lead	Tweed Forum
(Potential) Partners	<ul style="list-style-type: none"> • Galloway and South Ayrshire UNESCO Biosphere • Crichton Carbon Centre • Tweed Forum • NatureScot • SEPA • Dumfries and Galloway Council • Scottish Borders Council • Local educational institutions • South West Scotland Environmental Information Centre • The Wildlife Information Centre (TWIC) • Southern Upland Partnership

	<ul style="list-style-type: none"> • SOSE • Space Intelligence as our technical partner (subject to procurement)
Funding Required	<ul style="list-style-type: none"> • £359,000 Borderlands funding
Key Objective	Using innovative approaches to AI interpretation of satellite data, this project will produce data in a way relevant to and at a resolution that is useful to the Borderlands themes and partner organisations working in the natural capital sector. It will be used to explore land use change, habitat connectivity and restoration, carbon capture, and potential for nature-based solutions.
Key Deliverables	<ul style="list-style-type: none"> • Information audit to understand the data needs of partners across the region • Testing a catchment-wide approach on the ground, where a real-time monitoring data network that is linked with existing (satellite) data to make informed sustainable land use change decisions, support collaboration, and build the evidence base • Creation of a bespoke data set for the South of Scotland required by those working on the Regional Economic Strategy, Natural Capital and other projects within Borderlands that integrates socio-economic data • The mapping imagery and AI processing will be procured to collect and analyse the data, which will be ground truthed, via a combination of partner organisations and citizen science projects, with the results fed back to the model to improve future iterations. • GIS officer will be allocated to focus training and activity amongst partners and NGOs, upskilling the sector and encouraging greater adoption of this technology • 2 part time training posts to enhance digital skills and build capacity within the South of Scotland
Key Outputs	<ul style="list-style-type: none"> • 2 FTE jobs – 1 GIS Officer and 2 PT training posts • Data needs audit of Borderlands schemes, NGOs, and partners • Up-to-date spatial data procured for the Borderlands area in Scotland reflecting the data needs audit • Contemporary monitoring linked to other datasets tested • Links to wider socio-economic data and analysis • Central GIS resource • Training and skills development, including training placement opportunities in GIS, remote data collection and AI interpretation • IT consumables to enable partner organisation to engage with utilising and capturing spatial data • Opportunities for the wider public to engage with the project through citizen science ground truthing

1. Introduction

1.8 The Borderlands Partnership² put forward the unique Borderlands Inclusive Growth Deal to the UK Government and Scottish Government which outlines a cross border and strategic approach to the challenges and opportunities of the region. The Deal was signed with the UK Government and Scottish Government on 18th March 2021. The Deal is made up of £265 million from the UK Government £85 million from the Scottish Government and £102.56 million from local partners. The Deal Agreement states that the following are expected to be achieved over the 20-year benefits realisation period for the Deal, subject to full business cases:

- deliver an additional 5,500 job opportunities
- attract more than four million extra tourists to the area
- improve mobile and digital connections
- unlock investment in towns across the area
- generate around £1.1 billion in GVA for the Borderland's economy³

1.9 The signed Deal defined a package of activities that the governments will support, and described the Natural Capital theme as follows:

“This project underpins the development of the rural economy and supports clean growth. The UK and Scottish Governments will jointly fund up to £5 million in Scotland and the Department for Environment, Food and Rural Affairs will contribute up to £5 million in England, subject to full business case approval, to develop trials and sector strategies to capture the benefits of the region's natural capital. The £5 million for the Borderlands Natural Capital Innovation Zone in the South of Scotland comprises £2.5 million in capital, which is to come from the UK Government, and £2.5 million in revenue, which is to come from the Scottish Government. There are six pilot projects proposed in the South of Scotland to be funded by these capital and revenue allocations.” “The emerging projects on both sides of the border will apply the same natural capital approach and as such will work together in sharing best practice and learning as well as exploring the scope to increase the scale of these trials to wider areas as appropriate.”

1.10 The Natural Capital theme, as identified in the Borderlands Inclusive Growth Deal, underpins the development of the rural economy, and supports clean growth. The UK and Scottish Governments will jointly fund up to £5 million in Scotland and DEFRA will contribute up to £5 million in England, to develop trials and sector strategies to capture the benefits of the region's natural capital. A programme comprised of six pilot projects is proposed in the South of Scotland to be funded. The Programme will deliver a series of pilot interventions aimed at demonstrating the impact of investment in natural capital assets to support long-term economic benefit. This will be achieved by supporting jobs and business growth and provide learning for embedding natural capital considerations into future investment. The six pilot projects are:

- **Two Agri-Environment Pilots:**

² Bringing together the five cross-border local authorities of Carlisle City Council, Cumbria County Council, Dumfries and Galloway Council, Northumberland County Council and Scottish Borders Council

³ Borderlands Inclusive Growth Deal March 2021

- **Embedding Agricultural Resilience for a Productive Future – Farmers, Landowners and Species-rich Grassland (led by Scottish Borders Council)**
- **Whole Farm Audits and Natural Capital Advisory (led by Dumfries & Galloway Council)**

Focused on engagement of farmers and land managers with new ways of working to protect and enhance natural capital and identification of the potential benefits to them through new revenue models linked to public and private sector investment. This will deliver direct economic benefit through new jobs and GVA, as well as safeguarded livelihoods, more sustainable businesses, skills and innovation, and long-term investible projects for the private sector

- **Woodland Pilot: Integrated Land Use and Woodland Creation**

Taking a catchment scale approach to integrated land use and woodland creation to enable the integration of farming and forestry at a landscape scale, engaging landowners and farmers and foresters providing multiple benefits including timber production and natural flood management, identifying alternative revenue models associated with woodland creation, and overcoming siloes to adopt a sustainable agri-forestry model. This will deliver direct economic benefit through new jobs and GVA, as well as additional benefits associated with safeguarded livelihoods, a sustainable forestry sector, innovation in timber production and secondary manufacturing opportunities, and blended finance packages.

- **Marine Pilot: A Sustainable Solway Economy**

Across the two shores of the Solway on both sides of the border focused on habitat restoration in support of biodiversity, climate mitigation and the fishing and shellfish industry and saltmarsh-based livestock products, as well as water quality and coastal flood defence. This will deliver direct economic benefit through new jobs and GVA, as well as progress towards a sustainable farming and fishing industry, additional benefits for the visitor economy, safeguarded livelihoods, and enhanced flood resilience, delivering a legacy of skills, research, and capacity in the region.

- **Investment Pilot: Borderlands Natural Capital Investment Plan**

Associated with mapping a practical action plan for the Borderlands region to develop investable projects based on innovative blended finance and funding models. This could include elements like the development of a catchment trading platform to channel investment into environmental markets, based on a cornerstone outcome (e.g., water quality) but able to expand into other outcomes (e.g., flood risk reduction, biodiversity net gain). This will deliver important economic additionality benefits associated with enhanced investment into the region, new commercial activity, and business opportunities, as well as improved financial contacts, skills, and capabilities.

- **Data Pilot: Natural Capital Data Audit and Mapping**

Including digital mapping of the Borderlands Natural Capital assets and associated economic and non-market benefits, digital integration to challenge siloes, and demonstrating the use of innovative “smart” technology and a data driven approach. This will deliver direct economic benefit through new jobs and GVA, as well as training and skills development, and building innovation and technology capacity in the region.

- 1.11 During 2021 and early 2022, the natural capital leads within Scottish Borders and Dumfries and Galloway authorities were in dialogue with both Scottish Government and

UK Government on the next steps for the Natural Capital Programme and Scottish pilot projects. This led to approval for a Programme Business Case to be developed, with the intention that if successful, the six pilot projects will be brought forward under individual Business Justification Cases in due course.

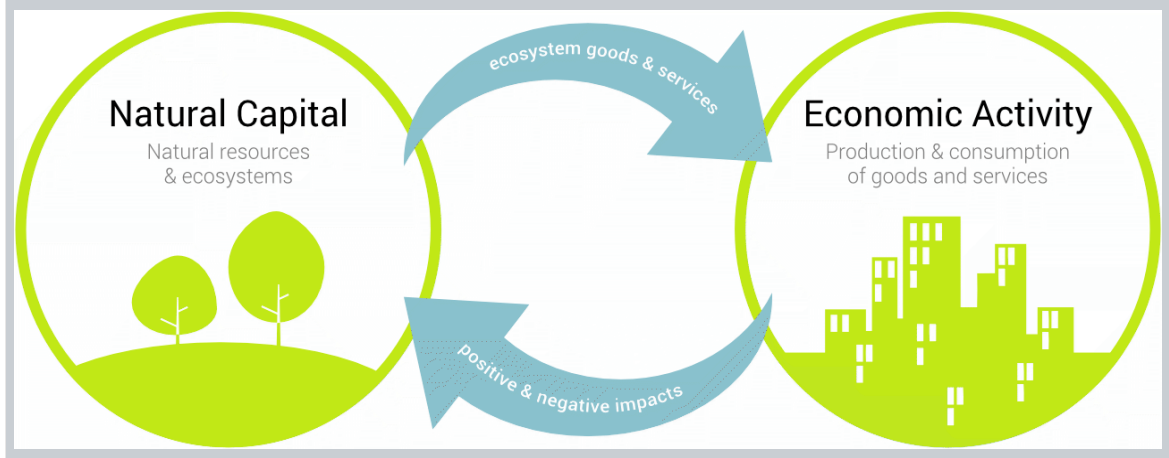
- 1.12 The Business Case for a Natural Capital Programme, made up of several natural capital pilot projects is about delivering innovation across a blend of revenue- and capital-based activities to support a new way of working that reflects the role of natural capital in underpinning regional economic development, community development, and land-use planning and management at a landscape scale. As such, it represents an enabling investment that will help to transform current practices, influence an emerging economic policy area post-Brexit, and support a series of long term and sustainable economic, environmental, and social outcomes. The argument for this economic business case is fundamentally about the direct economic benefit and broader socio-economic and environmental additionality it can bring to the Borderlands region in Scotland, as set out below.

Natural Capital

What is Natural Capital?

According to the Natural Capital Committee, Natural Capital is that part of nature which directly or indirectly underpins value to people, including ecosystems, species, freshwater, soils, minerals, the air and oceans, as well as natural processes and functions. For UK Government, natural capital underpins the other four types of capital: manufactured, financial, human and social.⁴ The Scottish Government framing has natural capital as one of four key pillars, the other three being financial and physical, human, and social capital.⁵ In combination with other types of capital, natural capital forms part of our collective wealth; that is, our ability to produce actual or potential goods and services into the future to support our economic prosperity and wellbeing.

Natural Capital is distinct from Ecosystem Services. Natural Capital is the stock of natural assets found in natural ecosystems, which in turn delivers a range of flows of benefit which accrue to people and wider society termed Ecosystem Services. As such, Natural Capital is the resource that underpins all economic prosperity and finding a way to sustain it and ensure it represents a renewable asset is critical to long term economic health.



⁴ Natural Capital Committee – Natural Capital Terminology report, 2019

⁵ Advisory Group on Economic Recovery – Towards a robust, resilient wellbeing economy for Scotland, 2020

Source: Scotland's Economic Strategy, 2015

In its most recent State of Natural Capital Annual Report 2020⁶, the Natural Capital Committee assesses progress to date against the UK Government's 25 Year Environment Plan. It finds that only moderate or limited progress has been made towards some of the 25 YEP ten goals and many areas of the environment are in decline. The State of Nature Scotland 2019 report⁷ also identifies a continued decline in Scottish wildlife and species, and whilst Scotland's Natural Capital Asset Index 2020⁸ summary suggests natural capital is being maintained north of the border, the potential of Scotland's habitats to contribute to wellbeing remains well below historic levels.

The Natural Capital of the Borderlands region underpins much of its economic prosperity with its reliance on land-based and coastal industries such as, agriculture, forestry, energy, food and drink, tourism, and outdoor recreation. A Natural Capital approach to economic development recognises the role of a healthy environment as the basis of the Region's sustainable economic growth, with natural capital underpinning prosperity, health, and wellbeing⁹, rather than it being treated as incidental or an obstacle. As a result, the future land and marine assets of the region are recognised as a critical element of its future economic growth and resilience.

- 1.13 The Borderlands region has a wealth of unique and diverse natural capital assets which yield a wide range of economic, environmental, and social benefits for the region, on a spectrum from core economic activities delivering jobs and GVA, through to wider non-market benefits that themselves support further important parts of the economy. Yet much of the management of this natural capital currently relied on EU subsidy to survive. As a result, there is a need to adapt to a new approach to land and marine management practices in a post Brexit context, making the natural capital proposals highly important to influence or inform policy and management decisions for the region's future economic resilience.
- 1.14 The principle of the Natural Capital Programme that the Scottish authorities of the Borderlands Partnership want to take is that the environment is no longer regarded as incidental or an obstacle to economic development, but that a healthy environment is the basis of developing a wellbeing economy and future resilience, thereby directly contributing to the strategic objectives for the Borderlands Inclusive Growth Deal. This principle is explained in detail in the Strategic and Economic Cases.

Structure of the Business Case

- 1.15 The programme business case follows the Green Book Five Case Model Programme Business Case guidance.¹⁰ Under this model, five key dimensions are addressed:
- The Strategic Case – this section makes the case for change and demonstrates how the business case provides strategic fit

⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/858739/ncc-annual-report-2020.pdf

⁷ <https://www.nature.scot/state-nature-scotland-report-2019>

⁸ <https://www.nature.scot/sites/default/files/2020-04/Scotland%27s%20Natural%20Capital%20Asset%20Index%202020%20-%20Update%20summary.pdf>

⁹ National Strategy for Economic Transformation, Scottish Government, March 2022

¹⁰ HMT Guide to Developing the Programme Business Case, 2018.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/749085/Programme_Business_Case_2018.pdf

- The Economic Case – this section identifies the proposal(s) that will deliver the best value, including wider economic, social and environmental effects
- The Financial Case – this section demonstrates the affordability and funding of the preferred option, including the support of stakeholders and customers, as required
- The Commercial Case – this section demonstrates that the preferred option(s) will result in viable procurement and a well-structured Deal between the public sector and its service providers
- The Management Case – this section demonstrates that robust arrangements are in place for the delivery, monitoring, and evaluation of the scheme, including feedback into the organisation’s strategic planning cycle

1.16 As outlined above, the intention is that once approval is secured for the programme business case, this will be followed by individual business justification cases and / or full business cases for the six natural capital pilot projects, based on Green Book Better Business Cases guidance and the Single Stage Business Case – Medium Value and Risk template¹¹.

¹¹ Medium-cost risk Business Justification Case template, HMT
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/935531/Template_for_medium-cost-risk_business-justification-case.docx

2. Strategic Case

Strategic Context

Organisational overview

- 2.1 The following local authorities and organisational partners are involved in the Borderlands Natural Capital Programme on the Scottish side.
- Scottish Borders Council
 - Dumfries and Galloway Council
 - South of Scotland Enterprise (SOSE)
 - Nature Scot
 - Scottish Environment Protection Agency (SEPA)
 - Marine Scotland
 - Crown Estates Scotland
 - Scottish Forestry
 - Rural Payments and Inspections Division

Alignment with policy and objectives

- 2.2 The strategic policy drivers and challenges that the Natural Capital Programme will help to address in Scotland are summarised below.
- 2.3 The proposal aligns with Scottish Government's policy requirements - as mentioned in the Programme for Scotland 2019-20 & 2020-2021 - to deliver the Scottish Land Use Strategy by establishing Regional Land Use Partnerships (RLUPs), and the need to reconcile the requirements of the main strategic drivers for land use and marine management set out in government legalisation and policy documents.
- 2.4 The Natural Capital Programme has been designed at the outset to deliver potential implementation projects for the RLUP under the emerging Regional Land Use Framework. The framework is likely to include high-level regional priorities for land use and marine management to enhance the region's natural capital assets and deliver against climate change and biodiversity objectives.
- 2.5 A detailed list of these documents and their key messages are included in Appendix A, with a summary of key strategic drivers below

Table 2.1 Policy and Strategic Alignment

Headline land-use/marine management, and holistic economic growth strategies both regional and national which particularly highlight the role of the green and blue economy and Natural Capital:

- **Scotland's National Strategy for Economic Transformation (2022)**¹² sets out the priorities for Scotland's economy as well as the actions needed to maximise the opportunities of the next decade to achieve the vision of a wellbeing economy. Natural Capital will be central to how Scotland transforms its economy and one of the Strategy's actions is to develop a high integrity values-led market for responsible private investment in natural capital.
- **The Scottish Budget 2023/24** highlights the green economy and strengthening Scotland's pandemic recovery as a major focus, outlining Scottish Government's ambition to build a stronger, fairer, greener economy for all Scotland's people and places, and to make the economy more sustainable and resilient in the long term.¹³
- **The 2022/23 Programme for Government** outlines how Scottish Government will deliver changes which will underpin a greener, fairer Scotland and how they will realise Scotland's potential to become a global green energy powerhouse.¹⁴
- **South of Scotland Regional Economic Strategy (RES) (2021)**¹⁵ which sets out a bold vision for the South of Scotland to be Green, Fair and Flourishing by 2031.
- **South of Scotland RES Delivery Plan 2022-2025 (2021)** outlines how the region's economic strategy will be delivered. Theme 5 (Green and Sustainable Economy) outlines priorities surrounding the green and sustainable economy, including to harness and enhance Natural Capital in the region. The Borderlands Inclusive Growth Deal is included in the RES under Theme notably Action 5c: to develop proposals to increase opportunities and benefits arising from the region's natural capital assets including support for sustainable agriculture, woodlands and forests, restoring peatlands, marine management, water management and increasing biodiversity
- **Circular Economy** The Circular Economy Bill was introduced to Parliament on 13th June 2023 and is now published on the Scottish Parliament website at the following link [Circular Economy \(Scotland\) Bill – Bills \(proposed laws\) – Scottish Parliament | Scottish Parliament Website](#)

Sitting in a wider landscape of economic strategies, including:

- UK Industrial Strategy (2017)¹⁶
- Levelling Up the United Kingdom White Paper (2021)¹⁷
- Scotland's Economic Strategy 2015
- Scotland's National Planning Framework 3 (NPF3) and NPF4 (published Feb 2023)
- Future Fisheries: management strategy - 2020 to 2030 (www.gov.scot)

Following the Covid-19 pandemic, there is also a renewed focus on the wellbeing economy and how this can help to drive a green recovery:

- The recent report from the Advisory Group on Economic Recovery (AGER) on a resilient wellbeing economy for Scotland post-Covid 19
- UK Government's Covid-19 Recovery Strategy (2020)

These economic strategies are supported by a series of headline land use, marine, and environmental strategies:

¹² Scotland's National Strategy for Economic Transformation, Scottish Government, March 2022

¹³ [Scottish Budget 2023-24](#)

¹⁴ [The 2022/23 Programme for Government](#)

¹⁵ South of Scotland Draft Regional Economic Strategy, South of Scotland Regional Economic Partnership, 2021

¹⁶ Industrial Strategy Building a Britain fit for the future, UK Government, 2017

¹⁷ [Farming Innovation Programme – Farming Innovation Programme \(ukri.org\)](#)

-
- **Update to the Climate Change Plan (2018-2032) *Securing a Green Recovery on a Path to Net Zero*** - “Scotland’s Natural Capital is of great economic significance; it is believed to account directly for more than 60,000 jobs in Scotland. It is vital to our tourist industry, which employs more than 200,000 people across the country and it is essential to Scotland’s food and drink sector”and “A clear opportunity for recovery and renewal in Scotland lies in our massive marine zone - six times the size of Scotland’s land mass. Our rich marine natural capital has the potential to help drive Scotland’s green recovery from COVID-19. The Organisation for Economic Cooperation and Development forecast the global blue economy to double from 2010 to 2030”
-
- **Scottish Land-Use Strategy 2021-2026** which outline a series of land use objectives including: 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; Urban and rural communities better connected to the land, with more people enjoying the land and positively influencing land use.
-
- **Scotland’s Draft Biodiversity Strategy 2022-2045** which sets out an ambitious new strategy to halt biodiversity loss by 2030 and reverse it with large-scale restoration by 2045.¹⁸
-
- **Biodiversity Strategy Post-2020: A Statement of Intent** which signals Scottish Government’s ambitions for Scotland in tackling the twin crises of climate change and biodiversity loss and outlines key priorities to achieve this such as extending the area protected for nature in Scotland to at least 30% of its land area by 2030.
-
- **Regional Land Use Partnerships and Framework (RLUPs)** Scottish Government pilot RLUPs are one of the key platforms for change in the national LUS. The pilots aim to test the practicalities of different ways to establish RLUPs and outline in a Framework (RLUF) how to use a natural capital approach to identify and agree upon current and potential land use changes across the region that support the delivery of Scottish Government’s climate change targets and other environmental objectives, including improving biodiversity. The RLUP is aligned to the Regional Economic Partnership and Regional Economic Strategy as noted above.
-
- **National Marine Plan (2015)**¹⁹ and the proposed ‘NMP2’ (final plan expected late 2025/early 2026), which sets out the vision for the marine environment – “clean, healthy, safe productive and diverse seas; managed to meet the long term needs of nature and people”
-
- **Blue Economy Vision for Scotland (2022)**²⁰ sets out Scottish Government’s long-term ambition for Scotland’s blue economy to 2045 – “By 2045 Scotland’s shared stewardship of our marine environment supports ecosystem health, improved livelihoods, economic prosperity, social inclusion, and wellbeing”
- Supported by a wider landscape of national and regional environmental policies that address the twin crises of climate change and biodiversity loss:
-
- UK Government 25 Year Environment Plan (2018)²¹
 - Climate Change (Emissions Reduction Targets) (Scotland) Act 2019
 - Scottish Biodiversity Strategy: ‘It’s in your hands’ 2004, & Scotland’s Biodiversity Strategy Post 2020: A Statement of Intent
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¹⁸ [Scotland’s Biodiversity Strategy to 2045](#)

¹⁹ [National Marine Plan \(2015\)](#)

²⁰ [Blue Economy Vision for Scotland \(2022\)](#)

²¹ A Green Future: Our 25 Year Plan to Improve the Environment, UK Government, 2018

-
- NatureScot: Delivering Scotland’s Ambition to Secure Positive Effects for Biodiversity (2020)
 - Environment Strategy for Scotland: Vision and Outcomes
 - Dumfries and Galloway Climate Change Emergency Declaration (2019)
 - Scottish Borders Climate Change Route Map (2021)
-

Renewed emphasis across the public sector on the importance of sustainable development drivers:

- As a signatory to the UN Sustainable Development Goals, and the National Outcome Indicators for Inclusive Growth to include the ‘Wellbeing Economy’²²
 - NatureScot’s Corporate Plan ‘Connecting People and Nature’: refers to sustainable prosperity and wellbeing
 - SEPA’s ‘One Planet Prosperity’ plans refer to the SDGs
 - The statutory aims of SOSE include improving the amenity and environment of the South of Scotland as well as furthering sustainable economic and social development
-

Numerous national policies that address the challenges and opportunities associated with the main land and marine use type sectors in the Borderlands region:

- Scottish Forestry Strategy 2019 – 2029
 - Ambition 2030 – A Growth Strategy for Farming, Fishing, Food and Drink
 - Scotland’s Historic Environment Strategy 2014 – ‘Our place in time’
 - The Scottish National Marine Plan 2015 and proposed ‘NMP2’ (final plan expected late 2025/early 2026).
 - Scottish Energy Strategy: The future of energy in Scotland 2017
 - Scotland 2030 – ‘Responsible Tourism for a Sustainable Future’²³
 - Our Vision for Scotland as a leader in sustainable and regenerative farming (2022)
 - Solway Tweed River Basin Plan 2021-2027²⁴
 - SEPA Flood Risk Management Plans 2022²⁵
-

Relevant local policies specific to the Borderlands region:

- South of Scotland Enterprise (SOSE) Operating Plan²⁶
 - Scottish Borders Woodland Strategy 2005 and 2012 update
 - Scottish Borders Land Use Strategy pilot
 - Scottish Borders Local Biodiversity Action Plan 2018-28
 - Regional Land Use Partnership and Framework for the South of Scotland, and delivery of the Scottish Government pilot
 - Scottish Borders Economic Strategy 2023
 - Dumfries and Galloway Regional Economic Strategy 2015-2020
 - Dumfries and Galloway Forestry and Woodland Strategy
 - Dumfries and Galloway food and drink strategy
 - Dumfries and Galloway Local Biodiversity Action Plan
 - Path to Sustainable Farming: An Agricultural Transition Plan 2021 to 2024
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²² <https://www.gov.scot/groups/wellbeing-economy-governments-wego/>

²³ <https://scottishtourismalliance.co.uk/scotland-outlook-2030-download/>

²⁴ 211221-final-rbmp3-solway-tweed.pdf (sepa.org.uk)

²⁵ Flood Risk Management Plans | SEPA

²⁶ https://www.southofscotlandenterprise.com/media/1134/sose_operatingplan20_interactive.pdf

Source: Borderlands Partnership and Hatch, 2022

Other strategic drivers

- The UK's exit from the European Union is resulting in changes to the current system of land and sea management practices and subsidies. This, along with measures required to tackle climate change, presents challenges and potential radical alterations to land and sea use patterns. These changes are likely to lead to traditional upland areas in the Borderlands becoming more financially marginal, further embedding siloed thinking and short termism, and threatening the viability of the farming and fishing sector as well as the social and cultural structures that farming and fishing supports.
- Interest in developing novel investment models and making natural capital projects investable for the private sector is accelerating²⁷. For example, the Billion Pound Challenge in Scotland, led by the Scottish Wildlife Trust and the Scottish Environment Protection Agency (SEPA), is an initiative to pioneer, develop, and showcase cutting edge- investment and funding models to close the gap between public and private sector funding, with the potential to generate £1 billion for biodiversity. Similarly, the Scottish Conservation Finance Project aims to generate new forms of investment in Scotland's stocks of natural capital in ways that will deliver significant economic, social, and environmental benefits, as well as returns for investors.
- Additionally, NatureScot and its partners are exploring innovative approaches to secure more varied and sustained investment in nature through the Facilitating Local Natural Capital Investment project.²⁸
- Additionally, COP26 discussed the emerging idea of Finance for Nature, highlighting the role of private finance in the global transition to more sustainable pathways. The debate centred on the need to include nature in financing accounts and how new parameters such as nature, biodiversity loss, and social impact can be included into traditional investment models. The development of the Taskforce on Nature-related Financial Disclosures will help to facilitate reporting on the risks in relation to nature. Whilst only 3% of global finance is being spent on nature-based solutions, the programme presented several examples of how financing nature and nature-based solutions is both possible and profitable.²⁹
- There is a significant track record in piloting natural capital activity in the region, including on the Scottish side of the border, e.g., the Natural Capital Protocol trial by Scottish Forum³⁰, and the Tweed Forum's work to leverage investment in natural capital³¹. The proposal for a Natural Capital Programme is unique in bringing together different pilots and will harness this good practice and drive forward the next wave of new ways of working in alignment with the ambitions of the Scottish Land Use Strategy and pilot RLUPs.

²⁷ <https://www.iema.net/preview-document/accelerating-private-investment-in-nature-based-solutions>

²⁸ Hume, A., Gibson, A., Fitton, R. and Mansfield, J. 2021. Facilitating Local Natural Capital Investment – project report. NatureScot Research Report 1272.

²⁹ <https://www.globalethicalfinance.org/2021/11/25/finance-for-nature-in-nature-at-cop26/>

³⁰

https://naturalcapitalscotland.com/docs/070_525__trialofncpforland_basedbusinesses_overviewreport_1539873053.pdf

³¹ <http://www.tweedforum.org>

- The climate crisis, Covid-19 and calls for a green recovery towards a wellbeing economy in Scotland³², and the biodiversity crisis are all key drivers for this proposal.
- Additionally, there is a lot of public research and engagement in Scotland around marine natural capital and its value, benefits etc. The DEEP project, Project Seagrass and others have proven that businesses have an interest in investing in natural capital. Project Seagrass have the band Coldplay as ambassadors/patrons, as well as support from Hendricks Neptuna Gin, Yo Sushi and Brewgooder.
- Building on the ambition for Scotland to deliver a values-led and high-integrity market for natural capital set out at COP26, Scottish Government have recently submitted a set of Interim Principles for responsible private investment in Scotland's natural capital, in advance of more formal policy documents. As a priority action under the National Strategy for Economic Transformation, the Scottish Government will develop new market infrastructure, rules, and governance for responsible private investment in natural capital. The principles include investment that:³³
 - Delivers integrated land use
 - Delivers public, private, and community benefit
 - Demonstrates engagement and collaboration
 - Is ethical and values-led
 - Is of high environmental integrity
 - Supports diverse and productive land ownership

Key Messages from Strategic Policy Drivers

- 2.6 The key policy and strategic drivers discussed above highlight several key messages that the Borderlands Natural Capital Programme will respond to, including:
- Economic resilience – supporting GVA and employment generation, as well as local training and education opportunities, in future-proofed sectors
 - Environmental sustainability – supporting enhanced landscapes and seascapes, improved woodland cover and peatlands, and enhanced biodiversity
 - Valuing the natural environment – supporting innovative ways to commercialise land management approaches and increase private investment in natural capital
 - Non-tangible value benefits such as improved wellbeing through knowledge and access to blue/green space
 -
 - Building buy-in across stakeholder groups – working collaboratively with local farmers, organisations, and stakeholders to deliver economic, environmental and social benefits

³² AGER report – Towards a robust, resilient wellbeing economy for Scotland, 2020

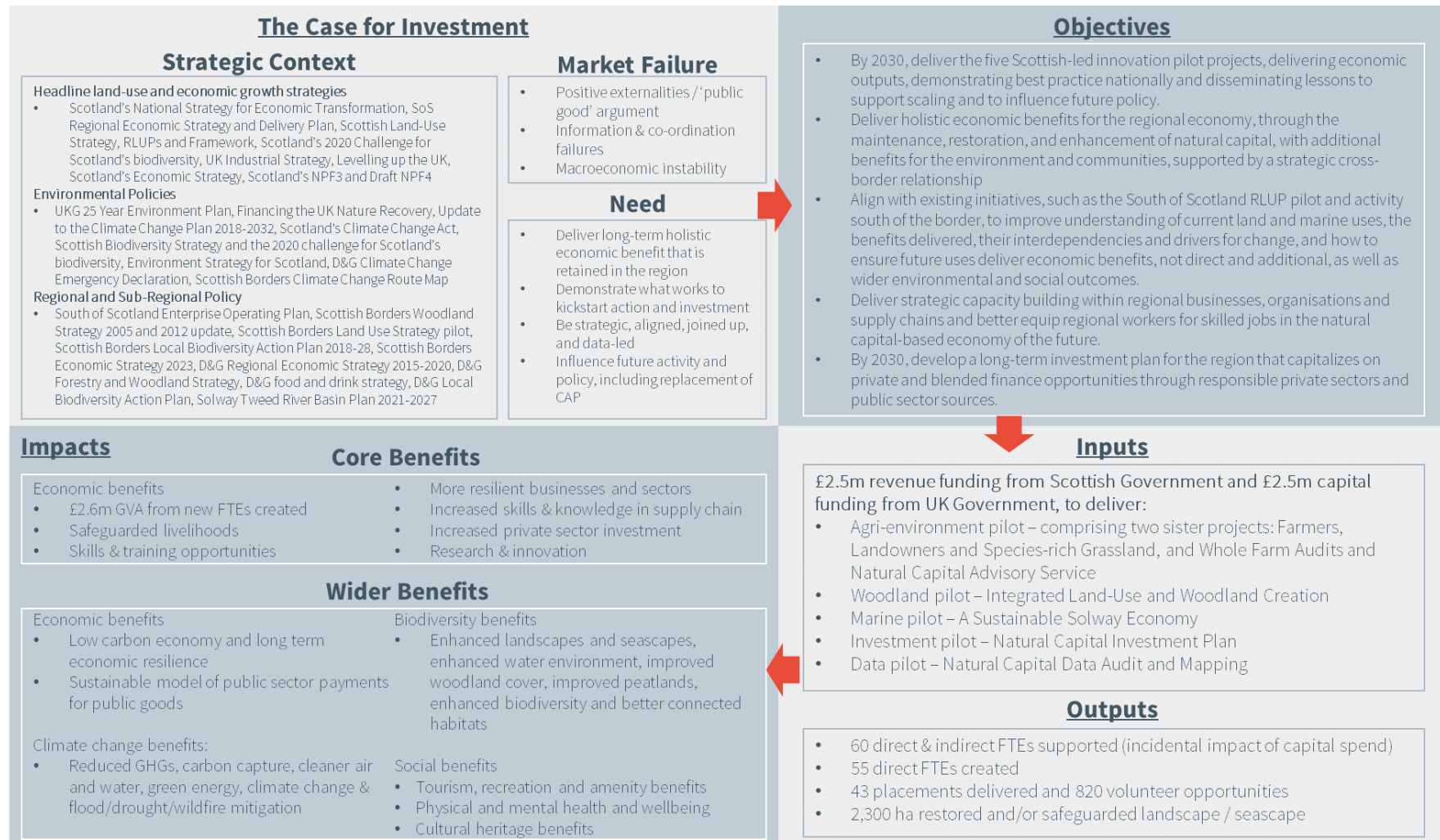
³³ <https://www.gov.scot/publications/ministerial-statement-on-interim-principles-for-responsible-investment-in-natural-capital/>

The Case for Change

Borderlands Natural Capital Programme – Logic Model

- 2.7 A logic model is presented below for the Borderlands Natural Capital Programme in Scotland.

Figure 1.1 Borderlands Natural Capital Programme in Scotland – Logic Model



Source: Borderlands Partnership and Hatch, 2022

Investment objectives

- 2.8 The natural capital assets of the Borderlands region in Scotland underpin a great deal of its economic activity and prosperity, through both direct dependency sectors such as agriculture and fishing, forestry, and the visitor economy, and those that indirectly depend on the natural economy such as hospitality, food and drink, manufacturing, energy, renewables, and utilities.
- 2.9 However, the reliance of the regional economy on natural capital is not fully recognised currently, and the planning and coordination of the Borderlands' nature-based assets is fragmented from economic development with the consideration of economic benefits being treated separately from the wider environmental and social benefits that it delivers. This presents challenges to those charged with managing a largely upland countryside, particularly related to marginal financial viability and a current reliance on national subsidy.
- 2.10 Improving the integration of land planning and delivery to support a wider set of economic activities and opportunities for long term resilience, whilst providing multiple wider, non-market benefits, will lead to better outcomes for the economy, the environment, and communities by capitalising on the region's unique natural resources. A Borderlands Natural Capital Programme in Scotland will enable a collective, coordinated, strategic approach to enhancing and growing the region's natural capital, both land and water, and associated economic opportunities through innovative integrated land use and management, informed decision-making, and improved communication across stakeholder groups.
- 2.11 The vision is to demonstrate the potential for a progressive natural capital-based economy to underpin the region's prosperity. This closely aligns with Scotland's strategic ambitions for a robust and resilient wellbeing economy, with South of Scotland's vision to be "green, fair and flourishing by 2031" with natural capital driving green growth, and with the Borderlands Growth Deal's ambition "for the Borderlands to reach its potential for everyone, delivering green growth and attracting new businesses and investment". Both Dumfries and Galloway and Scottish Borders Councils have been heavily engaged with and endorse this vision for the region.
- 2.12 The following objectives have been identified for the Borderlands Natural Capital Programme in Scotland:
- 1) **By 2030, deliver the six Scottish-led innovation pilot projects, delivering economic outputs, demonstrating best practice nationally and disseminating lessons to support scaling and influence future policy.**
Aligns with Action 5(A) of SoS RES Delivery Plan 2021 to undertake natural capital opportunity mapping and work to develop specific investment propositions.
 - 2) **Deliver holistic economic benefits for the regional economy through the maintenance, restoration, and enhancement of natural capital, with additional benefits for the environment and communities, supported by a strategic cross-border partnership.**
Aligns with the vision of the National Strategy for Economic Transformation (2022) which describes how natural capital will be used to transform the economy whilst creating more, well-paid, and secure jobs and developing new markets based on renewable sources of energy and low carbon technology. It also aligns with the SoS RES vision to use the region's natural capital assets to drive green growth.
 - 3) **Align with existing initiatives, such as the South of Scotland RLUP pilot and activity south of the border, to improve understanding of current land and**

marine uses, the benefits delivered, their interdependencies and drivers for change, and how to ensure future uses deliver economic benefits, both direct and additional, as well as wider environmental and social outcomes.

Aligns with Action 5(C) of SoS RES Delivery Plan 2021 to develop proposals to increase the opportunities and benefits arising from the region's natural capital.

- 4) Deliver strategic capacity building within regional businesses, organisations and supply chains and better equip regional workers for skilled jobs in the natural capital-based economy of the future.**

Aligns with Action 5(D) of SoS RES Delivery Plan (2021) to take forward recommendations within the SOS Community Wealth Building pilot report, and the National Strategy for Economic Transformation (2022) to deliver new, good, green jobs through investment in education, skills, and capacity building.

- 5) By 2030 develop a long-term investment plan for the region that capitalises on private and blended finance opportunities through both responsible private sector and public sector sources.**

Aligns with the National Strategy for Economic Transformation (2022) aim to establish a values-led, high-integrity market for responsible investment in natural capital.

Existing arrangements

Baseline

- 2.13 The Borderlands region is a unique area whose assets include high quality and varied natural landscapes which support land/marine based sectors such as farming, forestry, fishing, energy, as well as residential desirability and tourism. It represents 10% of UK landmass and is home to over 1 million people.
- 2.14 Over 13.5% of all employment in the South of Scotland was in the natural economy in 2018³⁴ and around 7.5% of Scotland's workforce are employed in nature-based jobs (19 5,000 jobs). Between 2015-2019 jobs in this sector accounted for a third of all job growth in Scotland.³⁵
- 2.15 However, there is currently no comprehensive baseline or register of natural capital in Scotland, and in particular the Borderlands region including marine based natural capital.
- 2.16 At a national level, Scotland's Natural Capital Asset Index attempts to quantify and track changes in the capacity of Scotland's terrestrial ecosystems to provide benefits to people. Notably it does not include the benefits from the marine environment. Whilst it does not include monetary values, a set of experimental natural capital accounts looked at the contribution of Scotland's natural capital in monetary terms in 2019 and 2020.
- 2.17 The Area Characterisation for the Scottish Borders Local Authority area describes it as geographically characterised by the catchment of the River Tweed, with arable farmland and grazing land accounting for 57% of land cover, woodland accounting for 23%, and

³⁴ https://www.sruc.ac.uk/download/downloads/id/4648/natural_economy_report_to_sruc_from_biggar_economics.pdf

³⁵ NatureScot (2021) Nature-based Jobs and Skills

heath / moor, bog, and peatland accounting for 20%.³⁶ Note that data for Dumfries and Galloway is not available in the same manner.

Threats

- 2.18 The baseline picture is not secure, and natural assets are being depleted and damaged with implications for those economic and social activities which are supported by them. For example, 37% of SSSI features in the Scottish Borders are in (un)favourable declining or unfavourable no change conditions. Woodland in the region is largely conifer plantation (17% land cover in Scottish Borders and >30% in Dumfries and Galloway), and whilst productive for timber output, this land is low in biodiversity and recreational value. Only 1.4% of the landcover across both Scottish Borders and Dumfries and Galloway is semi-natural woodland.³⁷
- 2.19 Across Scotland, the GVA generated by the natural economy declined over the period 2008-2018 by 18%, mainly due to a decline in the GVA generated by the energy sector³⁸.
- 2.20 The UK Government has ambitious plans for the advancement of nature-based solutions³⁹ but several challenges exist which may prevent widespread adoption. These include:
- Skills deficits to deliver nature-based solutions at scale, including in forestry, ecology, and habitat restoration
 - Lack of support for those responsible for farming, including advisory to help them negotiate a new funding landscape and support to change farming methods
 - The need for more funding in several key areas, including research, science, skills programmes, and public delivery bodies.⁴⁰
 - The need for robust comprehensive data that creates a comprehensive and accurate picture of current natural capital assets⁴¹, so that progress can be monitored and reported to relevant audiences.

Existing Support

- 2.21 There is a wide policy landscape contributing directly and indirectly to supporting economic activity in Scotland. Those with a particular focus on natural capital include:⁴²
- **National Strategy for Economic Transformation (2022)** – sets out the Vision for Scotland’s economy in 2032. This is supported by several programmes including the Rural Entrepreneur Fund, Green Jobs Fund, and the Climate Emergency Skills

³⁶ Dickie, I. and Royle, D. 2021. Facilitating Local Natural Capital Investment – Scottish Borders Area Characterisation. NatureScot Research Report 1284

³⁷ Dickie, I. and Royle, D. 2021. Facilitating Local Natural Capital Investment – Scottish Borders Area Characterisation. NatureScot Research Report 1284

³⁸ https://www.sruc.ac.uk/download/downloads/id/4648/natural_economy_report_to_sruc_from_biggar_economics.pdf

³⁹ The term “nature-based solutions” is used to mean working with the grain of nature to achieve a range of benefits, including enhanced biodiversity, flood alleviation, better livelihoods for local communities, and contributing to greenhouse gas reductions, either by storing carbon or by preventing its release.

⁴⁰ [Nature-based solutions: rhetoric or reality? - The potential contribution of nature-based solutions to net zero in the UK \(parliament.uk\)](#)

⁴¹ AGER - Towards a robust, resilient wellbeing economy for Scotland, 2020

⁴² [Meeting of the Advisory Council for the National Strategy for Economic Transformation: FOI release - gov.scot \(www.gov.scot\)](#)

Action Plan which have particular relevance to natural capital and the green economy.

- **The Food and Drink Sector Recovery Plan** – sets out a stream of actions to be delivered to 2023, to recover from the impacts of Covid0-19 on the sector and accelerate the core work of the sector’s overall strategy – Ambition 2030.
- **The Climate Emergency Skills Action Plan** – identifies a series of priority areas focused on employers, education and individuals that will help Scotland capitalise on job opportunities emerging from a net-zero transition.
- **The Skills Action Plan for Rural Scotland** – sets out a partnership approach to developing the skills and talent needed to make sure that Scotland’s rural economy and communities continue to flourish and grow. Focussing on education and skills provision tailored to the needs of the rural economy.
- **The Green Jobs Workforce Academy** – will support existing employees, and those who are facing redundancy, to assess their existing skills and undertake the necessary upskilling and reskilling they need to secure green job opportunities as they emerge.
- **The Natural Capital Asset Index** – monitors the quality and quantity of terrestrial habitats in Scotland, according to their potential to deliver ecosystem services now and into the future.
- **The Environment Strategy for Scotland** – sets out an overarching framework for Scotland’s existing environmental strategies and plans, including the Climate Change Plan
- **A Blue Economy Vision for Scotland** - sets out the long-term ambition for Scotland’s blue economy to 2045. It demonstrates how much the marine environment it valued and its significance. This is captured in six outcomes sitting across a range of environmental, social and economic ambitions.

2.22 Additionally, there are numerous funding schemes including:

- **The Scottish Rural Development Programme**⁴³ - aims to enhance the rural economy, support agricultural and forestry businesses, protect, and enhance the natural environment, address the impacts of climate change, and support rural communities
- **The Agri-Environment Climate Scheme** - promotes land management practices that protect and enhance Scotland’s natural heritage, improves water quality, manages flood risk, and helps to mitigate and adapt to climate change
- **The Forestry Grant Scheme** that supports sustainable management of existing woodlands and the creation of new woodlands
- **Marine Fund Scotland(Marine and fisheries grants - gov.scot (www.gov.scot)**, which delivers on Scotland’s Blue Economy Vision, (pub 2022) and can support eligible individuals, businesses, organisations and communities to deliver projects which contribute to an innovative and sustainable marine economy, reducing carbon emissions and supporting coastal communities
- **Scottish Marine Environmental Enhancement Fund (SMEEF)** is a trusted enabler, providing an innovative mechanism to funding projects in the Scottish marine and coastal environment (www.smeef.scot/)

⁴³ [Scottish Rural Development Programme | NatureScot](#)

- **SEPA's Water Environment Fund⁴⁴** – which aims to restore Scotland's catchments where historical activities have left them damaged, often resulting in water bodies being downgraded in the river basin management plan
- **NatureScot Nature Restoration Funds⁴⁵** – which encourages applicants with projects that restore wildlife and habitats on land and sea and address the twin crises of biodiversity loss and climate change
- Previous EU funding schemes also included:
 - **Common Agricultural Policy** – an income support scheme for farmers engaging in agricultural activities. Schemes within this policy included the basic payment scheme which accounted for over £250 million of payments in Scotland in 2020, the sustainable land use scheme, and the less favoured area support scheme⁴⁶.
 - **LEADER Funding Programme** – a scheme that was available for Local Action Groups (LAGs) for funding projects that created jobs, helped businesses to grow, and benefited the rural community under the LEADER scheme. LEADER funding was delivered via LEADER LAGs and was available to local businesses, communities, farmers, foresters, and land managers.
 - **European Maritime and Fisheries Fund (EMFF)** which helped fishers to adopt sustainable fishing practices and coastal communities to diversify their economies, improving quality of life along European coasts.

2.23 There is currently a siloed availability of agricultural farming advice, with little collation of support in the context of Natural Capital Assessment, values, qualities, etc. Some guidance programmes do exist in isolation, and these include:⁴⁷

- Scotland's Farm Advisory Service (a part of the Scottish Rural Development Programme)
- Monitor Farm Programme
- Crofters and Smallholders Skills Boost
- Future Farming Scotland
- SEPA Diffuse Pollution in the Rural Environment

2.24 Finally, there are existing natural capital pilot projects including the South of Scotland RLUP Pilot Project which aims to identify opportunities for land use change at a regional and landscape level to deliver environmental, socio-economic, and climate change goals through the production of a regional Land Use Framework.⁴⁸

2.25 However, under existing arrangements there is a lack of progress and implementation gaps still exist due to a number of factors including: knowledge gaps and the need to push best practice further to demonstrate effectiveness, reduce costs, and find ways to scale-up smaller scale interventions.

⁴⁴ [SEPA Water Environment Fund](#)

⁴⁵ [Scottish Government Nature Restoration Fund \(NRF\)](#)

⁴⁶ [Renewing-Scotlands-Rural-Areas-revisited.pdf \(scotlink.org\)](#)

⁴⁷ [Support for farmers and land managers | NatureScot](#)

⁴⁸ [South of Scotland Regional Land Use Pilot - Progress to Date \(2021\)](#)

Benefits

- 2.26 The Borderlands’ rich and diverse natural capital assets yield a wide range of economic, environmental, and social benefits for the region, on a spectrum from core economic activities delivering jobs and GVA, through to wider non-market benefits that themselves support further important parts of the economy.
- 2.27 These include **direct dependency sectors** that are mainly land/sea-based and environmental industries, such as the dairy and livestock industry (both lowland and upland farming), arable and forestry activity, and fisheries, with associated upstream and downstream expertise and capacity. These sectors also act as custodians and managers of the landscape and deal with the challenges and opportunities in sustainable landscape and land management in a way that further supports other parts of the economy. This includes **indirect dependency sectors**, including associated innovative and successful business clusters relating to the outdoor tourism, food and drink, and hospitality sectors, and linked skills provision with the Further and Higher Education sectors. Other major industries are also linked to land-based industries such as food and drink related manufacturing and forestry and paper products, as well as the growth of renewable energy and technology sectors.⁴⁹ The following direct benefits are associated with these sectors:

Table 2.2 Benefits of Natural Capital Assets	
Direct Dependency Sectors	
Sector	Benefits
Agriculture and Fishing (A&F)	<p>Employment and GVA:</p> <ul style="list-style-type: none"> • Across Scotland, agriculture provides 2.5% of employment, increasing to 10% in some rural areas.⁵⁰ • As of 2021, crop and animal production accounted for almost 6% of employment in the Scottish Borderlands authority areas (6,700 jobs), of which 3,500 jobs were in Dumfries and Galloway and 3,200 jobs were in Scottish Borders.⁵¹ • As of 2020, crop and animal production, hunting and related service activities contributed circa. £102m to the Scottish economy, accounting for c. 0.1% of Scotland’s total GVA.⁵² • The industry also makes significant contributions to other industries, including in 2022 supporting a further 17,500 enterprises in the food and drink industry.⁵³
Forestry	<p>Employment and GVA:</p> <ul style="list-style-type: none"> • As of 2021, across Scotland, forestry and logging accounts for 0.2% of employment (6,000), this rises to 0.9% in Dumfries and Galloway (650) and 1.3% in Scottish Borders (600). The sector has also grown since 2015, by 60% in both Scotland

⁴⁹ https://www.dumgal.gov.uk/media/18717/Regional-Economic-Strategy-2016-2020/pdf/Regional_Economic_Strategy_2016_-_2020.pdf?m=636592257429570000

⁵⁰ Farming and Food Production – Future Policy Group Report Draft (2020) [Farming and Food Production Future Policy Group report: EIR release - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/farming-and-food-production-future-policy-group-report-2020/pages/1-to-100.aspx)

⁵¹ Skills Development Scotland (2022). Regional Skills Assessment, South of Scotland. Skills Development Scotland (2022). Regional Skills Assessment, Dumfries and Galloway. Skills Development Scotland (2022). Regional Skills Assessment, Scottish Borders.

⁵² Scottish Annual Business Statistics (2020)

⁵³ <https://www.gov.scot/publications/growth-sector-statistics/>

	<p>and the Scottish Borders and by 30% in Dumfries and Galloway.⁵⁴</p> <ul style="list-style-type: none"> • As of 2020, forestry and logging contributed c. £193m in GVA to Scotland's economy, accounting for c. 0.2% of Scotland's total GVA. • The key economic activities associated with forestry are through the production of timber and other wood fibre, and through the provision of recreation and tourism assets. In 2015, forestry and timber processing contributed £771 million GVA and employed almost 20,000 FTEs, while forest recreation and tourism contributed £183 million GVA and employed just over 6,000 FTEs.⁵⁵ <p>Natural Capital:</p> <ul style="list-style-type: none"> • In Scotland, some 443k hectares of the forest resource are classified as native woodland and are regarded as being of high value of biodiversity.⁵⁶ • The Forestry Commission's National Forest Inventory (NFI) estimates that softwood availability for the Scottish Borderlands' forest estate (across Forestry Commission and private estates) will increase from 3.8 million cubic metres per year in 2017-21 to 5 million in 2027-31, after which it will reduce to 2.7 million in 2047-51.⁵⁷ This will have knock-on effects in terms of market products, jobs and GVA, but also in terms of wider non-market benefits. For example, in 2012 Scottish Borderlands' woodland trees represented a carbon stock of over 29.6 million tonnes of carbon⁵⁸ which would be depleted with a reduction in forest estates.
<p>Visitor Economy</p>	<p>Employment and GVA:</p> <ul style="list-style-type: none"> • Over 60 million visitors a year generating a value of over £1.3 billion to the Borderlands area⁵⁹, with 21% of total employment in the tourism sector, compared to 19% for Scotland as a whole. • eftec et al (2019)⁶⁰ estimated that for Scotland, 63% of tourism spending was dependent on natural ecosystems, 82% of the total adult population take recreational visits to the outdoors every year⁶¹ and the GVA associated with the forestry sector alone, through forest recreation and tourism, is £183m. The Borderlands area is highly represented in these activities.

⁵⁴ ONS, BRES, 2021

⁵⁵ Farming and Food Production – Future Policy Group Report Draft (2020) [Farming and Food Production Future Policy Group report: EIR release - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/farming-and-food-production-future-policy-group-report-2020/pages/12.aspx)

⁵⁶ <https://www.forestresearch.gov.uk/tools-and-resources/national-forest-inventory/what-our-woodlands-and-tree-cover-outsidewoodlands-are-like-today-8211-nfi-inventory-reports-and-woodland-map-reports/nfi-woodland-ecological-condition>

⁵⁷ NFI provisional estimates for woodlands in the Borderlands (2018)

⁵⁸ NFI provisional estimates for woodlands in the Borderlands (2018)

⁵⁹ Borderlands Growth Deal Heads of Terms Agreement, July 2019

⁶⁰ The ecosystem contribution to tourism and outdoor leisure, Defra (2019)

⁶¹ Scotland's People and Nature Survey, based on 2017-18 data

	<ul style="list-style-type: none"> The 'Visit Scotland' survey undertaken in 2015-2016 showed that 38% of visitors to Scotland visited a beach as part of their visit, in Dumfries and Galloway this figure is higher at 44%, highlighting the importance of coastal areas to Scotland's visitor economy.
Indirect Dependency Sectors	
Sector	Benefits
Manufacturing	<p>Employment and GVA:</p> <ul style="list-style-type: none"> As of 2021, manufacturing accounted for c.7% of employment in Scotland (179,000), this rises to c.9% in Dumfries and Galloway (6,000) and c.10% in Scottish Borders (4,750).⁶² As of 2020, manufacturing contributed c. £10,970m in GVA to the Scottish economy, accounting for c. 14% of total GVA in Scotland. In Dumfries and Galloway, manufacturing accounts for 19% of total GVA in the District and in Scottish Borders this figure is 14%.⁶³ Represents a fifth of the Borderland's GVA⁶⁴, including food manufacturing, forestry and wood processing and bio-technologies reliant on natural assets. These sectors are increasingly reliant on fast-changing digital technology and require skilled people⁶⁵, delivering high value employment in the region.
Energy	<p>GVA:</p> <ul style="list-style-type: none"> The Borderlands region is a major player in a range of the UK's energy and power sectors. The energy sector across Scotland generated over £13.6b GVA in 2020⁶⁶, and onshore wind is by far the most common form of renewable energy in the Galloway and Southern Ayrshire Biosphere.⁶⁷
Water	<p>Employment and GVA:</p> <ul style="list-style-type: none"> In 2020, fishing and aquaculture accounted for 0.3% of employment in Scotland (5,800). The sector contributed c. £540m GVA to the Scottish economy, accounting for 0.7% of Scotland's total GVA.⁶⁸ In 2020, Scotland's broader marine economic sector contributed c. £4 billion in GVA, accounting for 2.8% of the total Scottish economy. Additionally, the sector provided employment for 68,600 people, accounting for 3.6% of total Scottish employment. Although oil and gas services are the biggest contributor to the marine economy in terms of turnover and GVA, marine tourism employs the most people of all the sub-sectors, accounting for 39% of employment within the

⁶² ONS, BRES, 2021

⁶³ Scottish Annual Business Statistics (2020)

⁶⁴ The Borderlands Proposition September 2017

⁶⁵ https://www.confor.org.uk/media/246960/br_egger_forestry_en_borderlands-growth-deal_may-2018.pdf

⁶⁶ Scottish Government, Growth Sector Statistics Database (2020)

⁶⁷ <https://www.gsabiosphere.org.uk/wp-content/uploads/2017/09/GSA-Biosphere-Socio-Economic-Report-FINAL.pdf>

⁶⁸ Scottish Annual Business Statistics (2020)

	<p>marine sector. Fishing contributed £284m in GVA, and provided employment for 4,300 people. Of the Scottish Districts, Dumfries and Galloway ranks 9th for the percentage of GVA accounted for by the marine sector, at 2%.⁶⁹</p> <ul style="list-style-type: none"> • As of 2020, in Dumfries and Galloway, fishing contributed £5.6m in GVA. In Scottish Borders this figure was £1.8m.⁷⁰ <p>Natural Capital:</p> <ul style="list-style-type: none"> • Overall, Scotland’s water environment is in good condition, but a wide range of problems exist at a local level, for example, assessments indicate that about 40% of Scotland’s river basin waters fail the environmental standards required to support good ecology⁷¹. • The Borderlands area is highly significant in terms of its marine and freshwater resources which underpin manufacturing, tourism, energy, and other key sectors. • There are 624 river, lake, estuary, coastal, and groundwater bodies in the Solway Tweed river basin district.⁷² 46% of water bodies and 36% of protected areas in the district are not in good condition.⁷³
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Source: Borderlands Partnership and Hatch, 2022

2.28 There are also a wider set of non-market benefits that exist across all sectors, including avoided costs associated with mitigating the risks of not safeguarding natural capital, such as avoided flooding costs, property value uplift, a wide range of ecological, climate and air quality impacts, and health and wellbeing impacts including avoided healthcare costs. Whilst there is a lack of quantified evidence for these impacts at the scale of the Borderlands region or on the Scottish side specifically, there is strong evidence more widely for the importance of natural assets across a broad spectrum of benefits. This includes the work of the Scottish Forum on Natural Capital to trial the Natural Capital Protocol for land-based businesses in Scotland⁷⁴.

Key players

2.29 Alongside the two Scottish local authorities in the Borderlands region, there are a wide range of relevant public and private sector organisations, agencies and groups that contribute to the area’s land/water management and thinking on its natural capital. This includes:

- Scottish bodies – Scottish Environment Protection Agency (SEPA), NatureScot (prev. Scottish Natural Heritage), Scottish Land Commission, Scottish Forestry, Forestry and Land Scotland etc
- Community and development agencies – South of Scotland Enterprise (SOSE)

⁶⁹ [Scotland's Marine Economic Statistics \(2020\)](#)

⁷⁰ [Scotland's Marine Economic Statistics \(2020\)](#)

⁷¹ https://www.sepa.org.uk/media/37765/significant-water-management-issues_scotland.pdf

⁷² https://www.sepa.org.uk/media/218890/rbmp_solway_tweed_2015.pdf p.5

⁷³ https://www.sepa.org.uk/media/218890/rbmp_solway_tweed_2015.pdf p.9

⁷⁴

https://naturalcapitalscotland.com/docs/070_525__trialofncpforland_basedbusinesses_overviewreport_1539873053.pdf

- Place-based partnerships – Galloway and Southern Ayrshire UNESCO Biosphere (GSAB), Solway Firth Partnership, Crichton Carbon Centre, Tweed Forum, Borders Forest Trust, etc
- NGOs and other groups – Scottish Wildlife Trusts, Rivers Trusts, RSPB, Scottish Land & Estates, Southern Uplands Partnership, Environmental Alliance for the South of Scotland (EASOS), National Farmers Union Scotland (NFUS), Etc
- Private sector businesses in the natural economy and its supply chains.

Business needs – current and future

2.30 There are a number of identified needs, challenges, and opportunities in the Scottish side of the Borderlands region in relation to its land management and Natural Capital:

Strategic business needs	Important sub-themes
<ul style="list-style-type: none"> • The need to deliver long-term holistic economic benefit that is retained in the region 	<ul style="list-style-type: none"> • Supporting the delivery of long term holistic economic benefit from natural capital assets – addressing current challenges by taking an innovative approach to unlock direct, indirect, and additional economic, environmental, and social benefits to enhance the region’s natural economy for a resilient future for rural communities • Retaining benefits locally – increasing the level of secondary processing and manufacturing of the region’s raw products to retain the economic benefits, high value jobs, and related innovation • Delivering community wealth building through encouraging and demonstrating good practice for anchor organisations, creating ‘green’ local supply chains, and breaking down barriers for suppliers.
<ul style="list-style-type: none"> • The need to demonstrate what works to kickstart action and investment 	<ul style="list-style-type: none"> • Demonstrating what works – working with land owners, managers, and their supply chain to address the lack of awareness about new and innovative ways of working and associated benefits • Utilising responsible blended finance - developing new blended financial investment models to attract green finance to the sector from both responsible private and public sector sources
<ul style="list-style-type: none"> • The need to be strategic, aligned, joined-up and data-led 	<ul style="list-style-type: none"> • Strategic planning – developing clear medium- and long-term goals in order to reverse decline and to grow the natural capital opportunities of the region before it is too late • A joined-up approach – addressing the current fragmented and siloed approach to land and marine management in order to safeguard and enhance natural assets and overcome the barriers to sustainable economic prosperity in the long term • Institutional co-ordination - taking a partnership approach to maximise the impact of existing activities across key agencies and advisory bodies and to help build stronger networks with the public and private sector

	<ul style="list-style-type: none">• Alignment with existing initiatives – ensuring alignment with activity south of the Border, as well as relevant activity across Scotland including the RLUPs• A data-led approach – developing a comprehensive and accurate picture of current assets, noted as a key need in the recent AGER report⁷⁵, so that progress can be monitored and reported to relevant audiences• Utilising innovative technology – capitalising on advancements in technology to deliver innovative natural capital solutions where appropriate
<ul style="list-style-type: none">• The need to influence future activity and policy, including replacement of CAP	<ul style="list-style-type: none">• Influencing future policy and land use - ability to better inform and influence future land and marine use changes and associated regulation (post Brexit) to generate long term, resilient benefits for the region• Replacing the European Common Agricultural Policy post-Brexit – replacing reliance on subsidies with a model associated with public money for public goods in order to safeguard economic activities and that sustain and build natural capital stocks

Source: Borderlands Partnership and Hatch, 2022

Case for Change summary

2.31 The case for change is summarised below for each investment objective.

⁷⁵ AGER - Towards a robust, resilient wellbeing economy for Scotland, 2020

Proposed investment objectives

Investment objective	Existing arrangements	Business need
Objective 1: By 2030, deliver the six Scottish-led innovation pilot projects, delivering economic outputs, demonstrating best practice nationally, and disseminating lessons to support scaling and to influence future policy.	<p>Much of the current land and marine management practices in the Borderlands region rely on EU subsidy. These practices are therefore vulnerable in a post Brexit context.</p>	<p>Demonstrating what works</p>
	<p>Reformed agricultural policy and investment streams have created uncertainty for agriculture and land-based industries⁷⁶</p>	<p>A data-led approach</p>
	<p>There has been some work towards building a natural capital evidence base for Scotland. For example, Scotland’s Natural Capital Asset Index quantifies and tracks changes in the capacity of Scotland’s terrestrial ecosystem to provide benefits to people.</p>	<p>Influencing future policy and land use</p>
	<p>Additionally, Scotland’s Natural Capital Accounts analyses the contribution of Scotland’s natural capital to society in monetary terms.</p>	<p>Replacing the European Common Agricultural Policy post-Brexit</p>
	<p>In 2020, AECOM and the Lifescape Project set up the Natural Capital Laboratory in the Scottish Highlands to understand and value the natural world. This will explore the way in which technology can collect natural capital data, including trials of drones, satellites, AI, and robotic covers.⁷⁷ Further similar adoption of advanced technologies is needed in the Borderlands region to fully understand and value the regions natural capital offer.</p>	<p>Innovative technology use</p>
	<p>But there remains a key need for a full and comprehensive Scottish Natural Capital Census, as identified in the recent AEGR report.⁷⁸</p>	
<p>South of Scotland’s Regional Economic Strategy Delivery Plan highlights several priority actions to achieve the theme of a green and sustainable economy. This includes Action 5a – To undertake natural capital</p>		

⁷⁶ South of Scotland Regional Economic Strategy (2021)

⁷⁷ [GUEST BLOG - Natural Capital Laboratory - Natural Capital Scotland](#)

⁷⁸ AGER - Towards a robust, resilient wellbeing economy for Scotland, 2020

<p>Objective 2: Deliver holistic economic benefits for the regional economy, through the maintenance, restoration, and enhancement of natural capital, with additional benefits for the environment and communities, supported by a strategic cross-border relationship</p>	<p>opportunity mapping and work to develop specific investment propositions.</p> <p>Natural assets are being depleted with implications for those economic and social activities which are supported by them. Across Scotland, the GVA generated by the natural economy declined over the period 2008-2018 by 18%.⁷⁹</p> <p>Natural Capital assets underpin the region’s cultural, economic, and social activities through the ecosystem services they provide. If these assets are allowed to deteriorate, they present a real risk to the region’s ability to deliver inclusive economic growth.⁸⁰</p> <p>There is an emerging economic policy landscape in Scotland that has a focus on the holistic benefits of a wellbeing economy, to address the challenges faced in the region. E.g., National Strategy for Economic Transformation, South of Scotland Regional Economic Strategy</p> <p>Local challenges include:</p> <p>Some jobs in the region pay poorly, are insecure and are limiting standards of living⁸¹, with ~14% of people in the South of Scotland earning below the real living wage, compared to 9% across Scotland.⁸²</p> <p>The South of Scotland has some areas and groups of people that need more support to reduce deprivation, poverty, barrier and inequalities, otherwise their economic participation will be limited. For example, Burnfoot, Langlee, Lochside, and Lincluden are amongst the 20% most deprived areas in Scotland.⁸³</p>	<p>Deliver long term holistic economic benefits from natural capital assets</p> <p>Retain benefits locally and deliver inclusive growth</p> <p>Institutional co-ordination</p>
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⁷⁹ Dickie, I. and Royle, D. 2021. Facilitating Local Natural Capital Investment – Scottish Borders Area Characterisation. NatureScot Research Report 1284

⁸⁰ South of Scotland Regional Economic Strategy Delivery Plan, 2021

⁸¹ South of Scotland Regional Economic Strategy (2021)

⁸²ONS Annual Survey of Hours and Earnings, 2022

⁸³ South of Scotland Regional Economic Strategy (2021)

	<p>Land and marine management practices in Scotland are currently disjointed and fragmented, and there needs to be a decisive break in business-as-usual to create a co-ordinated approach to deliver better outcomes for the economy, environment, and society, and to put farming and food production on a more sustainable trajectory.⁸⁴</p>	
<p>Objective 3: Align with existing initiatives, such as the South of Scotland RLUP pilot, and activity south of the border, to improve understanding of current land and marine uses, the benefits delivered, their interdependencies and drivers for change, and how to ensure future uses deliver economic benefits, both direct and additional, as well as wider social and environmental outcomes</p>	<p>The Borderlands natural capital assets deliver a wide range of economic, environmental, and social benefits to the region. These include direct contribution to GVA and employment. But there is a lack of quantified evidence for the wider non-market benefits at the scale of the Borderlands including on the Scottish side.</p> <p>Although there is some understanding of the benefits that natural capital assets contribute to Scotland’s wellbeing economy (Scotland’s Natural Capital Asset Index, and Scotland’s Natural Capital Accounts), there remains a need for a full and comprehensive Scottish Natural Capital Census.⁸⁵</p> <p>Existing initiatives include a programme of national funding, support programmes, and innovative pilot projects including the South of Scotland RLUP pilot project which aims to identify opportunities for land use change to deliver environmental, socio-economic and climate change goals through the production of a Regional Land Use Framework.⁸⁶</p> <p>South of Scotland’s Regional Economic Strategy Delivery Plan includes Action 5(C) which highlights the need to develop proposals to increase opportunities and benefits arising from the region’s natural capital assets. These should include support for sustainable agriculture, woodlands, and forests, restoring peatlands, improved water management, and increasing biodiversity.</p>	<p>Aligning with existing initiatives</p> <p>Strategic planning</p> <p>A joined-up approach</p>

⁸⁴ [Renewing-Scotlands-Rural-Areas-revisited.pdf \(scotlink.org\)](#)

⁸⁵ AGER - Towards a robust, resilient wellbeing economy for Scotland, 2020

⁸⁶ [South of Scotland Regional Land Use Pilot - Progress to Date \(2021\)](#)

<p>Objective 4: Deliver strategic capacity building within regional businesses, organisations and supply chains and better equip regional workers for skilled jobs in the natural capital-based economy of the future</p>	<p>Currently, there is a skills gap in the UK to be able to deliver nature-based solutions at scale. Skills deficits range from forestry, ecology, and peatland restoration, to guidance for local authorities.⁸⁷</p> <p>In the South of Scotland, people are less likely to attain higher level skills (5% fewer people hold a degree level qualification in the region versus the Scottish average⁸⁸), with those who learn elsewhere not bringing these skills back to the region, harming the regional economy and accentuating growing skills gaps⁸⁹</p> <p>South of Scotland Regional Economic Strategy Delivery Plan highlights actions to achieve a green and sustainable economy. It includes Action 5(D) “to take forward the recommendation within the South of Scotland Community Wealth Building pilot report.” This includes encouraging good practice for anchor organisations, creating ‘green’ local supply chains, and breaking down barriers for suppliers.</p>	<p>Retaining benefits locally</p> <p>Community wealth building</p> <p>Delivering inclusive growth</p>
<p>Objective 5: By 2030 develop a long-term investment plan for the region that capitalises on private and blended finance opportunities through both responsible private sector and public sector sources</p>	<p>The South of Scotland has a relatively low public profile and identity for the region, with lower levels of inward investment in comparison to other parts of Scotland, with no single brand or prospectus for inward investment purposes.⁹⁰</p> <p>Under CAP, public funding most recently totalled £670 million, and ongoing public investment into Scotland’s rural areas is required.⁹¹</p> <p>But there is a need for between £15 and £27 billion of investment to deliver Scotland’s nature-based ambitions over the next 10 years. Much of this money will have to come from new private sources, paid for by businesses that depend upon and have impacts on nature.⁹²</p>	<p>Utilising responsible blended finance</p> <p>Strategic planning</p>

⁸⁷ [Nature-based solutions: rhetoric or reality? - The potential contribution of nature-based solutions to net zero in the UK \(parliament.uk\)](#)

⁸⁸ ONS, APS, 2022

⁸⁹ South of Scotland Regional Economic Strategy (2021)

⁹⁰ South of Scotland Regional Economic Strategy (2021)

⁹¹ [Renewing-Scotlands-Rural-Areas-revisited.pdf \(scotlink.org\)](#)

⁹² [Scotland's £bn Challenge for Natural Capital | NatureScot](#)

It is recommended that the Government must facilitate private investment in high quality nature-based solutions.⁹³

The National Strategy for Economic Transformation highlights an aim to establish a values-led, high-integrity market for responsible investment in natural capital. This is both an important economic opportunity and essential to meet the pace and scale of Scotland's climate change targets, biodiversity goals and wider land use policy objectives.⁹⁴

Source: Borderlands Partnership and Hatch, 2022

⁹³ [Nature-based solutions: rhetoric or reality? - The potential contribution of nature-based solutions to net zero in the UK \(parliament.uk\)](#)

⁹⁴ Scotland's National Strategy for Economic Transformation, Scottish Government, March 2022

Potential scope and service requirements

2.32 The strategic needs of the region suggest that a transformational programme intervention is required that can support fundamental changes in the current way of working, through a blend of revenue- and capital-based activities rather than a one-off capital project. To pave the way for, and contribute to, this transformational change, the Borderlands Natural Capital Programme for Scotland requires a combination of the following elements, including the core services that are essential for success as well as optional services that could support further change.

- **Innovation-Based Cross-Border Demonstrator Pilot Projects-** Showcasing new ideas and ways of working to deliver cross border economic benefits and learning, including promoting awareness, developing understanding and skills, and ultimately achieving buy-in and influencing changes in emerging policy
- **Cross-Sector Pilot Projects** - Targeted interventions based on sectoral need, but which operate cross-sector, e.g., agri-environment, multi-marine sectors, commercial forestry with natural flood management approaches, etc.
- **Pilot Project Dissemination and Networking Opportunities** – Disseminating knowledge and lessons learnt to influence and support the transition to a new policy regime that replaces European subsidies and ensures landowners, land managers, farmers and fishers get payments for economic and non-market benefits delivered and can benefit from sustainable natural capital stocks
- **Strategic Investment Plan for Natural Capital in Scotland’s Borderlands Region** - Exploring ways to join-up the needs of the region with private sector investment opportunities, given the acceleration in interest in novel green / sustainable investment opportunities and making natural capital projects investable for the private sector
- **Digital Register of Natural Capital Assets in Scotland’s Borderlands Region** - Digital mapping of natural assets, including marine/coastal, and the economic and non-market benefits they deliver to provide an accurate baseline picture against which progress can be measured and reported and using digital integration to challenge siloes.

Optional

- **Community Wealth Building** – Strengthening and upskilling natural capital businesses, organisations and their supply chains and better equipping regional workers to undertake high-skilled jobs and to tackle future natural capital challenges
- **Natural Capital Business Support** – Facilitating and supporting the creation and growth of new private enterprises and start-ups which focus on the natural capital challenges and opportunities of the region

Summary table of levels of scope and service requirements

Range	Core	Optional
Potential scope	<ul style="list-style-type: none"> • Showcasing new ideas and ways of working to deliver cross border benefits and learning, including promoting awareness, developing understanding and skills, and ultimately achieving buy-in and influencing changes in emerging policy. • Targeted interventions based on sectoral need, but which operate cross-sector, e.g., agri-environment, multi-marine sectors, commercial forestry with natural flood management approaches, etc. • Disseminating knowledge and lessons learnt to influence and support the transition to a new policy regime that replaces European subsidies and ensures landowners, land managers, farmers and fishers get payments for economic and non-market benefits delivered and can benefit from sustainable natural capital stocks. • Exploring ways to join-up the needs of the region with private sector investment opportunities, given the acceleration in interest in novel green / sustainable investment opportunities and making natural capital projects investable for the private sector. • Digital mapping of natural assets and the economic and non-market benefits they deliver to provide an accurate baseline picture against which progress can be measured and reported, and using digital integration to challenge siloes 	<ul style="list-style-type: none"> • Strengthening and upskilling natural capital businesses, organisations and their supply chains and better equipping regional workers to undertake high-skilled jobs and to tackle future natural capital challenges • Facilitating and supporting the creation and growth of new private enterprises and start-ups which focus on the natural capital challenges and opportunities of the region
Key service requirements	<ul style="list-style-type: none"> • Innovation-Based Cross-Border Demonstrator Pilot Projects • Cross-sector pilot projects • Pilot Project Dissemination and Networking Opportunities • Strategic Investment Plan for Natural Capital in Scotland’s Borderlands Region • Digital Register of Natural Capital Assets in Scotland’s Borderland’s Region 	<ul style="list-style-type: none"> • Community Wealth Building • Natural Capital Business Support

Source: Borderlands Partnership and Hatch, 2022

Main benefits and risks

Benefits

- 2.33 The Borderlands Natural Capital Programme for Scotland will essentially provide a mechanism, at a landscape scale, to develop integrated, place-based and locally-led initiatives that contribute to the delivery of direct and additional economic benefits, whilst responding to devolved drivers such as the Scottish Land Use Strategy and the Wellbeing Economy. In so doing, it will allow the Borderlands Partnership to better understand its natural capital assets, determining the opportunities and potential for these assets to further contribute to and enhance economic development and productivity. This would ensure that the value of these natural assets would be fully reflected in the emerging plans and policies developed by the Regional Economic Partnership, of which South of Scotland Enterprise (SOSE), Dumfries and Galloway Council, and Scottish Borders Council are members.
- 2.34 The benefits of the programme as a blend of revenue- and capital-based pilot activities with the objective to deliver learning for their future scale-up to promote a new way of working, rather than a one-off capital project, are therefore many, varied and long term, ultimately safeguarding the economic resilience and productivity of the region. These benefits include:
- **Economic benefits** – direct economic benefits associated with new employment and GVA, as well as enhanced efficiency and cost savings, and a range of indirect and additionality benefits such as safeguarded livelihoods, more resilient businesses and sectors, increased skills and knowledge in supply chain, increased private sector investment, sustainable model of public sector payments for public goods, and long-term economic resilience.
 - **Natural capital benefits**, including:
 - **Climate change benefits** – supporting a low carbon economy with embedded climate change mitigation and adaption, leading to reduced GHG emissions, carbon capture and storage, cleaner air and water, renewable energy, and flood, drought and wildfire mitigation.
 - **Biodiversity benefits** – sustainable farming, forestry, and fishing, leading to enhanced landscapes and seascapes, improved woodland cover, improved peatlands, enhanced biodiversity and more resilient habitats.
 - **Social benefits** – indirect tourism, recreation and amenity benefits, physical and mental health and wellbeing, and cultural heritage benefits, for rural and urban communities, as well as a cultural shift in people’s perceptions of natural capital and the benefits it can bring.

Benefit	Beneficiary
New employment and associated GVA	Regional population and economy
Safeguarded livelihoods	Regional population
More resilient businesses and sectors	Regional businesses and population
Increased skills and knowledge in the supply chain	Regional businesses and population
Increased private sector investment	Regional economy
Sustainable model of public sector payments for public goods	Regional to national economy

Sustainable model of private sector payments for carbon / biodiversity and community benefits	Regional to national economy
Long-term economic resilience	Regional and national economy
Supporting a low carbon economy with embedded climate change mitigation and adaptation, leading to reduced GHG emissions	National economy and landscape
Carbon capture and storage	Regional economy and biosphere
Cleaner air and water	Regional population and biosphere
Renewable energy	Regional economy
Flood, drought, and wildfire mitigation	Regional population and biosphere
Tourism, recreation, and amenity benefits	Regional population and economy
Physical and mental health and wellbeing	Regional population
Cultural heritage benefits	Regional population and economy
Cultural shift change in people's perceptions of natural capital and the benefits it can bring	Regional population, businesses, and economy

Source: Hatch and eftec, 2022

Risks

- 2.35 The main risks identified for the proposed Borderlands Natural Capital Programme for Scotland which would impact significantly on its success include:

Risk type	Description
Business risks	<ul style="list-style-type: none"> Resourcing, capacity, and skills related risks within the Scottish authorities or delivery partners Available cash flow of Scottish local authorities Failure to spend revenue in a given financial year Reputational risk associated with the delivery of the pilot projects Resource costs to administer the pilot projects The current fast moving and fluid Scottish policy landscape which will continue to evolve over the course of the delivery period
Service risks	<ul style="list-style-type: none"> The programme's pilot projects do not come forward in a timely manner The programme does not generate tangible results or lessons which can be shared and used to influence future land use and policy The programme cannot be delivered in full due to increased costs associated with inflation etc.
External risks	<ul style="list-style-type: none"> Lack of landowner, land manager, farmer and fisher buy in or engagement with pilot projects or take-up of opportunities Lack of private sector buy-in and further investment to fully realise the ambition of the programme Brexit and removal of European subsidy causes short termism and inhibits partnership approach

	<ul style="list-style-type: none"> • COVID recovery causes short termism and inhibits partnership approach • The speed at which green finance markets will sufficiently mature to enable private sector investment • Potential unintended negative impacts of conflicting government policy areas leading to a lack of clarity and direction
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Source: Borderlands Partnership and Hatch, 2022

Constraints and dependencies

Table 2.5 Constraints and Dependencies

The main constraints for the proposed Natural Capital Programme for Scotland at this stage include:

- The available Growth Deal funding is from the Heads of Terms Agreement, and approved through the 2020 Strategic Proposition, which provided for £5 million in funding for the natural capital theme on either side of the Border, with the £5m in Scotland comprised of half capital half revenue.
- The available Growth Deal funding is for a spending period until 2030/31
- The timescales, including the speed at which the pilot projects can start to be delivered
- Current land management is fragmented from economic development and lacking clear channels, roles and responsibilities which could hamper progress. The proposed establishment of a Natural Capital Programme aims to overcome this.
- Dependent on the success of pilot development, the scope may expand in time if additional external funding is secured

The main dependencies for the proposed Natural Capital Programme at this stage include:

- The Natural Capital Programme needs to fit with and influence emerging policy changes from Scottish Government to replace European Common Agricultural Policy subsidies.
- Activities and projects need to align with developing land use initiatives in the Scottish region of the Borderlands, namely the proposed RLUPs. The development of the Natural Capital Programme will build on the work undertaken in current pilots and initiatives.
- The Natural Capital Programme needs to align with other Borderlands Inclusive Growth Deal proposals, including:
 - Dairy Innovation Centre in Scotland, South of Scotland Learning Network, Mountain Bike Innovation Centre and Forestry Innovation Zone in England
 - Destination Borderlands and its role as a leading outdoor and adventure tourism destination – Hadrian’s Wall, Destination Tweed,

- Stranraer Marina, Lilidorei at the Alnwick Garden, 7Stanes Mountain Biking Centre development, and See More Lake District Cycling
- Energy masterplan and Borderlands Energy Investment company
 - Place programme and the interdependencies between rural and urban environments, sectors and activities
 - Transport theme and the opportunity for habitat creation and other biodiversity enhancements.
- Activities and projects need to be delivered in line with partner organisations including Stranraer Marina
 - The programme needs to align with work carried out across the border to develop a joined-up cross-border relationship
 - The progress of national and regional activities which may overtake / overlap with the work of the pilot projects if their start dates are delayed
 - Nature based solutions is a key theme within the Scottish Borders Climate Change Route Map (CCRM) and there may be opportunity to support the concept across the Borderlands region through the programme

Source: Borderlands Partnership and Hatch, 2022

3. Economic Case

- 3.1 Hatch and eftec have drafted the economic case on behalf of the Borderlands Natural Capital client group.
- 3.2 The Natural Capital Programme requires an innovative approach for the development of the economic case given that Government guidance on natural capital is still fairly new. It has not been widely tested in relation to a programme level investment rather than a defined natural capital project; nor as part of a Growth Deal; nor in relation to the treatment of exploratory pilot projects.
- 3.3 In this context it is important that the funding decision is based on the full Programme business case, across all five cases, and the Value for Money (VfM) assessment and Benefits Cost Ratio (BCR) should not be considered as the primary way to make this decision. This fits with the HM Treasury Green Book update, which stresses the importance of the Strategic Case.
- 3.4 It is also important the options appraisal process is undertaken in the context of the Strategic Proposition for the Natural Capital programme (developed in 2020) which sets out the six Scottish pilot projects and was approved by Scottish Government in 2021.
- 3.5 As a result, the economic case departs from formal guidance in order to produce a compelling case in a robust but pragmatic manner. This was discussed with Scottish Government economists on 14th June 2022 and is captured in a summary note prepared ahead of that meeting.
- 3.6 The economic case is structured as follows:
 - The **Options Assessment** is comprised of a **longlist assessment** using investment objectives from Strategic Case and Critical Success Factors (CSFs) to demonstrate how the configuration of a Natural Capital programme made up of a set of themed pilot projects was developed, including a shortlist of potential alternatives
 - Rather than subjecting the shortlist to a VfM assessment, a more detailed, qualitative **shortlist assessment** based on multiple criteria is used to demonstrate that the six Scottish pilot projects and planned procurement mechanisms and delivery approach are the most appropriate configuration for the programme and taken forward as the Preferred option into the economic appraisal
 - The **Economic Appraisal** therefore assesses the VfM of the Preferred option only, as opposed to assessing the shortlist options also, on the grounds this would not be robust or proportionate.

Options Assessment

Market Failure

- 3.7 As outlined in the strategic case above, there is a clear case for intervention in the Natural Capital Programme, as a result of long-running market failures that have led to a disjointed policy arena, implementation failures and knowledge gaps. The fundamental rationale for public sector investment in the Natural Capital programme relates to the market's failures which are three-fold, comprising partial public goods and private sector reluctance to invest due to both coordination and information failures, as well as wider instability at a macroeconomic level.

- 3.8 Positive externalities (partial public goods): the potential economic, environmental and social benefits that would be delivered by the Programme would be felt broadly, and it is both unrealistic to identify a way to capture revenue from all those beneficiaries deriving value from it, as well as impractical to exclude those who do not pay from benefitting. As a result, the market will not solve this challenge.
- 3.9 Information / coordination failures: in part, coordination failures are acting to prevent investment, and with many different landowners and stakeholders across the Scottish Borderlands region, the challenge of mobilising and coordinating plans is high and perceived difficulties by the private sector limit action. This is being compounded by information failures where there are knowledge gaps in the private sector, acting as a barrier for change.
- 3.10 Macroeconomic instability: a further barrier to investment is driven by current instability at a macro level, including in a post-Brexit context and the current challenges faced in the UK economy, which is acting as an inhibitor of private sector willingness to innovate and invest.
- 3.11 The BIG Deal funding provides an opportunity to unlock investment for a Natural Capital Programme, that has the potential to deliver a range of benefits beyond a financial return to the immediate landowners. The Borderlands group is committed to delivering a holistic package of pilot-based interventions that provide long-term opportunities and solutions to the challenges faced in meeting Scottish Government objectives that would not be taken forward by the private sector alone.

Longlisting of Options

- 3.12 A workshop was held on 1st February 2022 with representatives from the local authorities, the natural capital sector, and Scottish Government. The workshop focussed upon the range of possible options for the programme, taking in matters of:
- **Scope** – including discussion around the current policy gap, the primary land and marine uses of the region, the need for a joined-up approach to create systematic change, and funding availability
 - **Service solution** – including discussion around emerging policy post-CAP, the need to value natural capital, the need for holistic evaluation and support, and existing projects and initiatives
 - **Delivery** – the capacity of the councils, including skills and resources, the prevalence of trusted intermediaries and land use organisations across the South of Scotland and where best practice exists within organisations
 - **Implementation** – the constraints of the Borderlands Programme, the timing of policy development and business need
 - **Funding** – possibility of scaling projects to match further funding, capital and revenue split requirements, and delivery of public good
- 3.13 Throughout the discussion of each matter above, the critical success factors of business need, strategic fit, additionality beyond existing policy efforts, benefits optimisation, potential achievability, supply side capacity and capability and potential affordability were considered.
- 3.14 Using the above themes and discussions the group generated a longlist of potential options against which the project's investment objectives could be met, which are set out below.

Delivery Option	Scope	Service	Delivery	Implementation	Funding
Option 1 / Do Nothing (Reference Case)	Continuation of business-as-usual land use management practices which tend to operate in sector-based silos, like agriculture or forestry, rather than through a holistic systems approach. ⁹⁵ These management practices have tended to rely on public subsidy, such as The Common Agricultural Policy and The Scottish Rural Development Programme.	There is a lack of holistic support and evaluation, for example the siloed availability of agricultural and farming advice.	There are some pockets of innovation delivered by natural capital organisations, e.g., the South of Scotland RLUP project.	n/a	n/a
Option 2 Cross-sector demo	A cross-sector demonstration of innovative land and marine management practices and sharing of best practice, regionally and nationally.	The delivered services would comprise of pilot projects across significant land use types in the region, including agri-environment, woodland and forestry, as well as the marine sector.	Delivered by Dumfries and Galloway and Scottish Borders Councils.	The pilot projects would be delivered from 2023 to 2030.	£5 million public funding from Scottish Government, half of which is capital, half of which is revenue (and aim to secure match funding).
Option 3 Cross-sector demo and	A cross-sector demonstration of innovative land and marine management	The delivered services will comprise of six pilot projects across significant land use	Delivery will be outsourced through the procurement of	The pilot projects would be delivered from 2023 to 2030	£5 million public funding from Scottish Government, half of

⁹⁵ Scotland's Third Land Use Strategy 2021-2026, Scottish Government, March 2021

Delivery Option	Scope	Service	Delivery	Implementation	Funding
long-term planning	practices and sharing of best practice, regionally and nationally, combined with long term planning for the region.	types in the region, including two agri-environment, woodland and forestry, and marine sectors, as well as a data led pilot project and an investment pilot project.	lead delivery partners.		which is capital and half of which is revenue (and aim to secure match funding).
Option 4 Scaled-up cross-sector demo and long-term planning	A scaled-up cross-sector demonstration of innovative land management practices across numerous (sub)sectors and sharing of best practice nationally, combined with long term planning for the region.	The delivered services will comprise of eight pilot projects across multiple land use types in the region including agri-environment, woodland and forestry, marine, rivers, and peatland, as well as a data led pilot project, an investment pilot project, and a skills pilot project.	Delivery will be outsourced through the procurement of lead delivery partners.	The pilot projects will be delivered from 2023-2030.	Funded by £5m public funding from Scottish Government, half of which is capital and half of which is revenue (and aim to secure match funding). If further match funding is made available, expansion of the scheme into further sub sectors of regional land uses will be explored.
Option 5 Cross-border programme	A cross Scottish-English border programme of innovative land management practices and sharing of best practice, combined with long term planning for the Borderlands region.	The delivered services will comprise of six pilot projects across multiple land use types on both sides of the border within the Borderlands region. This will include, two agri-environment, woodland and forestry, and marine sector pilot projects, as well as a	Delivery will be outsourced through the procurement of lead delivery partners.	The pilot projects will be delivered from 2023 to 2030.	Funded by £5m public funding from Scottish Government, half of which is capital and half of which is revenue, combined with £5m of Defra funding from the English side (and

Delivery Option	Scope	Service	Delivery	Implementation	Funding
Option 6 Cross-sector demo of technological solutions	A cross-sector demonstration of technologically focused land management practices, and sharing of best practices, combined with long term planning for the region.	The delivered services will comprise of innovative pilot projects, focusing on how technological solutions can be applied across the major land use typologies on the Scottish side of the Borderlands region including agri-environment, woodland and forestry, and marine sectors. Additionally, there will be an investment pilot project and a data pilot project.	Development and delivery of these pilot projects will be fully outsourced to the private sector.	Pilot projects will be delivered between 2023-2030.	aim to secure match funding). Funded by a blend of £5m public funding from Scottish Government, half of which is capital and half of which is revenue, combined with £2m private sector funding (and aim to secure further match funding).

Source: Borderlands Partnership and Hatch, 2022

Longlist Options Assessment

3.15 The longlist has been assessed against the programme's investment objectives, as outlined in the Strategic Case, and Critical Success Factors.

Critical Success Factors

3.16 The following Critical Success Factors have been identified for the Scottish Borderlands Natural Capital Programme.

- **CSF1 – Business Need** - the extent to which the Programme will align with current business needs identified in the Strategic Case including:
 - The need to deliver long-term holistic economic benefit that is retained in the region
 - The need to demonstrate what works to kickstart action and investment
 - The need to be strategic, aligned, joined-up and data-led
 - The need to influence future activity and policy, inc. replacement of CAP
- **CSF 2 – Strategic Fit** - the extent to which the Programme fits within the strategic context of existing policy drivers and developing land-use planning initiatives
- **CSF 3 – Additionality** – the extent to which the Programme will deliver additional to (i.e. not duplicating) existing policy efforts, and therefore meaningfully contribute to meeting Scottish Government objectives
- **CSF 4 – Benefits Optimisation** - the extent to which the Programme will sustain and further unlock the economic value of the natural economy across direct, indirect, and additional holistic benefits
- **CSF 5 – Potential Achievability** – the extent to which the scope is achievable within the timeframe and resources available within the Borderlands Growth Deal terms and will ensure an ongoing legacy programme
- **CSF 6 – Supply-side Capacity and Capability** – the extent to which there is appropriate resourcing, with the capacity and capability to deliver the transformation required (in terms of new ways of working, thinking and partnership building)
- **CSF 7 – Potential Affordability** – the extent to which the scope is affordable within the Borderlands Inclusive Growth Deal funding committed to the natural capital theme, whilst noting the ambition to secure and lever in additional resources.

3.17 To assess the longlist of options, a RAG analysis matrix was used, as shown in Table 3.2. below. Each option was assessed against the investment objectives and the CSFs and given an overall rating of red, amber, or green.

Table 1.1 Longlist Option Assessment						
Evaluation Criterion	Option 1 / Do Nothing	Option 2 - Cross-sector demo	Option 3 - Cross sector demo and planning	Option 4 - Scaled up cross sector demo	Option 5 - Cross-border demo	Option 6 - Technological cross sector demo
Investment Objectives						
Obj 1: By 2030, deliver the six Scottish-led innovation pilot projects, delivering economic outputs, demonstrating best practice nationally and disseminating lessons to support scaling and influence future policy.	Red	Amber	Green	Green	Amber	Amber
Obj 2: Deliver holistic economic benefits for the regional economy, through the maintenance, restoration, and enhancement of natural capital, with additional benefits for the environment and communities, supported by a strategic-cross border partnership.	Red	Green	Green	Green	Green	Amber
Obj 3: Align with existing initiatives, such as the South of Scotland RLUP pilot, and activity south of the border, to improve understanding of current land and marine uses, the benefits delivered, their interdependencies and drivers for change, and how to ensure future uses deliver economic benefits, both direct and additional, as well as wider environmental and social outcomes.	Red	Amber	Green	Amber	Green	Green
Obj 4: Deliver strategic capacity building within regional business, organisations and supply chains and better equip regional workers for skilled jobs in the natural capital-based economy of the future.	Red	Amber	Green	Green	Green	Red
Obj 5: By 2030 develop a long-term investment plan for the region that capitalises on private and blended finance opportunities through both responsible private sector and public sector sources.	Red	Red	Green	Green	Green	Amber
Critical Success Factors						
CSF1: Business Need	Red	Amber	Green	Green	Amber	Amber
CSF2: Strategic Fit	Red	Amber	Green	Green	Amber	Amber
CSF3: Additionality	Red	Amber	Green	Green	Amber	Amber
CSF4: Benefits Optimisation	Red	Amber	Amber	Amber	Green	Amber
CSF5: Potential Achievability	Green	Green	Green	Amber	Amber	Green
CSF6: Supply-side Capacity and Capability	Green	Red	Green	Amber	Green	Amber
CSF7: Potential Affordability	Green	Green	Green	Amber	Red	Amber
Shortlisting Outcome	Carry forward	Carry forward	Preferred Way Forward	Carry forward	Discount	Discount

Source: Borderlands Partnership and Hatch, 2022

3.18 Note: **Green** = strong alignment with evaluation criterion. **Amber** = some alignment with evaluation criterion. **Red** = poor alignment with evaluation criterion

Longlist Assessment Summary and Selection of Shortlisted Options

Table 3.2 Longlist Assessment Summary

Option 1 / Do Nothing (Reference Case)

Under the do-nothing scenario, there is a continuation of current business-as-usual (BAU) land and marine management practices with negative effects for natural capital assets, and the economic and social activity they support, operating under a siloed policy landscape. Natural capital is not fully valued in current land and marine management approaches which are skewed towards solo-sector thinking and reliance on public subsidy, rather than long term economic and environmental resilience. There is a lack of holistic support and evaluation, with siloed availability of agricultural and farming advice. The BAU is set out in more detail in the Strategic Case, under the section on Existing Arrangements.

The do-nothing scenario therefore fails to address the majority of the strategic objectives and critical success factors:

- Current business-as-usual land and marine use change is negatively affecting natural capital, prohibiting the delivery of holistic economic benefits which can be delivered through the maintenance, restoration, and enhancement of natural capital.
- There is a lack of a comprehensive evidence base of natural capital in the Borderlands region, or across Scotland, and there are few projects trialling new ways of working which are being successfully delivered with the vision to scale up and disseminate lessons regionally or nationally. Therefore, the ability to influence emerging economic and environmental policy changes is reduced.
- Natural capital is not fully valued in current land and marine management approaches which are skewed towards solo-sector thinking and reliance on public subsidy, rather than long term economic and environmental resilience.
- There is currently no long-term investment plan for the region that capitalises on blended finance opportunities from both responsible private sector and public sector sources.

Option 2: Cross-sector demo

Option 2 does, in part, address some of the strategic objectives. However, certain objectives and CSFs are not addressed:

- The lack of a data pilot project will hamper the ability to create a comprehensive natural capital evidence base and the ability to understand current land and marine uses and challenges.
- Without an investment pilot project, it will not be possible to build a long-term plan for the region to capitalise on blended and responsible private finance sources. Therefore, it does not address key business needs or the emerging strategic vision to create natural capital markets for private finance sources.
- As local councils are delivering these projects, there is little opportunity to build capacity within the regional economy and deliver community wealth building. This also creates problems relating to supply-side capacity and capability, due to the capacity and resource constraints that the councils are operating under. Within the region, there is an array of land use organisations experienced in delivering best practice land use projects and have built a positive reputation and relationship with regional landowners and managers. This option does not capitalise on these organisations, which is likely to affect benefits optimisation.

Option 3: Cross-sector demo and long-term planning

Option 3 performs well in addressing both the strategic objectives and the critical success factors:

- The delivery of the six pilot projects focuses on some of the most influential land/marine uses in the region and where implementation gaps are considered to exist compared to current policy efforts (based on knowledge gaps, need for demonstrable best practice, demonstration of effectiveness, cost reduction etc) and is likely to deliver significant benefits optimisation given the scale of the funding. However, its likely that holistic economic, environmental and social benefits could be further optimised if this programme was expanded into a cross-border programme.
- The delivery of the data pilot project ensures that the programme can build a natural capital evidence base identified as a key business need. Additionally, the investment pilot project will contribute to the development of a long-term plan for the region that capitalises on blended finance opportunities from both responsible private and public sector sources.

Option 4: Scaled-up cross-sector demo and long-term planning

Option 4 generally addresses the investment objectives, however there is some misalignment with some of the strategic objectives:

- Objective 3 highlights the need to align with existing initiatives. This option will deliver a higher number of pilot projects across a wider range of land use sectors and sub sectors. Consequently, there may be some overlap with existing initiatives in Scotland, such as in the rivers sub-sector.
- There are significant problems surrounding the potential achievability and affordability of the programme. The scale of this programme would not be deliverable with the £5 million funding available from Scottish Government and may also place strain on the existing capacity within the region. Given funding constraints, it would also diminish the benefits optimisation by over stretching resources across a greater number of land use (sub) sectors.

Option 5: Cross-border programme

Option 5 performs well against most of the investment objectives and would address the need to build a strategic cross-border partnership to deliver holistic economic benefits particularly well. However, there are crucial problems in its delivery:

- Given the different policy landscapes in Scotland and England, the programme may struggle to deliver on the objective to influence future policy and to address the business need of replacing the European Common Agricultural Policy post-Brexit.
- The English natural capital working group within the Borderlands Inclusive Growth Deal is developing a distinct approach that responds directly to the drivers and needs on that side of the Border, negating the possibility of delivering cross-Border pilot projects.

Option 6: Cross-sector demo of technological solutions

Option 6 does not perform well against many of the investment objectives and critical success factors.

- It fails to deliver against Objective 4, to deliver capacity building and the business need to deliver community wealth building. As the programme would be entirely delivered through outsourcing to the private sector, there would be reduced
-

opportunity for capacity building outside of those businesses and immediate supply chains, with reduced wider benefit for other local organisations and communities.

- The option may be less likely to influence future policy due to the lack of local council involvement. This may also affect its alignment against all of the identified business needs, given that it would be driven by the open market and the priority challenges that have been identified by the local council teams based on their knowledge of the region may not be fully addressed.
- Finally, the affordability of the option is likely to be comparatively reduced due to the VAT implications of outsourcing to private companies compared to channelling public funds through the local councils.

- 3.19 The longlist assessment has identified that Option 1 to 4 are taken forward to the shortlist and Options 5 and 6 are discounted, as shown in the tables above.

Short-listed Options and Assessment

- 3.20 Following the assessment of the longlist options against the investment objectives and critical success factors, there are **three shortlisted options** alongside the Do Nothing:

Table 3.3 Shortlist Options Summary

Option 1: Do Nothing (Reference Case)

There is a continuation of business-as-usual land management practices with negative effects for natural capital assets, operating under a siloed policy landscape. Natural capital is not fully valued in current land and marine management approaches which are skewed towards solo-sector thinking and reliance on public subsidy, rather than long term economic and environmental resilience. There is a lack of holistic support and evaluation, with siloed availability of agricultural and farming advice.

Option 2: Do Minimum (Cross-sector demo)

A cross sector demonstration of innovative land and marine management practices and sharing of best practice, regionally and nationally. The delivered services will comprise of pilot projects across significant land use types in the region, including agri-environment, woodland and forestry, and marine sectors. These projects will be delivered by Dumfries and Galloway and Scottish Borders Councils. The pilot projects will be delivered from 2023 to 2030 and will be funded by £5 million public funding from Scottish Government, half of which is capital and half of which is revenue, and aim to secure match funding.

Option 3: Preferred Way Forward (Cross-sector demo and long-term planning)

A cross-sector demonstration of innovative land and marine management practices and sharing of best practice, regionally and nationally, combined with long term planning for the region. The delivered services will comprise of six pilot projects across significant land use types in the region, including agri-environment, woodland and forestry, and marine sectors, as well as a data led pilot project and an investment pilot project. Delivery will be outsourced through the procurement of lead delivery partners. The pilot projects will be delivered from 2023 to 2030 and will be funded by £5 million public funding from Scottish Government, half of which is capital and half of which is revenue (and aim to secure match funding).

Option 4: Do Maximum (Scaled-up cross-sector demo and long-term planning)

A cross-sector demonstration of innovative land and marine management practices across numerous (sub)sectors and sharing of best practice nationally, combined with long term planning for the region. The delivered services will comprise of eight pilot projects across multiple land use types in the region including agri-environment, woodland and forestry, marine, rivers, and peatland, as well as a data led pilot project, an investment pilot project, and a skills pilot project. Delivery will be outsourced through the procurement of lead delivery partners. The pilot projects will be delivered from 2023-2030 and will be funded by £5m public funding from Scottish Government, half of which is capital and half of which is revenue (and aim to secure match funding). If further match funding is made available, expansion of the scheme into further sub sectors of regional land use will be explored.

Source: Borderlands Partnership and Hatch, 2022

Shortlist Options Assessment

- 3.21 Each shortlisted option was qualitatively assessed against multiple criteria, as opposed to be taken forward directly into the economic appraisal.

The table below provides a summary of the shortlist assessment and the assumptions that guided this.

Table 3.4 Shortlist Assessment Summary				
Evaluation Criterion	Option 1 / Do Nothing	Option 2 Cross-sector demo	Option 3 Cross sector demo and planning	Option 4 Scaled up cross sector demo
Pilot projects: land-use and marine sectors	No pilot projects or associated learning and dissemination	Most influential land and marine uses in the region	Most influential land and marine uses in the region	Most influential land and marine uses in the region, but combined with additional sub sectors which could dilute efficiency
Pilot projects: long-term planning	No pilot projects or associated learning and dissemination	Efficacy of the programme will be hampered as no data pilot, particularly in terms of longer-term benefits of future scaling up activity	Data and Investment pilots provide opportunity to build a natural capital evidence base and contribute to the long-term plan for the region	Data and Investment pilots provide opportunity to build a natural capital evidence base and contribute to the long-term plan for the region
Planned Delivery	N/A	Delivered by local councils without external collaboration, missing opportunity to build capacity and upskill within the regional economy, and creating supply-side delivery problems due to the significant constraints the councils are operating under.	Delivered in partnership between 2023 to 2030, as required by the Borderlands funding.	Delivered in partnership between 2023 to 2030, as required by the Borderlands funding.
Planned Procurement	N/A	N/A	Outsourcing to lead delivery partners would capitalise on existing expertise, networks and relationships of regional land use organisations and the landowners and managers across the South of Scotland region, including an existing network of stakeholders for each pilot as well as contributing to capacity building and upskilling in the region.	Outsourcing to lead delivery partners – also capitalising on existing networks and contributing beneficially to capacity building in the region (as under Option 3)
Expected Benefits	No benefits expected,	Fails to capitalise on the existing expertise and networks of local	Optimises potential for influential learning and dissemination to	Potential to deliver significant benefits given breadth of pilot

	continued dis-benefit of BAU	organisations in the region nor the positive relationships they hold with regional landowners and managers, affecting the potential scale of benefits and longer term legacy that could be realised through a more collaborative approach	drive scaled up activity in the future. Likely to deliver significant benefits optimisation within the region according to the scale of funding.	projects. But likely to negatively affect benefits optimisation by overstretching the existing capacity within the region.
Expected Risks	High risk of natural capital assets being further depleted with negative impact for economic and social activity supported by them	Risk of none or very little downstream opportunities for scaling up of pilot activity: <ul style="list-style-type: none"> Without a Data pilot, strong risk that land and marine use pilots will remain as demonstrator activity only. This is because the region already suffers from a lack of a comprehensive natural capital evidence base to understand current land and marine uses and challenges, and respond to them effectively. Without Investment pilot, not be possible to build a long-term plan for the region to capitalise on blended and responsible private finance sources. 	Proposed configuration and delivery approach mitigates risks associated with affordability, deliverability, as well as optimising opportunity for dissemination and learning, capacity building and longer term scaling up and legacy across the region.	Not affordable or deliverable within the funding available: <ul style="list-style-type: none"> Increasing the number of pilot projects within the programme is likely to cause significant problems associated with achievability and affordability Likely to overstretch existing resources given the scale of funding available is £5 million from Scottish Government
Appraisal Outcome:	Discounted	Discounted	Preferred Option, taken forward into the Economic Appraisal	Discounted

Source: Borderlands Partnership and Hatch, 2022

- 3.22 Therefore, Option 3 has been taken forward as the Preferred Option in the economic appraisal below, which focuses on assessing the Value for Money (VfM) of the Preferred Option only as opposed to appraising a further set of alternative options or pilots.

Economic Appraisal

Economic Appraisal Summary

- 3.23 This section sets out the assessment framework for assessing the benefits of the Scottish Natural Capital programme.
- 3.24 The economic appraisal is structured by three main benefit typologies:
- **Incidental benefits** supported as a result of pilot delivery in the immediate term. These are **not** included in the core BCR as they are temporary in nature and supported by the capital. They are presented in an adjusted BCR.
 - **Direct benefits** created by the pilots that persist over time. These are included in the VFM assessment and core BCR.
 - **Downstream benefits** of any potential scaled up activity beyond the pilots in the long term. These are dealt with separately and are not included in the VFM assessment or core BCR, due to the uncertainties in projecting them.
- 3.25 Across these typologies, there are two main benefit categories that can be assessed and monetised in line with Government guidance, as follows:
- **Economic benefits**
 - Incidental employment supported
 - Direct employment and GVA
 - Social value of placements and training
 - Social value of volunteering
 - Cost savings / enhanced efficiency
 - **Environmental/natural capital benefits**
 - Carbon sequestration / GHG emissions reduction
 - Timber production
 - Food provision
 - Air quality benefits

Monetised Costs and Benefits

- 3.26 Costs are split between Borderlands Inclusive Growth Deal funding, public sector match funding from a range of sources across the pilot projects, and private sector match funding through unsecured private finance in the Woodland pilot.

Capital and Revenue costs

- 3.27 The total capital costs for the Preferred Option are estimated to be £6,250,065.
- 3.28 The total revenue costs for the Preferred Option are estimated to be £2,512,500.

- 3.29 Before adjustment for optimism bias and discounting, the assumed breakdown by financial year is as follows:

Table 3.5 Summary of Programme Costs		Borderlands	Public match	Private match
FY2023/24	Capital	£0.11m	£0.39m	£0.05m
	Revenue	£0.13m	£0.01m	
FY2024/25	Capital	£0.35m	£0.39m	£0.05m
	Revenue	£0.25m		
FY2025/26	Capital	£0.73m	£0.43m	£0.05m
	Revenue	£0.47m		
FY2026/27	Capital	£0.61m	£0.43m	£0.05m
	Revenue	£0.47m		
FY2027/28	Capital	£0.3m	£0.43m	£0.05m
	Revenue	£0.45m		
FY2028/29	Capital	£0.23m	£0.43m	£0.05m
	Revenue	£0.42m		
FY2029/30	Capital	£0.17m	£0.43m	£0.05m
	Revenue	£0.3m		
Total		£5.00m	£3.34m	£0.42m

Source: Natural Capital Programme Scotland –Working Group

Benefits

- 3.30 The economic and environmental/natural capital benefits of the Preferred Option have been monetised below.

Table 3.6 Monetised and Non-Monetised Benefits Summary	
The following variables have been monetised in line with Government guidance:	
Value of incidental employment supported	Estimated using the Scottish Government Local Economic Impacts of Natural Capital Investment Model (v1.0 April 2022) to estimate the number of FTEs supported, and the GVA impacts calculated using ONS sub-regional productivity stats and BRES data to identify GVA per FTE in sector F: Construction. Not monetised as part of the core BCR.
Value of direct employment and GVA	Estimated based on the number of direct new FTE jobs that the pilots will create, and the GVA impacts calculated using ONS sub-regional productivity stats and BVES data to identify GVA per FTE in sectors A-E: Production.
Social value of placements and training	Calculated using the HACT Social Value Bank – ‘vocational training’.
Social value of volunteering	Calculated using the HACT Social Value Bank – ‘regular volunteering’.
Value of cost savings and enhanced efficiency	Calculated by etfec ⁹⁶ , in alignment with UK Government guidance on natural capital assessment. Further detail is provided in the VfM Assessment section below.

⁹⁶ Eftec – Economics for the Environment Consultancy are environmental economics specialists.

Value of carbon sequestration	Calculated by eftec, in alignment with UK Government guidance on natural capital assessment. Further detail is provided in the VfM Assessment section below.
Value of GHG emissions avoided	Calculated by eftec, in alignment with UK Government guidance on natural capital assessment. Further detail is provided in the VfM Assessment section below.
Value of timber production	Calculated by eftec, in alignment with UK Government guidance on natural capital assessment. Further detail is provided in the VfM Assessment section below.
Value of food provision	Calculated by eftec, in alignment with UK Government guidance on natural capital assessment. Further detail is provided in the VfM Assessment section below.
Value of air quality	Calculated by eftec, in alignment with UK Government guidance on natural capital assessment. Further detail is provided in the VfM Assessment section below.
The Natural Capital programme is likely to lead to the following wider benefits that have not been monetised and are not included within the VfM assessment:	
Innovation and learning	Delivered across all six pilot projects given their experimental nature and represents an important impact which is key to pilot activity being scaled up in the future. This is discussed in more detail in the section below on Downstream Benefits.
Enhanced resilience of jobs and safeguarded livelihoods	This would be at a small scale as a direct benefit of the pilot projects but could be significant to the long-term economic success of the Borderlands region if learning and activity is scaled up in the future. Benefits are tied to enhancing the resilience of associated businesses and sectors for the longer term in relation to land use management and climate-related challenges.
Access to additional revenue streams / private investment	Through the pilots, in particular the Investment pilot, opening up opportunities for leveraging investment in scaled-up activity in the future.
Cost savings and enhanced efficiency	Likely to be delivered through the Agri-environment (Whole Farm Audits) pilot in terms of energy and fertiliser savings, and in the Data pilot and Investment pilot in terms of time savings in future project planning and development.
Other natural capital benefits	Other direct natural capital benefits are likely to be delivered by all three of the applied land and marine use pilots (Agri-environment, Woodland and Marine) but these benefits are either difficult to evaluate in monetary terms or are small at this scale but could be significant if implemented at regional or national scale. Please see Appendix B - for a summary of these non-monetised natural capital benefits.

Source: Hatch and eftec

Optimism Bias

- 3.31 Green Book Supplementary Guidance has been applied. The upper limit for 'non-standard civil engineering' projects (66.0%) was considered as the starting point. Given that programme planning and costings are not fully developed, a conservative approach was adopted in applying this upper limit of 66.0% to all capital costs within the economic appraisal. As the programme and its pilots are developed, residual Optimism Bias (OB) will fall.

Discounting

- 3.32 The economic appraisal presents both a 60-year appraisal period in line with HM Treasury Green Book guidance and which is suited to capturing the long-term nature of natural capital benefits, as well as a 25-year appraisal period to test the level of benefit over a shorter time frame which is more suited to capturing the shorter term direct economic benefits as well as a significant quantum of the natural capital benefits. A discount rate of 3.5% has been applied in line with the HM Treasury Green Book over the 25-year appraisal period. For the 60-year appraisal period, the 3.5% discount rate has also been applied to year 30 and from year 31 applies a discount rate of 3.0%.

Inflation

- 3.33 Inflation has been applied in the capital and revenue costs estimates for the programme presented in the Financial Case and in Appendix C - Programme Costs. Therefore, the costs presented below remove inflation from the capital and revenue cost inputs for the Preferred option.
- 3.34 It should be noted that Sensitivity Test 1 increases the application of optimism bias on capital costs to assess the implication of inflationary pressures on VfM. As the programme planning and costing work evolves for the project, the pilot project delivery partner leads will consider in more detail how inflation impacts upon the programme.

VAT

- 3.35 Costs in the economic case do not include VAT.

Assessing Additionality

- 3.36 The following additionality adjustments have been accounted for within the VfM assessment:
- **Appraisal Period** – a 25-year appraisal period for the persistence of economic benefits has been implemented. The appraisal period starts in FY2023/2024 when delivery is expected to begin. A 60-year appraisal period has also been implemented in order to address the long-term nature of some of the natural capital benefits.
 - **Leakage** – In terms of the economic impacts related to employment and GVA, and the social value of placements, training and volunteering, a leakage rate of 25.0% has been applied in line with *HCA Additionality Guide - Ready Reckoners*. No leakage rate has been applied to natural capital benefits.
 - **Displacement** – In terms of the economic impacts related to employment and GVA, and the social value of placements, training and volunteering, a displacement rate

of 25.0% has been applied in line with *HCA Additionality Guide - Ready Reckoners*. No displacement rate has been applied to natural capital benefits.

- **Deadweight** – in terms of the social value of placements, training and volunteering, deadweight has been applied in line with the specified social value indicator as set out in the HACT Social Value Bank to account for social value that may occur elsewhere⁹⁷.

Value for Money Assessment

- 3.37 Value for Money (VfM) calculations assess costs per one unit of benefits achieved (i.e. cost per one pound generated in the economy), net present value of cash flows, and analyses the cost/benefit ratios for all options to compare value.
- 3.38 A robust forecasting model, built on a series of assumptions, has been established in order to quantify the economic benefits and VfM being achieved through the proposed interventions.
- 3.39 All methods and assumptions are drawn from the following Government publications and guidance documents:
- HM Treasury Green Book (2020)
 - Ministry of Housing Communities and Local Government (MHCLG) Appraisal Guide (2016)
 - Homes and Communities Agency (HCA) Additionality Guidance (4th Edition)
 - GDP deflators at market prices, and money GDP October 2021
 - Housing Associations Charitable Trust (HACT) Social Value Bank
- 3.40 The assumptions for quantified economic benefits are set out below:

Incidental employment impacts

- 3.41 Incidental employment benefits arising from the delivery of the pilot projects has been calculated using the Scottish Government Local Economic Impacts of Natural Capital Investment Model to estimate the number of FTEs supported, which is anticipated to be 100 Direct FTEs, and a further 41 Indirect FTEs, supported in total across the programme delivery period, or c. 16 FTEs per year.
- 3.42 ONS sub-regional productivity stats and BRES data have been used to estimate GVA impacts per FTE for sector F (construction), as follows:
- **Borderlands GVA per FTE: £66,873 (sector F)**
- 3.43 A leakage rate of 25.0% has been applied in line with *HCA Additionality Guide – Ready Reckoners*.
- 3.44 A displacement rate of 25.0% has been applied in line with *HCA Additionality Guide – Ready Reckoners*.

Direct employment and GVA

- 3.45 Based on information provided by the pilot project leads, it is assumed that a total of 55 direct FTE jobs will be created by the Natural Capital programme across the delivery period, or c. 5.5 FTEs per year.

⁹⁷ 'Vocational training' = 15%; 'Regular volunteering' = 19%

3.46 ONS sub-regional productivity stats and BRES data has been used to estimate GVA impacts per FTE for sectors A-E (production), as follows:

- **Borderlands GVA per FTE:** £93,035 (sectors A-E)

3.47 A leakage rate of 25.0% has been applied in line with *HCA Additionality Guide – Ready Reckoners*.

3.48 A displacement rate of 25.0% has been applied in line with *HCA Additionality Guide – Ready Reckoners*.

Social value

3.49 Social value arising from the pilot projects has been calculated using the HACT Social Value Bank (v4). The HACT Guidance permits the valuation of social impact through placing a value on wellbeing. Wellbeing valuation is specified in the HM Treasury’s Green Book as a method of placing market value on intangible social impacts.

3.50 The following outcomes and values⁹⁸ have been monetised as part of the social value appraisal for the pilot projects:

- **Vocational training:** £1,019 per annum

3.51 Based on information provided by the pilot project leads, it is assumed that a total of 43 placements will be delivered through the Natural Capital programme during its delivery period, or c. 4.3 placements per year.

- **Regular volunteering:** £3,199 per annum

3.52 Based on information provided by the pilot project leads, it is assumed that a total of 820 volunteers will be involved in the Natural Capital programme during its delivery period, or c. 82 volunteers per year.

3.53 In terms of additionality, the following deadweight values have been applied as per the HACT Social Value Bank guidance:

- **Placements and training:** 15%
- **Regular volunteering:** 19%

3.54 A leakage rate of 25.0% has been applied in line with *HCA Additionality Guide – Ready Reckoners*.

3.55 A displacement rate of 25.0% has been applied in line with *HCA Additionality Guide – Ready Reckoners*.

Value of cost savings and enhanced efficiency

3.56 Cost savings are the economic benefits that landholders receive from requiring fewer inputs into operations on their lands whilst maintaining or improving their efficiency or yield. Within the context of the Agri-environment Whole farm audit pilot project, cost saving benefits are derived from two activities: a reduction in the application of fertilisers to farmland and an increase in the energy efficiency of farming operations.⁹⁹

Table 3.7 Costs savings and enhanced efficiency of Whole Farm Audit pilot

⁹⁸ Values have been obtained from the HACT Social Value Bank for ‘Outside of London’

⁹⁹ Cost savings, as defined here, were not identified for any of the other case studies within the Borderlands Programme. These figures are not intended to be exhaustive, and other pilot projects may confer cost saving benefits to landholders, but these could not be identified here due to insufficient data.

Reduced fertiliser use	Documentation provided by the pilot states that proposed changes to agri-environment practices on farm holdings will result in a 10% reduction in the amount of fertiliser used annually. Additionally, provided documentation states the current estimated fertiliser application on Borderlands farm holdings is 67 kg/ha. Assuming that these improvements take place across all farm holdings (encompassing an area of approximately 1,200 hectares), it is estimated approximately 80,400 kg of fertiliser is used across the pilot project area annually. This total is multiplied by the 10% reduction figure to estimate the volume of fertiliser use avoided as a result of improved farming practices (8,040 kg of fertiliser use avoided annually). It is assumed that ammonium nitrate (AN) is representative of all fertilisers on all landholdings within project scope. Using this assumption, the market price of ammonium nitrate fertiliser as of May 2022 (Farmers Weekly, 2022) ¹⁰⁰ of £716/tonne is multiplied by the volume of avoided fertiliser use to produce the value of cost savings from improved farming practices.
Energy efficiency of farming practices	Documentation provided by the pilot states that proposed changes to agri-environment practices on farm holdings will result in a 5% improvement in energy efficiency across all farm holdings. This 5% improvement is interpreted as a reduction in the amount of fuel used for current farm operations. Based on previous research conducted by ettec, it is estimated that approximately 43 litres of diesel per hectare is used on farm holdings. Multiplying this litre usage assumption by the total area of farm holdings within project scope (1,200 hectares) provides an estimate of the total annual fuel usage by farms within the pilot project area. This total fuel usage figure is then multiplied by the estimated improvement in energy efficiency to yield the amount of fuel usage avoided through improved agricultural practices. This avoided fuel usage figure is multiplied by the market price for diesel as of June 2022 (Farmers Weekly, 2022) ¹⁰¹ of £1.24/litre to estimate the total value of improved energy efficiency on farm holdings.

Source: ettec

Value of carbon sequestration

- 3.57 Across pilot projects, the sequestration rate of four different types of assets was used: woodland, hedgerows, saltmarsh, and seagrass. This benefit is estimated using the most recent sequestration rates for each habitat (tonnes CO₂ equivalent per hectare) and the central value of carbon (BEIS, 2021)¹⁰². Sequestration rates for these three habitat types are assumed to remain constant over time.

Table 3.8 Habitat sequestration rates

Pilot Project	Habitat	Sequestration rate (average)tCO ₂ e/ha/yr	Source
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¹⁰⁰ <https://www.fwi.co.uk/prices-trends/fertiliser-prices>

¹⁰¹ <https://www.fwi.co.uk/prices-trends/fuel-prices>

¹⁰² <https://www.gov.uk/government/publications/valuation-of-energy-use-and-greenhouse-gas-emissions-for-appraisal>

Farm audit	Woodland	5.75	ONS (2021) ¹⁰³ and Forestry Commission (2017) ¹⁰⁴
Farm audit	Hedgerows	1.99	Robertson et al. (2012) ¹⁰⁵ ; Gregg et al. (2021) ¹⁰⁶
Marine	Saltmarsh	5.19	Beaumont et al. (2014) ¹⁰⁷ ; cited in Gregg et al. (2021)
Marine	Seagrass	1.1	Defra (2021) ¹⁰⁸

Source: effec

- 3.58 The total amount of CO₂ equivalent sequestered is estimated by multiplying these per hectare rates by the total hectares of the respective habitat type. The amount of CO₂e sequestered is then valued following the BEIS (2021) for the central value of carbon, £245 per tonne of CO₂e in 2021. This is multiplied the estimated tonnes of CO₂e sequestered. Future flows of carbon are valued using the BEIS (2021) carbon values series until 2050. Following BEIS (2021) advice, a real annual growth rate is then applied starting at the most recently published value for 2050 and into the future.

Note on the Woodland pilot

For woodlands planted in the Woodland pilot project, the differential sequestration rate over time for coniferous and broadleaved tree species as reported in the Woodland Carbon Code's (2020) Carbon Calculation Spreadsheet¹⁰⁹ was used to more accurately estimate physical flows. It is assumed that sequestration data for mixed conifers and mixed broadleaves is reflective of the tree species to be planted in the pilot project. It is also assumed that no tree thinning is performed on coniferous and broadleaved woodland and that trees have a spacing of 1.5 meters per hectare.

Note on the Marine pilot

The differential carbon sequestration rate for seabed and coastal habitat restoration, over time, in the Marine Pilot is acknowledged, however the understanding of these rates and differentials is very much site dependant and research work on these metrics is still underway nationally (for example by the CEH) to fully understand and build models to predict this. Therefore, for simplicity at this Programme OBC stage, the calculation for carbon storage for marine habitats has been assumed as being constant over time.

- 3.59 Additionally, in the Woodland pilot project, woodland planting does not occur in a single period and is instead evenly phased over a seven-year period, beginning in 2023. This

¹⁰³ <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/uknaturalcapitalaccounts/2021>

¹⁰⁴ <https://www.forestresearch.gov.uk/documents/3176/wapr2017.pdf>

¹⁰⁵ Robertson, H. et al. (2012) Economic, biodiversity, resource protection and social values of orchards: a study of six orchards by Herefordshire Orchards Community Evaluation Project. Natural England Commissioned Reports (November), pp. 1–257. Available at: <http://publications.naturalengland.org.uk/publication/1289011>

¹⁰⁶ Gregg, R. et al. (2021) Carbon storage and sequestration by habitat: a review of the evidence. Natural England Research Report NERR094., Natural England Research Report. Available at: <http://publications.naturalengland.org.uk/file/6257983284838400>

¹⁰⁷ Beaumont, N. J. et al. (2014) The value of carbon sequestration and storage in coastal habitats. Available at: <https://nora.nerc.ac.uk/id/eprint/504365/1/N504365PP.pdf>

¹⁰⁸ <https://www.gov.uk/government/publications/enca-featured-tools-for-assessing-natural-capital-and-environmental-valuation>

¹⁰⁹ <https://woodlandcarboncode.org.uk/landowners-apply/template-documents>

means that only a fraction of total carbon sequestration benefits will be realised in years 2023 – 2028, with 100% of woodland being planted in 2029 onwards. This phasing impacts coniferous and broadleaved woodland identically, and one species is not preferentially planted. Carbon emissions from livestock and peatland have not been included in these accounts as there was no data to indicate that the presence of either asset on pilot project lands would not change substantially after pilot projects are implemented.

Value of avoided GHG emissions

- 3.60 In the Whole farm audit pilot project, reductions in the use of fertiliser and diesel confer benefits to society due to reductions in the associated GHG emissions produced by these sources.
- 3.61 GHG emissions associated with fertiliser and diesel use are estimated to be 2.28 kgCO₂e and 2.68 kgCO₂e from a kg of fertiliser and a litre of diesel, respectively (Farm Carbon Calculator, 2022; BEIS, 2022)¹¹⁰. These figures are multiplied by the total amount of avoided fertiliser and diesel use to estimate the total amount of avoided GHG emissions from improved farming practices. These figures are then multiplied by the BEIS (2021)¹¹¹ carbon values.

Value of timber production

- 3.62 Timber production benefits are only realised for the woodland pilot project, where a total area of 380 hectares of woodland is expected to be planted for timber production as a significant benefit. The varieties of woodland planted for this purpose include conifers and productive broadleaves.
- 3.63 Delivery partner data suggested that coniferous and broadleaved woodlands would have a per hectare annual yield of 14 – 30m³ and up to 12m³, respectively. To provide a conservative estimate of the total timber benefits produced, a yield class of 14m³ and 10m³ are assumed for coniferous and broadleaved woodland, respectively.
- 3.64 For coniferous and broadleaved woodland categories, two different harvesting strategies are assumed. Coniferous woodland is allowed to grow to maturity and is harvested once every 50 years. At this time, the cumulative annual yield of the previous 50 years is assumed to be harvested in a single period. Broadleaved woodland is assumed to require 50 years of growth to reach a mature, harvestable age. Once period 50 is reached, there is a steady harvest rate through thinning thereafter.
- 3.65 The value of softwood timber production is based on the Forestry Commission standing sales price index (Forest Research, 2021)¹¹². The stumpage price used in the account is estimated as the price recorded in September 2021, roughly £40.12/m³ overbark standing in 2021 prices. This monetary unit value is then applied to the estimated volume of softwood removals. It is also assumed that the unit value remains constant over time. Note that this sales figure is applied to both coniferous and broadleaved woodland.

¹¹⁰ <https://calculator.farmcarbontoolkit.org.uk/>; <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2022>

¹¹¹ <https://www.gov.uk/government/publications/valuation-of-energy-use-and-greenhouse-gas-emissions-for-appraisal>

¹¹² Forest Research (2021) Timber Price Indices: Coniferous Standing Sales Price Index for Great Britain. Available at: <https://www.forestresearch.gov.uk/tools-and-resources/statistics/statistics-by-topic/timber-statistics/timber-price-indices/>

- 3.66 Note: the timber production benefits do not overlap with the GVA impacts that have been assessed, as these are associated with the direct jobs created through the pilots only, and not the wider impacts on employment in the sector.

Value of food provision

- 3.67 Food provision comprises the increase in the extent of native oyster beds in the marine pilot and is measured based on the estimated increase in the number of native oysters produced and the additional income they are expected to generate. While food provision may be impacted elsewhere (e.g., changes in grazing density on saltmarsh in the marine pilot project), there is insufficient information about these impacts for a complete valuation.
- 3.68 Estimates of the benefits that two additional hectares will generate is based a production estimate of 3,000 native oysters/yr. Applying this yield figure to the two additional hectares of native oyster beds to be created in the pilot project yields an estimated 6,000 additional native oysters per year.
- 3.69 Delivery partner data on the market value of native oysters produced serves as the basis for monetary valuation. It is estimated that native oysters generate £45,000 in revenue annually, or £0.6 per native oyster as income to the producer (note retail sales are c £1.2 per native oyster). The per oyster sales figure is multiplied by the total volume of additional native oyster production generated in this case study, generating an annual benefit of £3,600/yr.
- 3.70 Note: the food provision benefits do not overlap with the GVA impacts that have been assessed, as these are associated with the direct jobs created through the pilots only, and not the wider impacts on employment in the sector.

Value of air quality

- 3.71 Air quality benefit arises from the ability of different types of vegetation to remove pollutants from the air. This benefit is estimated for the amount of PM2.5 removed by woodland, which makes up more than 70% of this benefit in the UK (Jones et al, 2017), and the human health benefits of this removal.
- 3.72 Jones et al. (2017)¹¹³ modelled this benefit for the UK national accounts reflecting the variety of different levels of PM2.5 concentration, types and extent of vegetation and density of human population across the country. An update to this study has produced estimates of PM2.5 removal per hectare of woodland by local authority. The kilograms PM2.5 removed by hectare of woodland (eftec and CEH, 2019)¹¹⁴ is multiplied by the total woodland area in a given local authority in each reporting area. The PM2.5 removal per ha of mature (i.e., existing) woodland is falling over 2015-2030 based on the assumption about emissions and concentrations falling over time. For all pilot projects reviewed, physical and monetary flow data for the Scottish Borders council area was used.
- 3.73 The economic value of this service is estimated through the resulting avoided healthcare cost at local authority level (eftec and CEH, 2019). The account shows the benefits as the result of: £ per ha of woodland (in terms of avoided health care cost due to PM2.5 removed, in 2021 prices, for a given local authority area (eftec and CEH, 2019), which is

¹¹³ Jones, L. et al. (2019) National Atmospheric Emissions Inventory: Greenhouse Gas Inventories for England. Available at: http://naei.beis.gov.uk/reports/reports?section_id=3

¹¹⁴ eftec and Centre for Ecology and Hydrology (2019) Pollution removal by vegetation. Available at: <https://shiny-apps.ceh.ac.uk/pollutionremoval/>

multiplied by the total woodland area in that area (as produced by further GIS analysis). This produces the annual value of PM2.5 removal by woodland.

- 3.74 Future benefits decline in line with lower emission / concentration assumption mentioned above but are discounted at lower levels using the lower health discount rates (HM Treasury Green Book, 2022).
- 3.75 Note that the time phasing of woodland planting used for carbon sequestration calculations is not applied to air quality regulation calculations. This is due to underlying assumptions of the eftec & CEH (2019) tool, where the per hectare PV figures reported are only valid if all woodland planting begins in period 0. Therefore, the figures shown are a slight overestimate.

Economic Benefits Summary

- 3.76 The below table sets out the value of the economic benefits for the Preferred Option:

Variable	Preferred Option (NPV 25 years)	Preferred Option (NPV 60 years)
Incidental Benefits		
Incidental employment supported	£4.9m	£4.9m
Direct Benefits		
Direct employment	£2.6m	£2.6m
Social Value – Vocational training	£0.02m	£0.02m
Social Value – Regular Volunteering	£1.1m	£1.1m
Cost savings / enhanced efficiency	£0.1m	£0.2m
Carbon sequestration/avoided GHGs	£46.6m	£88.3m
Timber production	£0.0m	£1.7m
Food provision	£0.1m	£0.1m
Air quality	£0.0m	£0.1m
Total (Direct Benefits only)	£50.5m	£94.2m
Total (Direct and Incidental)	£55.5m	£99.2m

Source: Hatch

Value for Money – Borderlands Inclusive Growth Deal funding

- 3.77 The core and adjusted BCRs are presented below. The core BCR does not include the value of incidental employment supported.

Value for money assessment (£m, discounted, 2022 prices)		Preferred Option NPV 25	Preferred Option NPV 60
Total economic benefits (Direct)	(A)	£50.5m	£94.2m
Total economic benefits (Direct and Incidental)	(AA)	£55.5m	£99.2m

<i>BIG Deal cost/funding</i>	(B)	£6.0m	£6.0m
<i>Co-funding</i>	(C)	£4.3m	£4.3m
<i>Total public sector funding</i>	(D) = (B) + (C)	£10.3m	£10.3m
<i>Private sector funding</i>	(E)	£0.6m	£0.6m
<i>Total economic costs</i>	(D) + (E)	£10.9m	£10.9m
Core Benefit-Cost Ratio (BCR)	(A) / (D) + (E)	4.6	8.6
<i>Adjusted Benefit-Cost Ratio (BCR)</i>	<i>(AA) / (D) + (E)</i>	5.1	9.1

Source: Hatch

The Preferred Option

- 3.78 The Preferred Option (NPV 25) delivers a core BCR of 4.6:1 within 25 years, which according to HM Treasury Guidance is “very high value for money”.

Sensitivity Analysis

- 3.79 To assess the robustness of the value for money assessment, the Preferred Option (NPV 25) has been subject to a number of sensitivity tests. These have been designed to mimic the potential implications of reduced benefits associated with the Preferred Option.
- 3.80 The impacts associated with the Preferred Option have been tested by making adjustments to the following variables, each of which drive project costs and economic effects:
- 1) **Test 1:** Increasing Optimism Bias on capital costs to 80% (beyond the Upper Limit for Non-standard Civil Engineering projects from within HMT Green Book).
 - 2) **Test 2:** Adjusting the BEIS non-traded carbon value used in estimating the carbon sequestration impacts of the Woodland pilot¹¹⁵ to the Low estimate (the original analysis used the Central estimate).
- 3.81 As set out below, Sensitivity Test 1 still returns a BCR of 4.3 which demonstrates “very high value for money” (VFM).
- 3.82 Under Sensitivity Test 2, the BCR is 2.5 which still demonstrates “high value for money” (VFM).

The results of this sensitivity testing are set out below:

Sensitivity Test	Net Present Value of Public	Net Present Value of Private	Net Present Value of Benefits	BCR (net present benefits – net present)

¹¹⁵ Carbon sequestration in the Woodland pilot represents the benefit category delivering a highly significant proportion of total benefits at £46.6m (NPV 25), and therefore it is an important sensitivity test to apply a lower carbon value estimate to this pilot.

	Sector Costs inc. OB	Sector Costs inc. OB	(Direct only, NPV 25)	private sector costs / net public sector costs
Central Estimate (Preferred Option, NPV 25)	£10.3m	£0.6m	£50.5m	4.6
Test 1: Adjustment to OB on capital costs to 80%	£11.2m	£0.6m	£50.5m	4.3
Test 2: Adjustment to non-traded carbon value to the Low estimate	£10.3m	£0.6m	£27.4m	2.5

Source: Hatch

- 3.83 The results summarised above illustrate that, when looking at adjusted impacts, value for money remains at 2.5 or above across all tested scenarios. This remains above the HMT Appraisal Guide benchmark for strong value for money (2:1).

Switching Values

- 3.84 For the BCR to decrease to 2.0:1 for the programme, the benefits and costs would need to be altered by £28.7 million and £14.4 million respectively. This implies a decrease of approximately 57% in the programme's benefits, or a 132% increase in the programme's costs.

Table 3.10 Reducing the BCR to 2.0:1 for the Preferred option (NPV 25)

	Absolute Value (£m)	% change
Benefits	-£28.7m	-57%
Costs	£14.4m	132%

Source: Hatch

Downstream Benefits

- 3.85 Beyond the incidental and direct impacts modelled above, we anticipate that the Natural Capital Programme will support a wider range of downstream benefits for residents, businesses, and visitors across the Borderlands region. Whilst these cannot be quantified robustly and factored into a VfM assessment, they highlight the depth of added value likely to be achieved. The following sections present this in detail for each of the pilot projects.

Agri-Environment Pilot – Species Rich Grassland

Approach to Scaling up

- 3.86 If the pilot is successful in developing new restoration techniques and helping to develop a Result-based Agri-environment Payment Scheme for national roll out then the direct benefits included in the VfM assessment would be expected to extend across all species-rich grassland (SRG) in Scotland.

Scale of Opportunity

- 3.87 Species-rich grasslands (SRG) are a scarce national resource and a conservation priority. Accurate mapping of potential SRG opportunities is still under development, however

around 30,000 ha of SRG could be restored in Scotland according to the Scottish Natural Heritage (SNH, now NatureScot) NH commissioned report on “The extent and condition of non-designated species-rich lowland grasslands in Scotland”.

- 16% of Scottish Borders landcover (74,474 ha) is classified as other grassland i.e., not productive grassland with potential for restoration to SRG.
- The SNH commissioned report (2014) conducted surveys across Scotland to estimate the extent of non-designated species-rich lowland grasslands. 43 sites were surveyed in the Borders totalling 878 ha. In Dumfries and Galloway, 10 sites were surveyed totalling 126 ha.
- Data is available on the uptake of SRG management options under the current agri-environment scheme (AECS). This gives an estimate of 3,275 ha of SRG being managed under AECS in the Scottish Borders and 1,075 ha in Dumfries and Galloway.

3.88 Butterfly Conservation Scotland’s survey of the Northern Brown Argus (NBA) (2016) estimated that there is approximately 1,500 ha of ‘key habitat’ for NBA in the Scottish Borders and Dumfries and Galloway.

Potential Outputs

3.89 If the pilot is successful in developing new restoration techniques and helping to develop a Result-based Agri-environment Payment Scheme for national roll out, then the benefits outlined below would be expected to extend across all SRG in Scotland. However, there is currently insufficient information to adequately quantify the scale of these benefits at this stage.

- Flower-rich grasslands support greater numbers and diversity of pollinating species than any other habitat type. Grassland networks for pollinators in southern Scotland can significantly increase their extent and improve connectivity.
- Carbon sequestration in grassland, although the improvement in sequestration rate depends upon the grassland management regime of the grassland prior to SRG restoration. There is potential to explore funding from emerging carbon credit schemes.
- In addition to NBA conservation, SRG restoration can support other rare species such as, the Small Pearl-bordered Fritillary (vulnerable), Forester moth (UKBAP priority species), Dingy Skipper (vulnerable) and Grayling (endangered).
- Both rare and common species of butterfly and pollinators contribute to human well-being and can be ambassadors for species conservation. This can be enhanced by the planned programme of education, outreach, and research.
- Investigating the potential for selling accredited farm produce. Indications from Quality Meat Scotland (QMS) are that certification can achieve a 15% price premium relative to non-assured meat. However, any price premium can vary overtime (with market conditions) and care is needed in attributing any premium to specific elements as these can include a broad range of consumer concerns such as; animal welfare, traceability, and local supply as well as conservation measures. Hence it is very difficult to isolate the relationship between accreditation benefits and specific environmental outcomes.

3.90 As part of their work with the Programme, Butterfly Conservation Scotland has been liaising with NatureScot’s natural capital team developing the Piloting an Outcomes Based

Approach in Scotland (POBAS) programme, and the team overseeing NatureScot's Farming with Nature programme.

Agri-Environment Pilot – Whole Farm Audit

Approach to Scaling up

- 3.91 The project is partnered with NatureScot POBAS trials. This means that it is part of a national set of pilots and will help to inform the national approach. Consequently, the findings of the pilot audit can be fed into the process of changing agricultural support in Scotland post 2024. As only limited information from phase 1 of the pilot would be available at the time a new policy is brought in, it is likely that any changes to the new subsidy system will be reviewed in the light of ongoing practice so interim findings of the pilot can be fed into that process.
- 3.92 SAC Consulting, who run the Farming Advisory Service and produce existing farm plans, are interested in the progress of the pilot and how it may build upon the plans they currently produce. This represents an opportunity for a much wider roll out of the audit process.
- 3.93 Further funding could also be used to scale up the pilot further (including potentially from NatureScot Nature Restoration Fund, Woodland Trust, individual charities such as Esmee Fairburn).

Scale of Opportunity

- 3.94 Approximately 70% of the land in Scotland is classed as being agricultural in terms of land use. Improved grassland at 1,405,500 ha represents around 18% of Scotland's land area with a concentration of this in the south of Scotland.
- 3.95 There are approximately 51,000 farm holdings in Scotland, to which process and environmental benefits could be scaled up to. Within Dumfries and Galloway alone, there are a total of 3,900 registered farms. The audit process can, in theory, be scaled up to any farm that seeks finance outside of the business itself, which will become much more likely given the move towards conditionality in the agricultural support system.

Potential Outputs

- 3.96 It is not possible to predict the precise improvement opportunities that may emerge from the farm audits. However, some level of potential improvement may be expected to be realistically achievable based on the following assumptions:
- Farm productivity improvements can be achieved through a wide range of farming changes, with the aim of the audits to both boost farm income and improve environmental outcomes. Note it may be reasonable to assume that the lower quartile farms productivity can at least be brought up to average without detriment to environmental improvements.
 - Local accreditation and connection to local quality food markets – small price premium (up to 15%) but the scale is small (i.e. only a limited proportion of farms will qualify to maintain the distinctiveness of their product).
 - Farm emissions reductions and further soil carbon sequestration represent major opportunities to mitigate climate change and contribute to the Scottish Government's net zero target. Whilst there are no targets set for specific measures, the Scottish Government aims to encourage widespread adoption of all best

available techniques¹¹⁶, and emerging initiatives such as the grassland carbon code for farm soils is being developed by SRUC¹¹⁷.

- Water quality can be improved by a broad range of measures including, reductions in fertiliser use, steps taken to avoid soil run off, riparian woodland planting and steps to prevent poaching from livestock. All these measures are important but to be effective would require the majority of farms to take the required measures at a catchment scale. 22% of Scotland’s water bodies are in moderate condition and 14% are poor or worse, with agricultural activities being a major reason for not achieving good status.

3.97 As an indication of the potential scale of benefits across the Scottish non-LFA grazing sector the potential for costs savings in fertiliser and diesel use and associated GHG savings are shown below.

Table 3.11 Summary of Downstream Benefits from Farm Audit Pilot Projects across Several Scenarios

Cost saving/productivity increase %	Scotland (non-LFA grazing sector)	
	5%	10%
Benefits	£’m PV (25)	£’m PV (60)
Fertiliser cost saving	94.2	188.5
Diesel cost saving	104.8	209.5
GHG saving (Fertiliser reduction)	90.2	180.3
GHG saving (Diesel reduction)	68.2	136.5
Productivity improvement	TBD	TBD
Total Benefit	357.4	714.7

3.98 Several of the proposed activities from the process and the result of them being scaled-up are set out below:

- **Process and environmental**
 - The pilot aims to increase sward diversity by a minimum of 10% on each holding. If this were to be scaled up to grassland across Scotland, this could represent an increase in the diversity of the grass sward and soil carbon/fertility benefits of 140,000 hectares with associated pollinator benefits.
- **Economy and jobs/training**
 - The audit process itself could create approximately 50 new positions for whole farm audit advisors across Scotland (England has been recruiting well in excess of this number for its transition to Environmental Land Management Systems).
 - The audit will create learning and development opportunities through development of the audit tool, with approximately 100 development roles/training positions throughout Scotland. The implementation of the audit Scotland wide and the jobs created directly from the additional interventions

¹¹⁶ Scottish Government (2020) Securing a green recovery on a path to net zero: climate change plan 2018–2032 – update. Online at: <https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/pages/13/>

¹¹⁷ SRUC (2021), <https://www.sruc.ac.uk/all-news/new-projects-to-develop-ecosystem-markets/>

on the ground to meet investment and public policy requirements could be between 5—and 1000.

- The farm audit can assist significantly in moving to a net zero Scotland by 2045 while maintaining and safeguarding the £3.68 billion output value (including £502 million support payments) and the 67,000 direct jobs in agriculture and the many others that rely on that output by widening the skills base requirement in natural capital management techniques

Integrated Land Use & Woodland Pilot

Approach to Scaling Up

- 3.99 Upon completion, the success of the pilot programme will be promoted in several ways, including:
- The creation of a case study document which will be used to raise awareness of the programme amongst the agriculture and forestry sector
 - Workshops in partnership with organisations such as Royal Scottish Forestry Society, NFUS, and Confor for those involved with the agriculture and forestry sectors to promote integrated land use
 - Promotion of the project on social media platforms
 - Raise awareness of the project amongst further education providers, including Borders College and SRUC and educational events such AS Tweed Forums' Borders Demonstration Catchment events.
- 3.100 Tweed Forum has held several meetings over the last two years with landowners and senior Scottish Government officials to show them the broad range of the work they do and to demonstrate Integrated Catchment Management processes. Integrating Farming, Forestry and Conservation is a key aim of Tweed Forum; they have recently written and submitted a paper to Scottish Forestry regarding how the planting of riparian woodlands could be better facilitated.

Scale of Opportunity

- 3.101 The total potential areas that the integrated approach could be applied (to productive forestry) would be c. 445,000 ha (c. 195,000 ha (41%) in Scottish Borders and c. 250,000 ha (39%) in Dumfries and Galloway). This land has the most potential for integrating different woodland types. Additionally, potential native woodland areas amount to c. 89,000 ha (c. 34,000 ha (7%) in Scottish Borders and c. 55,000 ha (8%) in Dumfries and Galloway).
- 3.102 Additionally, of the 4,000 ha of woodland approved for planting annually in southern Scotland (over recent years) the project aims to encourage c. 50% of this (2,000 ha) to be a more varied tree species mix and woodland option type, to deliver more integrated land use.
- 3.103 At 700 ha, the woodland creation of this project represents less than 0.2% of the Scottish Borders Council area and less than 3% of the 25,000 ha woodland creation potential in the Scottish Borders. The Scottish Forestry Strategy (2019) aims to increase woodland cover in Scotland from 18.5% to 21% which represents around 200,000 ha of new woodland creation nationally. The Scottish Government wish to increase woodland planting in Scotland from current target of 15,000 ha to around 18,000 ha per year by

2024 onwards, to allow time for the supply chains to develop (e.g. seed supply, nursery production, labour resource etc).

- 3.104 It is likely that within the land capability classes for agriculture in SE Scotland, that the bulk of the productive woodlands will occur on land classes 5.1 to 5.3 (improved grassland). There may even be a small element on land class 4.2 (mixed grassland). The native woodland components are likely to be on similar land classes but will extend uphill into land class 6.1 to 6.2 (rough grazing). The greatest potential for new planting in the Scottish Borders will remain on these grassland areas.
- 3.105 Of the 4,000 ha of woodland approved for planting annually in Southern Scotland (over recent years) the majority is commercial conifer. The aim of the Borderlands project would be to encourage approximately 50% of this amount (i.e 2,000 ha) to be of a more varied tree species mix and woodland option type, to deliver more integrated land use.

Potential Outputs

- 3.106 A range of 1% to 2.5% increase in woodland cover is a realistic target for both the South of Scotland and Scotland as a nation. The table below illustrates the range of benefits achievable at this scale of woodland creation. The benefits quantified below, could be achieved by current approaches to woodland creation (large scale planting with emphasis on productive conifers). However, the advantage of this project's approach would be that a similar level of benefits could be achieved but with greater integration with other economic activities/livelihoods and land use to provide more targeted environmental benefits of biodiversity, water quality, natural flood risk mitigation. Whilst these additional benefits will occur, the precise level of benefit is crucially dependent upon the spatial location of the woodland and hence is difficult to quantify. This project suggests 50% of woodland creation could be targeted in this manner.

Table 3.12 Summary of Downstream Benefits of Woodland Creation across Several Scenarios

Increase in % of land cover	South of Scotland		Scotland	
	1%	2.5%	1%	2.5%
Woodland creation (ha)	11,158	27,895	77,910	194,775
Benefits	£'m PV (60)	£'m PV (60)	£'m PV (60)	£'m PV (60)
Timber production	27.4	68.5	191.3	478.3
GHG sequestration	1,393.9	3,484.9	9,733.2	24,332.9
Air Quality	2.0	4.9	13.7	34.3
Total	1,423.3	3,558.3	9,938.2	24,845.5
Less cost of creation	65.4	130.0	363.0	907.5
Less agri-income foregone	2.7	6.6	18.5	46.3
Net benefit	1,355.2	3,421.7	9,556.7	23,891.7

- 3.107 Cost of woodland creation assuming around £6.5k/ha (as per the pilot case), and agriculture income foregone assumes average LFA net income per hectare (£9/ha for LFA sheep)¹¹⁸. This illustrates that the net benefits are in the range of £1.4 to 3.3 billion (PV 60) for the Borderlands area and £9.2 to 23.9 billion (PV 60) for the whole of Scotland.
- 3.108 As well as these quantified benefits, there are numerous unquantified benefits that are anticipated to occur, including:

¹¹⁸ Source: Scottish Agriculture Economic Report (2018-29)

- Employment support - The forestry sector currently supports 25,000 jobs in Scotland with ambitious plans from Scottish Government to increase future woodland planting. There is a skills shortage in the forestry sector, with a capacity for 200 skilled jobs within the forest sector annually (c.60 skilled jobs in the Scottish Borderlands area).
 - Employment will also be supported through tourism generated by the landscape benefits of new integrated woodland
 - Suitably sited woodland can increase shading for fish, leading to larger fish being caught and economic benefits accruing to shops and accommodation venues
 - Enhancement to water quality through the buffering of watercourses'
 - Soil erosion will be reduced through planting the most appropriate tree species in the most appropriate location
 - Biodiversity benefits through the creation of habitat networks
- 3.109 Tweed Forum are working with NatureScot and SOSE on a scoping study to investigate opportunities for private investment in natural capital including woodland creation in the region. This builds upon their earlier work for NatureScot on Facilitating Local Natural Capital Investment.
- 3.110 The Project will have a Steering Group which will report to a smaller Core Group. The Core Group will work closely with the RLUP. The RLUP's are not sufficiently developed to provide the space to debate the issue of integrating forestry into the farming landscape effectively. The project will explore the practicalities of achieving this and help inform the RLUP process and how that evolves. The aim of the project is to encourage a more diverse mix of commercial conifer and native broadleaf woodland types in the Scottish Borders landscape. The pilot project will explore the best ways to facilitate a more diverse mix of woodland types through a range of blended finance (both public and private) options. It will also help focus the debate on reforming the FGS scheme post 2025 to encourage a more balanced approach. The blended finance approach will look at the economics of forestry in terms of costs and benefits. The project is very much about promoting Integrated land use; the right tree in the right place at the right scale.

Marine Pilot

Approach to Scaling up

- 3.111 The pilot will generate important knowledge and practical lessons about what makes for successful native oyster bed, salt marsh and sea grass creation and restoration, and through effective information sharing this knowledge will be key to potential scaling up.
- 3.112 Nationally the work of the Solway Coast and Marine Pilot Project (SCAMPP) will be made available to other restoration projects both north and south of the border. The focus on innovation will help increase the success rate and decrease the cost of habitat restoration, increasing the flow of ecosystem services from the restored habitats. Locally the Project will be able to provide regional data to help highlight restoration areas and provide a baseline which can be used to illustrate and monitor changes in health and coverage of seagrass, native oysters and saltmarsh in Solway Firth through targeted habitat restoration and trials. This means that pressures can be identified to reduce or stop loss of these habitats in the future and will provide the basis and support for the roll out of more extensive marine and coastal habitat restoration work by a future project.

Scale of Opportunity

3.113 Benefits can be scaled up regionally throughout the Solway both north and south of the border and nationally across Scotland and England in the following ways:

- Up to 600 ha possible native oyster bed creation in Loch Ryan (assume 25% of bay). Nationally projects are already underway with for example the Dornoch Environmental Enhancement Project (DEEP) project is investing £6.4m in restoring 40 hectares of native oyster reef off the shore in the Dornoch Firth, to provide a bioengineering solution to treatment of the last 5% of biological oxygen demand pollution from the Glenmorangie Distillery at Tain. As part of the overall project DEEP is investing £1.4m on sourcing native oysters some of which have been sourced from Loch Ryan. Restoration could enable economic activity from native oyster cultivation to equal the current Scottish levels for Pacific Oysters within 5 years, adding 5% growth. This has the potential to create up to 50 FTE jobs and £3.5m gross value added. These jobs would be in the most fragile rural communities, helping sustain some of the most economically marginal areas.¹¹⁹
- Saltmarsh creation. Potential range of opportunities of 900-1,600 ha in Solway Estuary, or 3,238-5,480 ha potential in Scotland. Offsetting a potential loss of 675ha in Scotland due to sea level rise. The Solway has the opportunity to be at the forefront of Scottish saltmarsh research, and restoration as it has some of the largest expanses of saltmarsh in Scotland. Caerlaverock, Wigtown and Kirkconnell Merse and Priestside Bank are among the 7 largest saltmarshes in Scotland. This concentration of saltmarsh assets means that saltmarshes in Dumfries and Galloway hold the largest quantity of carbon of any of Scotland's local authorities (41% of total Scottish surficial saltmarsh soil organic carbon stock) (Austin et al, 2021).
- Seagrass restoration. This trial aims to explore techniques to reduce the cost of restoration. At least 44% of United Kingdom's seagrasses have been lost since 1936, 39% since the 1980's. However, losses over longer time spans may be as high as 92%. Based on these estimates, historical seagrass meadows could have stored 11.5 Mt of carbon and supported approximately 400 million fish. The report results demonstrate the vast scale of losses and highlight the opportunities to restore seagrass to support a range of ecosystems services. (Green et al, 2021)¹²⁰
- The Solway Coast and Marine Pilot project has undertaken a number of baseline surveys throughout its development (Seagrass extent and condition, Saltmarsh expansion potential and native oyster extent and condition) to further understand the condition of coastal and marine habitat within the Solway. This work will continue through the pilot project – adding to the detailed knowledge of the habitats of the Solway, their current condition and any change over time. This data will be available for us when assessing future activity within the Solway.

Potential Outputs

3.114 Key benefits will include:

- Native oyster production plus breeding ground for other fish / shellfish

¹¹⁹ Towards an Economic Value of Native Oyster Restoration in Scotland: Provisioning, Regulating and Cultural Ecosystem Services - Scotland's Centre of Expertise for Waters new report

¹²⁰Green AE, Unsworth RKF, Chadwick MA and Jones PJS (2021). Historical Analysis Exposes Catastrophic Seagrass Loss for the United Kingdom. *Front. Plant Sci.* 12:629962

- Cultural and tourism benefits from the oyster fishery including the successful Stranraer Oyster Festival and birdlife associated with saltmarsh Carbon sequestration from seagrass and saltmarsh creation and associated impacts ¹²¹
- Coastal protection from saltmarsh creation including increased flood resilience
- Improvement in water quality

Table 3.13 Summary of Downstream Benefits from Marine Pilot Project Across Several Scenarios

	Native Oyster Beds	Seagrass	Saltmarsh	Saltmarsh
Extent (ha)	600	6,148	3,238	5,480
Benefits	£'m PV (60)	£'m PV (60)	£'m PV (60)	£'m PV (60)
Food production	29.0	-	-	-
Carbon sequestration	-	54.8	136.3	230.7
Total Gross Benefit	29.0	54.8	136.3	230.7
Costs of creation	-	430.4	44.8	75.9
Net benefit	n/a	-375.5	91.5	154.8

Data Audit and Mapping Pilot

- 3.115 This pilot is an enabling project that will support scaling up activity across the other land use -focused pilot activity and the marine pilot activity.
- 3.116 This project is to be applied across the whole of the South of Scotland and whilst applied policy may vary between England and Scotland, the concepts of good data collection, management and analysis can be readily expanded across the Borderlands area. There is existing engagement between national governments and departments on data requirements and project partners are linked into these discussions to facilitate scaling up. As an element of the delivery of Scotland's Natural Capital Programme, the data pilot will be a contemporary regional application of data activity to drive activity across Scotland.
- 3.117 This work will feed directly into that of the Regional Economic Partnership, supporting the management and monitoring of the Regional Economic Strategy and the delivery of the Regional Planning Strategy.
- 3.118 The Data pilot is also intrinsically linked with the development of the Investment plan and, as such, could lead to significant inward investment and associated skills, training, and job opportunities in the delivery of the NSET themes of New Markets and Digital.

Natural Capital Investment Plan Pilot

- 3.119 This pilot is an enabling project that will support scaling up activity across the other land use focused pilot activity.
- 3.120 Increasing private investment in Natural Capital is a target of both UK and Scottish Government. For example, the UK Government is aiming for £500m annual natural capital investment by 2027 and £1bn by 2030. On a pro rata basis this would equate to a target of between £10m to £20m annually in South of Scotland from 2026 onwards. This

129 A Saltmarsh Carbon Code is being developed and there is momentum towards including seagrass and saltmarsh in the UK Greenhouse Gas Inventory

investment would be used to help restore and maintain the Borderlands natural capital assets and in turn would generate an associated increase in skills, training, and jobs opportunities needed to deliver the investment.

All Pilot Projects

3.121 The scale of downstream benefits depends both upon the level of success of the pilot projects and the extent to which these are implemented across the Borderlands and across Scotland nationally. Based on the downstream assessments described in the preceding sections then the overall potential scale on monetary benefits at both the south of Scotland and whole Scotland area is summarised in the table below.

Project	Low scenario	High scenario
Whole Farm Audits	357.4	714.7
Woodland creation	9,938.2	24,845.5
Marine*	165.3	259.7
Gross benefits	10,460.9	25,819.9

*Note: The Marine case assumes no rollout of seagrass creation as the estimated costs exceed the currently quantifiable benefits, the pilot hopes to develop cost effective restoration techniques so that rollout can occur .

3.122 It should be noted that these figures include only the benefits that can be quantified based on current levels of information and methods of evaluation. The projects yield other natural capital benefits, in particular enhanced levels of biodiversity which cannot be adequately evaluated in monetary terms.

4. Financial Case

Introduction

- 1.1 The Borderlands Natural Capital Scotland Programme will be delivered over a period of 8 years drawing on £5m from the Borderlands Growth Deal. The Programme will deliver 6 pilot projects, and each will complete a BJC, with one (Woodland Creation), completing an FBC as it is just over the funding threshold for a BJC. Each Pilot business case will include detailed financial information including:
- Details of the amount of capital investment required from the Borderlands Inclusive Growth Deal in total and per annum.
 - The amount of co-investment for each project, both in total and per annum, if relevant.
 - If applicable, the sources and status of co-investment for each project i.e. whether confirmed, confirmed subject to securing the Borderlands investment, awaiting decision, application submitted, or initial discussion with funder.
 - Details of any ongoing revenue costs, and how those costs will be met (e.g. income generation, lead partners own resources, revenue funding programmes).
 - A description of the lead delivery partner's financial management processes and systems. It is expected that each lead delivery organisation will have robust processes in place to effectively manage all grant funding received to support project delivery.
- 4.1 In addition, each Pilot business case will describe the change control processes in place, including how any changes to the overall spend profile for the project will be managed. This will be undertaken in line with the established processes for the Borderlands Inclusive Growth Deal.
- 4.2 This financial case sets out an overarching programme profile which is built up from the current forecasts for individual pilots. The final detailed profile will be agreed through the individual Business Justification Cases and Business Case.
- 4.3 The proposed pilot projects were asked to provide the latest forecast expenditure excluding recoverable VAT (as we anticipate the pilots will be lead primarily by organisations which are able to reclaim VAT or are exempt). A series of common assumptions were then applied to these base figures to address inflation (based on the forecasts available from the Office for Budget Responsibility (OBR) where available. Due to the length of the programme a flat 3% p.a. increase was applied for the period beyond available forecasts. Staffing costs received a more limited 3% p.a. uplift each year and a standard contingency for works was added at 15%. This was intended include an additional uplift to reflect the current uncertainty in material costs.
- 4.4 The final costs will be validated during the approval process for the individual pilot projects including through the due diligence activity of Dumfries and Galloway Council as the Accountable Body and Scottish Government and UK Government as part of the appraisal process in line with standard practice for Full Business Case and Business Justification Cases.
- 4.5 Alongside the £5m of Borderlands funding requests a further £3.77m is forecast to be delivered through match funding and co-investment. Due to the nature of the development process for the Programme Outline Business Case (OBC), the match funding commitment continues to be developed through the finalisation of the Pilot Project business cases. In most cases the match funding currently proposed is dependent on

funding competitions and has been provided as an indicative total figure due to the uncertainties over competition award timeframes. This would be agreed as part of the business case process and included in any funding award to the pilots. The likelihood and availability of match funding, particularly where this is essential to the delivery of the activity, will be a key part of the pilot assessments.

Funding Source	Value
Borderlands Inclusive Growth Deal Funding	£5m
Anticipated Public Sector Match	£3.34m
Anticipated Private Match	£0.42m
Total	£8.77m

Note: Numbers may not sum perfectly due to rounding.

Capital and Revenue requirements

- 4.6 At the programme level the approach to developing the capital and revenue requirements has been build up from the individual project levels with a maximum set by the original Deal value approval.

Capital funding

- 4.7 The total Capital funding requirement for the programme is £2,500,000 including inflation and contingency assumptions.
- 4.8 The precise nature of the Capital Expenditure varies across projects depending on the project itself and is set out in more detail in each of the project appendices but includes the construction of new assets, enhancement of landscapes and public realm works as well as supporting costs necessary to deliver these including staffing and management costs relating to the development of capital assets. The innovative Data pilot also includes support for IT equipment. As part of the pilot projects investment in assets required to enable monitoring and analysis are also included.
- 4.9 At a programme level the funding has been allocated against four headings as follows:
- Staffing – £ 371,162
 - On-site works – £ 2,008,152
 - Site monitoring and evaluation – £120,686
 - Contingency – £281,416.47
- 4.10 Details of what will be under these headings will be included in the project business cases.

Revenue funding

- 4.11 The total revenue funding for the programme is £2,500,000 including inflation and contingency measures.
- 4.12 The specific amount of revenue funding is set out in project appendices in more detail but is primarily relating to salary costs for delivery of the project and specific costs such as software for pilot activity which is not identified as capital expenditure. Due to the nature of the pilot activity there is a focus on engagement activity to bring stakeholders, communities and businesses into the process and embed the approach in wider working. There is also a sizable budget to enable site-specific monitoring and data capture.

4.13 At a programme level the funding has been allocated against four headings as follows:

- Staffing – £ 2,032,493
- Engagement activity – £167,397
- Site monitoring and evaluation – £300,110
- Contingency – £8,339

4.14 The table below is built up from project level information and is inclusive of inflation and contingency.

Table 4.2 Programme level budget

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	Total
Capital	112,408.00	348,276	726,638	612,638	300,138	228,941	170,961	2,500,000
Revenue	133,226.00	253,307	472,611	468,367	450,540	422,196	299,753	2,500,000
Total	245,634	601,583	1,199,249	1,081,005	750,678	651,137	470,714	5,000,000

Net effect on prices

- 4.15 The full details of the impact will be considered at a project level. The total value of the programme is fixed. Projects will be required to undertake contracting in line with public sector procurement regulations. The current impact of inflation on prices is significant and larger contingency has been included and the inflationary forecast is based of the best available information.

Impact on income and expenditure account

- 4.16 The cashflow of the programme will be undertaken by Dumfries and Galloway Council as part of the Accountable Body arrangements for the Borderlands Deal in Scotland. Individual project will be required to manager project level cash flow and reflect that all payments for grant claims will be quarterly in arrears from activity. As part of the due diligence of the pilot business cases and justifications the ability to cashflow the project to meet this requirement will be confirmed.

Impact on balance sheet

- 4.17 The cash flow management at a programme-level will be undertaken by Dumfries and Galloway Council as the Accountable Body for the Borderlands Partnership in Scotland. All activities will be undertaken in line with the relevant financial regulations and as signed off by the Section 95 officer.
- 4.18 The Borderlands Partnership has an established approach to managing programme expenditure for the Borderlands Inclusive Growth Deal which is already operating in England through Northumberland County Council.
- 4.19 It is however not anticipated that there will be a significant impact on balance sheets with the funding provides on a quarterly basis from Scottish Government in line with the claims received from projects. As such, at a programme-level this will be undertaken in line with the processes set out for Growth Deals in Scotland.

Overall affordability and funding

- 4.20 The specific affordability and funding package will be established at a project level through the business justification process. This will ensure that the project sponsor is able to take forward the project in line with the public funding requirements and ensure appropriate cash flow capacity. South of Scotland Enterprise, Dumfries and Galloway Council and Scottish Borders Council are all closely involved.

- 4.21 As Accountable Body Dumfries and Galloway Council is in a position to handle and manage the public funding in line with long-established financial regulations. This programme represents a small proportion in comparison to the annual Council budget of £391.6m.

Confirmation of stakeholder support

- 4.22 Please refer to Appendix F , Appendix G and Appendix H for details of the support of key stakeholders for the Programme at Programme level, including the proposed Programme Board.

5. Commercial Case

- 5.1 Consistent with other projects and programmes in the Borderlands Inclusive Growth Deal, the responsibility for the procurement for each pilot project will be with the project applicant. This may ultimately be one of the partner local authorities where robust processes to manage this are well established. In all cases the approach to procurement will be set out in the pilot project business case and will form part of the local appraisal to ensure a robust approach is agreed to the satisfaction of the Accountable Body, Dumfries and Galloway Council.
- 5.2 The approach to procurement for each project will be set out in detail within the relevant BJC/FBC and reviewed during appraisal by the Borderlands Partnership Programme Management Office (PMO) to ensure that the Accountable Body is comfortable that the approach complies with relevant UK and Scottish public procurement requirements such as The Procurement Reform (Scotland) Act 2014.
- 5.3 Each project will need to have a detailed description of the approach to procurement and how this complies with public procurement requirements. The lead local authority will provide support to project partners where necessary, to ensure they understand procurement requirements. As part of the approach to overall delivery, projects will need to set out how their approach to procurement will ensure robustness and transparency, achieve value for money and how it will support goals of inclusive growth, community wealth building to deliver local and social value, and sustainability. This will include the provision of an Integrated Impact Assessment, finalised as part of the BJC/FBC stage for the projects. Social value / community benefits will be used to encourage the use of local Small Medium Enterprises (SMEs) or Voluntary and Community Sector (VCS) organisations as part of any sub-contracting process, which, in turn, will make for a more sustainable approach to procurement. In this way, the local community will retain much of the economic benefit from their projects and will also see a reduction in the carbon footprint required to deliver these.
- 5.4 For each project where procurement is to be undertaken, the following information will be provided:
 - The type/s of service to be procured.
 - The potential contract/s value for each procurement and the procurement route to be followed (OJEU, three quotes etc).
 - The potential timeline for each procurement.
 - Indicative selection criteria (price, quality, experience/track record).
 - Which organisations / individuals will be involved in assessing and selecting submitted quotes.
 - How community wealth building has been considered and integrated

Appraisal

- 5.5 As part of the review process to be undertaken by the Borderlands Partnership PMO, following the 'Green Book' approach, there will be consideration of the procurement approach being proposed. The Accountable Body, through due diligence, will confirm that this meets public procurement requirements. This review will consider robustness and transparency of the approach, how value for money will be achieved, and how contributions to community wealth building, social value and sustainability are embedded.

As part of approving the business justification cases, and one full business case, for the specific pilots, the Scottish Government will complete a full appraisal of applications.

- 5.6 Where an asset is to be created through the project this will be captured in the project plan, setting out ownership, conditions of use, retention and benefit from the asset.
- 5.7 Issues highlighted through the appraisal or due diligence will normally be addressed prior to approval but depending on the nature of the specific issue may also be addressed through inclusion of a special condition in the Grant Funding Agreement to inform delivery.

Assurance in Delivery

- 5.8 The requirement for procurement, including any special conditions identified through the appraisal, will be included in the Grant Funding Agreement between the Accountable Body and the project lead. The Grant Funding Agreement will require compliance with public procurement requirements as a condition of grant funding. In line with the delivery approach to be undertaken by the PMO, a Project Engagement Visit will be undertaken for each project during which the approach to procurement and required evidence will be discussed and confirmed.
- 5.9 As part of the Quarterly Monitoring Review and Claims process, each project will need to provide evidence of defrayal and delivery including details of any procurement undertaken, with a procurement report provided for procurement activity setting out the specification, approach taken, responses and resulting decision. This will ensure that on-going delivery is monitored to reduce risks. The Grant Funding Agreement will set out the response to non-compliance in line with the requirements of the Accountable Body. Standard practice includes retention of 10% of funding until after the Project Completion Visit during which all evidence of spend is confirmed.

Procurement strategy and route

- 5.10 The Procurement strategy and route for each of the pilot projects will be included in each project business case.

Services and required outputs

- 5.11 The project leads will set out the approach to procurement in the business justification or business case and will be required to share the procurement report and specification for any activity with the PMO to support claims activity. This will set out the scope of the procurement, specification, conditions for success and objectives as well as demonstrate how value for money was delivered in line with public procurement legislation.

Risk allocation

- 5.12 Programme-level risks are set out in the Programme Risk Register in Appendix D - . Pilots will be required to provide a project level risk register as part of the final business justification case/business case.

Charging mechanism

- 5.13 Projects will receive payment in arrears for evidenced, defrayed expenditure undertaken in the previous quarter. This will be claimed through the standard quarterly returns and claim process managed by the Borderlands Programme Management Office with Dumfries and Galloway Council this will confirm to the Borderlands Handbook which sets

out programme wide templates and processes and in line with the financial regulations of Dumfries and Galloway Council.

- 5.14 These claims will be collated and provided to Scottish Government in line with the Deal Grant Funding letter between Scottish Government and Dumfries and Galloway Council. Following receipt of the funding to Dumfries and Galloway and with the approval of the Section 95 officer a payment will be made to the project sponsor.

Key contractual arrangements

- 5.15 The contractual arrangements will be developed for each pilot project as part of their business case development.

6. Management Case

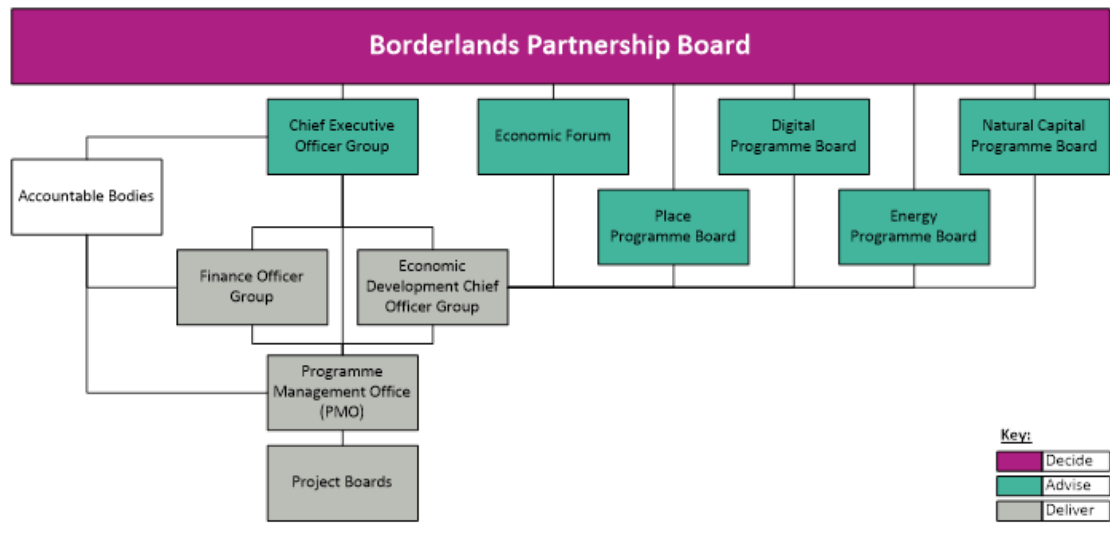
- 6.1 The Natural Capital Programme in Scotland will deliver 6 pilot projects across the Scottish Borders and Dumfries and Galloway local authority areas. The Natural Capital Programme Partners, working together with the Programme Management Office (PMO) and in consultation with the UK and Scottish Governments, have developed detailed and robust governance arrangements for the Programme, which fit within the overall governance arrangements for the Borderlands Inclusive Growth Deal.
- 6.2 The Programme partners recognise that delivering the ambitions of the Natural Capital Programme within the Borderlands Inclusive Growth Deal requires alignment between local, regional and national ambitions, policies and resources. The governance arrangements proposed in this document will ensure this alignment happens and the pilot projects are managed consistently within a framework. It will ensure that the outputs and outcomes of each pilot are brought together to deliver the Programme's objectives; to transform current practices, influence an emerging economic policy area post-Brexit, and support a series of long term and sustainable economic, environmental, and social outcomes
- 6.3 The Governance arrangements will link to the developing Natural Capital Programme in England, which will deliver in Cumbria and Northumberland, the other areas in the Borderlands region. They will ensure that the two Programmes are brought together at the appropriate level, to share learnings and outcomes, to deliver shared knowledge and results across the Borderlands region.
- 6.4 The management of the Natural Capital Programme in Scotland is comprised of three distinct stages which are overseen by a common governance arrangement:
- 6.5 **Development of the pilot business cases** – each pilot project is responsible for developing its own proposal for submission to the Scottish Government for appraisal and confirmation that they, as the funder, are comfortable with awarding the funding. In advance of submission to the Scottish Government the pilot cases will be considered by the Borderlands Programme Office for being complete and remaining within the principles of the Natural Capital programme and Borderlands Inclusive Growth Deal and endorsed for submission by the Borderlands Partnership Board. This is consistent with the approach for governance across the Deal.
- 6.6 **Monitoring and management during delivery** each pilot project will be established through a Grant Funding Agreement prepared by Dumfries and Galloway Council as Accountable Body for the Borderlands Inclusive Growth Deal in Scotland. This will set out the terms and conditions of award and grant payment profile. Following an initial Project Engagement Visit by the Accountable Body and Borderlands PMO all pilots will be required to provide a month update and quarterly claim based on activities undertaken and identifying any issues. This will be escalated as required including for change controls and be discussed at the regular Natural Capital Scotland Working Group.
- 6.7 **Evaluation and lesson learning** as a set of pilot projects a key outcome for the Natural Capital Scotland programme is the evaluation and benefits realisation from the pilot activity. Each project will provide the evidence needed to undertake this with the ownership of this being taken forward primarily by the Natural Capital Programme Board.

Programme management governance arrangements

- 6.8 The Natural Capital Programmes for England and Scotland will be incorporated into the overall Borderlands Governance and Management Arrangements through a Natural

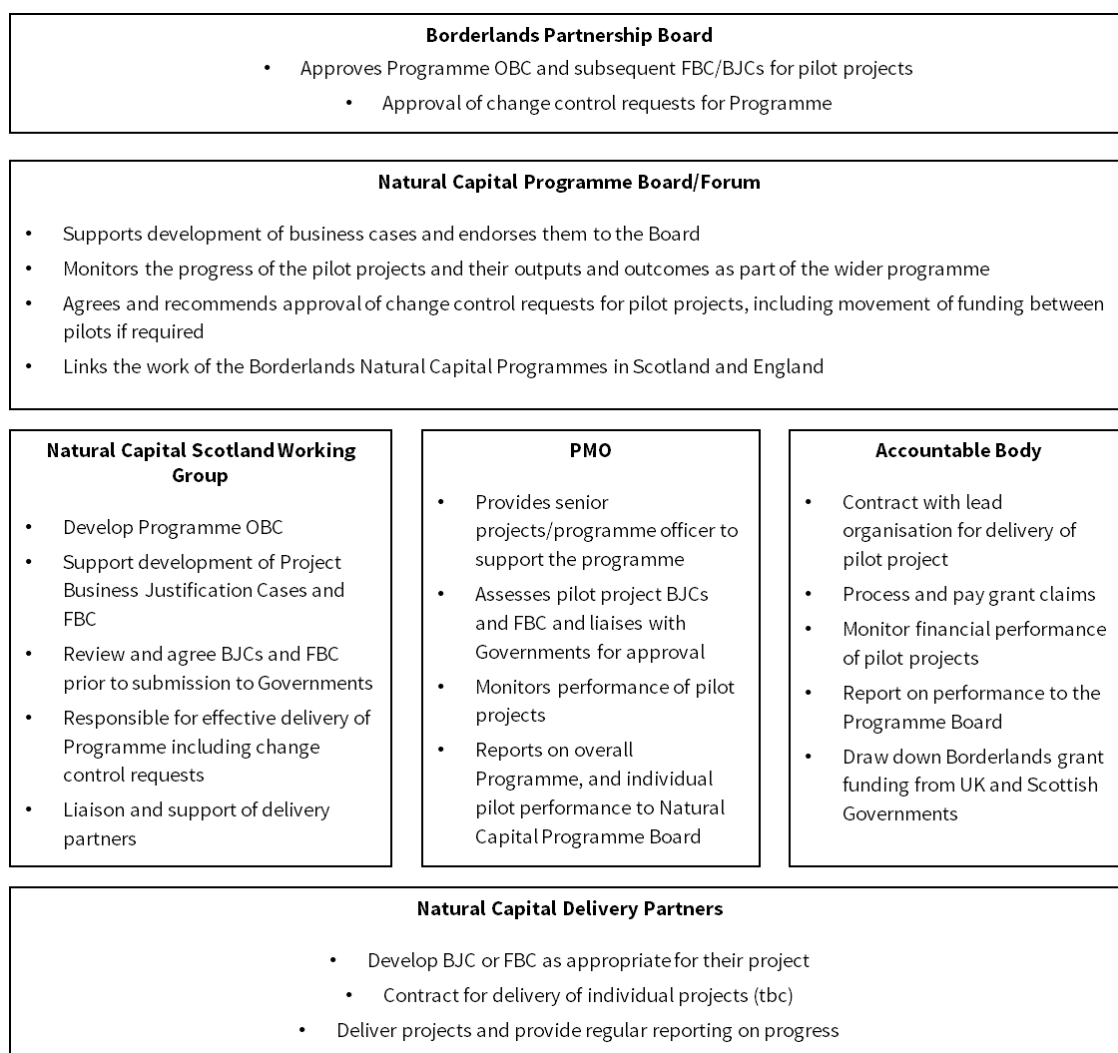
Capital Programme Board. The management of the programme will use the approach and templates set out for the overall Deal as included in the Borderlands Governance Plan, Implementation Plan, Finance Plan, Benefits Realisation Plan and accompanying Handbook. Its place in the overall governance is shown in the figure below.

Figure 1.2 Borderlands Governance and Management Arrangements



- 6.9 The roles and responsibilities of the key groups and organisations involved in the management and governance structure for the Natural Capital Programme Scotland are described below and illustrated in the following figure below.
- 6.10 A Natural Capital Programme Board will be set up to provide advice and “critical friend” support to the programmes in both Scotland and England. It will review and advise on the development of the pilot project business cases and their implementation. It will provide a link into policy experts across both governments and other private and public sector organisations. The Board will take a significant lead in overseeing the evaluation of the pilots collectively with ownership of the Benefits Realisation Plan. This will ensure that the pilot project outputs and outcomes are seen as a complete set of results to inform further project development and expansion. **More details for the Board are in Appendix H including a draft Terms of Reference.**
- 6.11 The Board would be appointed in line with the timetable for delivery of the Scotland Natural Capital Programme but will include cross border representation too, in anticipation of the Borderlands Natural Capital England programme. The representatives will include a range of strategic stakeholders (including the UK Government and Scottish Government) and specialists such as academics. This will ensure that cross border learnings and connections across projects can be established from the start, but it won't delay any elements of the programme delivery in Scotland. The Board will meet two to four times a year to receive updates from pilots, guide evaluation work.
- 6.12 A Natural Capital Scotland Working Group has been established which will focus on the delivery and coordination of pilots in Scotland only. This group is meeting on a monthly basis to oversee the progress and performance of the pilots and identify issues to be escalated. The Working Group includes representatives from each of the pilot projects alongside the Borderland Programme Management Office and Accountable Body. A Terms of Reference and full details are included at Appendix G.

Figure 1.3 Overview of Natural Capital Programme management structure



- 6.13 As part of the information assessment by the Programme Management Office in advance of submission, each pilot project will be required to develop a robust management plan as part of their FBC or BJC. This will set out how the pilot project will be managed, the capacity and experience within the lead partner to undertake this and how this will ensure that the evaluation requirements are met. This will include specific governance arrangements associated with the six projects, inc. SRO.
- 6.14 Each proposed project is led by an experienced organisation with strong connections in their field and a track record of delivering projects.
- 6.15 Programme Plan: a Gantt chart for the Programme is provided in Appendix E - and key milestones are outlined in the table below.

Table 6.1 Key project milestones

Activity	Target dates
Submit draft OBC to the UK and Scottish Governments	November 2022
OBC agreed by the UK and Scottish Governments and Borderlands Partnership Board	June 2023
Pilot project FBC / BJCs developed in tandem with OBC	From Jan 2023
Pilot 1: Species Rich Grassland BJC signed off	July 2023

Pilot 2: Whole Farm Audits BJC signed off	July 2023
Pilot 3: Woodland Creation FBC signed off	July 2023
Pilot 4: SCAMPP Marine BJC signed off	July 2023
Pilot 5: Investment Plan BJC signed off	Q3 2023
Pilot 6: Data Audit and Mapping BJC signed off	Q3 2023
Delivery of pilot projects	Aug 2023-September 2030
Final project delivered	September 2030
Interim review of Programme performance and impact	Mar 2028
Final review of Programme performance and impact	Mar 2032

6.16 When developing the Gantt chart for the Programme, the following assumptions have been made:

- The Natural Capital Scotland Programme will be delivered over a period to March 2031. The Programme will involve 6 pilot projects as described in this OBC. The projects will develop a BJC – and an FBC in the case of the Woodland Creation pilot – in tandem with the development and sign off for the Programme OBC.
- Each pilot project will manage its own project plan and feed and updated the overall Programme Plan regularly.
- Each pilot will run to its own timetable but within the overall timescale for the Programme, ensuring that the outputs are delivered within the timescales for the Programme and the Borderlands Deal
- All Borderlands eligible activity should be complete by September 2030, allowing three months to finalise payments, and complete performance monitoring processes.
- As the Programme progresses, and pilot projects begin work, the Gantt chart will be regularly updated. This will help to manage the volume of work for the teams involved and inform forecast spend profiles to ensure alignment with the overall financial profile for the Natural Capital Scotland Programme.

Use of specialist advisors

6.17 The Programme partners are working with Hatch and eftec, an environmental economics agency, to develop the Programme OBC. The partners do not currently have any plans to appoint special advisors to support delivery of the pilot projects, as they are being developed and delivered by specialist bodies. However, should the volume of demand exceed the available resource for any elements of the Programme, the partners may decide to procure specialist support to add to the capacity and specialist input of the PMO and the Programme partners. This may cover areas such as state subsidy advice, monitoring and evaluation, change control and due diligence advice, as well as specialist advice linked to the pilot areas of work.

Change and contract management arrangements

6.18 Once the project BJC/FBC is approved, the Accountable Body, Dumfries and Galloway Council, will contract with the lead organisation to deliver the project, using a grant funding agreement.

6.19 The lead organisation will have overall responsibility for delivery of the project and reporting on performance to the accountable body and PMO. This will include claiming grant from the accountable body and reporting on project performance to the accountable body and PMO.

- 6.20 The PMO will amalgamate output, outcome and impact data for individual Projects, reporting on their performance to the Partnership Board.
- 6.21 The accountable body will review, and process grant claims, making payments to each project delivery organisation on submission of a complete and evidenced grant claim.
- 6.22 Contracts for the delivery of the projects will vary, depending on the details of the project, any condition of grant funding, and the overall timescale for delivery. The Programme has developed a change management and contract management process, based on existing good practice, to ensure all changes are handled fairly, consistently, and transparently. The process is consistent with the wider Scheme of Delegation and Collaboration Agreement which applies to the full Borderlands Inclusive Growth Deal. This includes delegation to the Natural Capital Programme team and to a named responsible officer within the PMO and working officers from the relevant Accountable Body. This approach will ensure that any proposed change or variation is confirmed to be reasonable, in line with the project approval and will not hinder the delivery of the Deal.
- 6.23 The process will apply to changes or variations within Project Plans that have been formally agreed.

Change Management Process

- 6.24 The change management process is set out in the Borderlands Programme Handbook and involves three levels of change or variation: minor, notable, and significant, which will affect the level of information required to secure approval. The current process is as follows, any changes to this require approval from the Borderlands Partnership Board on advice of PMO, Accountable Bodies and UK Government and Scottish Government:
- 6.25 The project delivery partner identifies the change, why it is needed, and secures agreement from their project team
- 6.26 The project delivery partner notifies the PMO of the proposed change by completing a 'change request form', part of the agreed Borderlands change control process. In discussion with the relevant Accountable Body, the PMO will determine whether the proposed change is minor, notable or significant, which will determine the relevant level of approval required.
- 6.27 **Minor:** The proposed change or variation will be considered minor if it does not have a material impact on: the outputs or outcomes to be delivered; on the nature of the project; or to the overall financial profile of the project (such as a slippage in expenditure over a quarter within the year but no increase, or a less than 10% variation across budget headings), or following the change, the resulting project looks fundamentally the same. In the case of a minor change, the PMO, in agreement with the Accountable Body, will confirm the change or variation in writing. All 'minor' variations will be reported to the Natural Capital Programme team and will be included in the subsequent Programme updates to the Borderlands Partnership Board.
- 6.28 **Notable:** The proposed change or variation will be considered notable, if it has an impact on the nature of the project, the financial profile or the outputs/outcomes to be delivered, which may impact on the project's contribution to the overall Natural Capital Scotland Programme and the Borderland Deal. For example, if the change equates to less than 15% of the overall funding for the project; or will increase / decrease the outputs or outcomes to be delivered by less than 10%. In this case, the PMO will prepare a report to the Borderlands Partnership Board in consultation with the Accountable Body, with a recommendation to approve, not approve, or request further information about the rationale for, and potential impact of the change. If approved, and where a variation to the contract is required, the Accountable Body will update the contract, or provide an

appendix to the contract to confirm the change. The decision of the Partnership Programme Board will be reported to the Governments.

- 6.29 **Significant:** The proposed change or variation will be considered significant, if it will have a material impact: on the timescale for delivery; on the outputs and / or outcomes to be delivered of more than 10%; on the financial profile of more than 15% in total; or on the nature of the project to be delivered, with the activity being no longer consistent with that detailed in the contract award. Where a change or variation is considered to be significant, additional information will be sought from the partner delivery organisation, over and above that provided in the 'change request form'. In some instances, the PMO may require a revised BJC or project plan, setting out the proposed change/s in detail, and the impact on delivery. The updated project plan would be re-appraised to ensure that it remains eligible for Borderlands Investment, and will provide value for money, with the Accountable Body undertaking further due diligence checks if required. A report and recommendations about the significant change, (and the updated project plan) will be submitted to the Government partners and to the Borderlands Partnership for final approval.

Benefits realisation arrangements

- 6.30 Cumulative Programme level benefits have been described in the strategic case and quantified in the economic case. Each project will generate benefits (i.e., outputs and outcomes) which contribute to the achievement of the Programme level targets e.g., new FTE jobs created; timber production, carbon sequestered, land improved etc. The contract between the relevant accountable body and the pilot project lead will specify the benefits to be generated by the project, how they will be evidenced and reported on, and the timescale for delivery. The accountable body will regularly report on progress towards the achievement of benefits to the Borderlands PMO. The lead delivery partner for each project supported by Borderlands investment will have overall responsibility for the achievement of relevant contracted benefits. Any changes to the benefits for a project will be managed through the change control process described above.
- 6.31 The Borderlands PMO will be responsible for aggregating benefits information, reporting on progress towards the achievement of benefits to the Natural Capital Programme Board, and Borderlands Partnership Board, at an individual project and overall Programme level. The PMO will develop a benefits register for the Programme, at Programme and project level to track and monitor progress.
- 6.32 Successful delivery of the programme will be managed through best practice approaches and using the Borderlands Inclusive Growth Deal programme management guidance and processes. This will embed appropriate change, contract and risk management processes as well as the use of gateway reviews. The partners will agree any specific processes for programme control and risk management.

Risk management arrangements

- 6.33 The Natural Capital Scotland Programme will invest £5m of Borderlands funding across the pilot projects). As such, risks will need to be managed at two levels:
- **Programme-level** - Managing the risks associated with delivery of a complex, high-value, multi-faceted Borderlands wide investment programme.
 - **Project-level** - Managing the risks associated with the delivery of individual projects benefitting from funding.

6.34 The attached risk register (see Appendix D -) identifies the main programme level risks, the approach to mitigating each risk, and those that will be responsible for risk management.

Risk	Mitigation / Management
Costs in 2022 increased significantly, energy prices, material supplies, and the cost of living rose dramatically; this is forecast to continue and will affect all pilot projects	<ul style="list-style-type: none"> Project to identify options during finalisation of the business case/justification. Increase contingency included in financial case assumptions.
Projects do not align with Programme and Deal objectives, eligible interventions and target outcomes.	<ul style="list-style-type: none"> NC working group and Borderlands PMO will work closely together in the development of the programme and project business cases, to ensure they align and meet the Borderlands Deal objectives and outcomes
Difficulties in sourcing materials, employees or contractors across the pilot projects	<ul style="list-style-type: none"> Sign off project business cases as soon as possible after the programme OBC, to secure funding to allow the procurement of staff and materials to begin.
Weak evidence base justifying intervention and demonstrating market failure.	<ul style="list-style-type: none"> Specialist consultants assisting with Programme business case development, working with all pilot projects
Delay to signing off Programme Business case will lead to subsequent delays in the sign off and start date of the pilot projects	<ul style="list-style-type: none"> Resource from Borderlands PMO to support the programme business case development and sign off. Close working with both Governments to ensure the review process is actively managed.
Risk of skills shortages to deliver the proposed projects – how can this be assessed and managed.	<ul style="list-style-type: none"> A range of mitigations in place, with more detail in the risk register. The projects have ensured that they have allowed for good market salaries and the projects will include training places which will help bring along a pipeline of skilled individuals Through this Borderlands project, we will gain further knowledge of the skills gap and be able to fold this information into training programmes being developed by the partner authorities as part of national and local schemes.
Lack of engagement with stakeholders for the overall Programme	<ul style="list-style-type: none"> Stakeholder engagement plan for the Programme will link with project engagement plans to ensure all stakeholders are involved and engaged

6.35 Risks to the Natural Capital Programme will be identified, recorded and managed by the Head of the Borderlands Programme Management Office (PMO) who will be responsible for risk management at the overall Programme level, while ultimate accountability will rest with the Borderlands Partnership Board.

6.36 The Programme risk register will be monitored and updated on an ongoing basis by the PMO/Programme team, who will be responsible for identifying and implementing actions to mitigate each of the risks recorded in the register. Monitoring and management of some of the risks will also require the PMO to liaise closely with both the Accountable Body and

with the programme lead, in order to maintain an overview of risks associated individual projects.

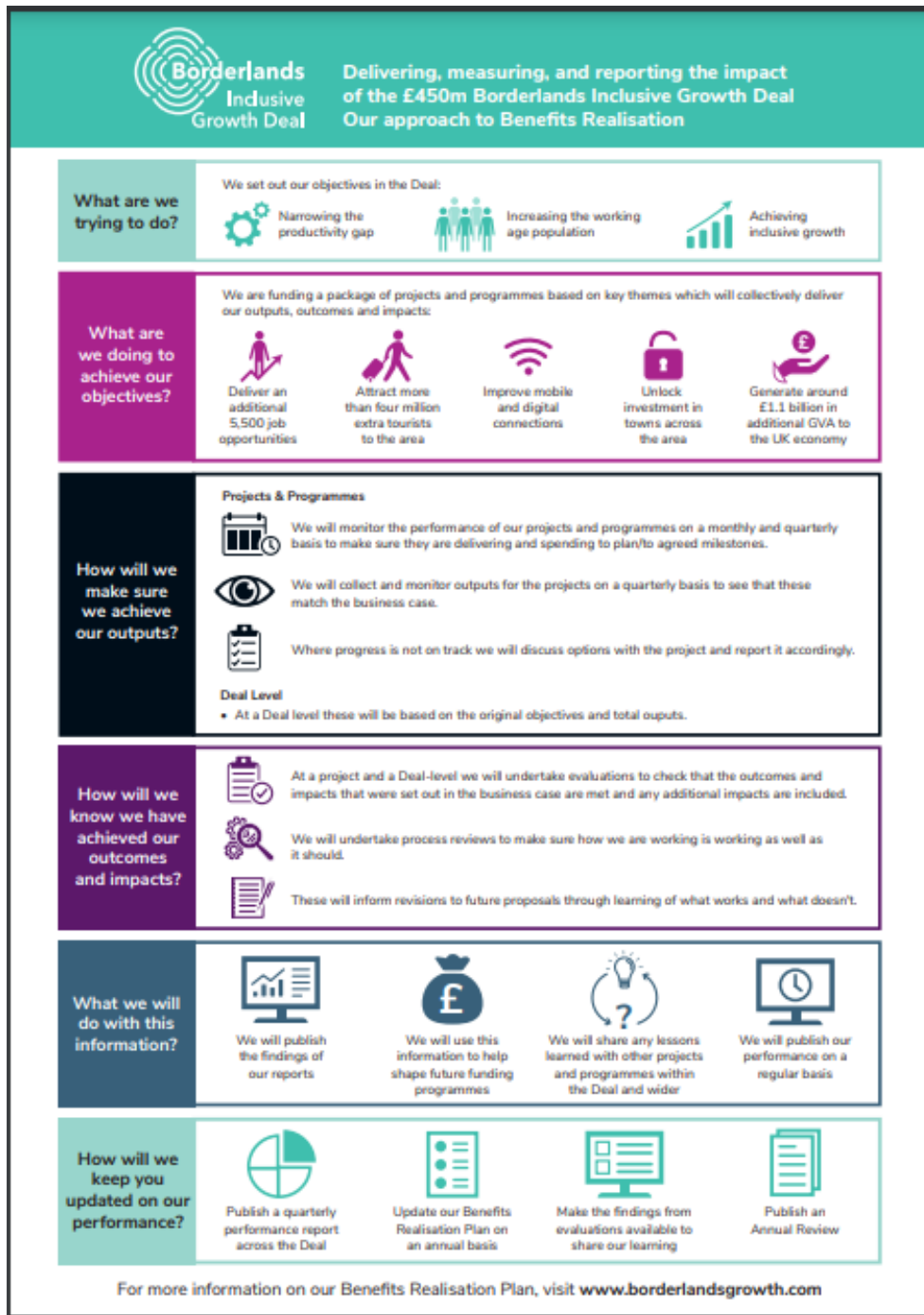
- 6.37 The PMO will provide risk management updates on a quarterly basis to the Natural Capital Programme Board and will escalate key risks or significant changes to risk, to the Borderlands Partnership Board.
- 6.38 At project level, all projects will develop and manage their own risk register but will be asked to report on a quarterly basis to the programme team/PMO to highlight any changes to the register, either in level of risks or new risks emerging. These will be assessed and added to the programme level risk register as appropriate. Risks will be identified, monitored, and managed through the following process:
- Application and appraisal - Risk management will be integrated as a core element of the process of developing the individual project business cases. As part of preparing the BJC or FBC, each project will be responsible for developing a project risk register. The PMO and Programme team will undertake an assessment of risk at individual project-level as part of the overall appraisal of each BJC/FBC. The projects will need to include a robust risk management plan.
 - Contracting and monitoring - Once the BJC or FBCs for a project is approved by the Programme team and the Borderlands Partnership Board, the risk register will form part of the Grant Agreement between the Accountable Body and the lead Local Authority/Delivery Partner(s). This will place a responsibility on the lead Local Authority to manage and monitor risk at the project level. As part of the Quarterly Monitoring Returns, the lead Local Authority and project delivery partner will be required to report to the Accountable Body on risk management. On a quarterly basis, the Accountable Body and the PMO will report these into the overall Programme-level risk register.

Programme assurance and evaluation arrangements

- 6.39 A full monitoring and evaluation framework will be developed for the Natural Capital Programme to guide all monitoring and evaluation activity. The framework design will be based on the Programme logic model and will be consistent with the Borderlands Growth Deal M&E Framework. In line with the overall monitoring and evaluation approach, the Natural Capital Programme specific activity will be to show that the Natural Capital Scotland Programme is making a difference in the Borderlands area, including:
- Contributing to the three challenges of the Borderlands Inclusive Growth Deal (increasing the working age population; boosting productivity; delivering inclusive economic growth).
 - Achieving the Strategic Objectives of the Natural Capital Scotland Programme.
- 6.40 This will feed into the overall evaluation of the Deal evidencing both the direct outputs generated by the investment but also the longer-term strategic impact in ensuring the natural environment of the Borderlands region is recognised as an economically productive asset and is developed sustainably and protected. The initial approach will focus on regular monitoring of delivery and the resulting outputs or key performance indicators (KPIs) directly generated as part of the quarterly and annual review approach for all projects. This will capture both delivery against spend but also the delivery of key direct outputs in relation to the projects' baselines established at the start of the programme.

- 6.41 The Natural Capital Scotland Programme has a focus on measuring and quantifying the benefits of the region's natural capital. Projects may include specific engagement and evaluation activities such as surveys and case studies undertaken throughout delivery of each project; this activity will be detailed in the project plans. Additional qualitative, as well as quantitative, elements will be an important part of the approach to monitoring and evaluation. At the project level the monitoring and evaluation approach will include:
- 6.42 **Baseline** - Establishing the baseline position in the Borderlands natural capital economy and in each of the pilot areas to benefit from the Programme's investment.
- 6.43 **KPIs** - Establishing the key output and outcome measures against which the progress and impact of the Programme will be assessed, including both quantitative and qualitative measures.
- 6.44 **Evidence** - Developing a system for collecting both quantitative and qualitative evidence through regular monitoring activity, as well as through evaluation research.
- 6.45 Together this approach mirrors the wider approach proposed for the full Borderlands Inclusive Growth Deal Monitoring and Evaluation framework.

Figure 1.4 Borderlands Inclusive Growth Deal benefits realisation plan



Outputs, outcomes, and impacts

6.46 Outcome and impact measures will be used to assess the extent to which the Natural Capital Scotland Programme delivers on its Strategic Objectives as well as contributing to the three Borderlands Inclusive Growth Deal challenges (including the key priority of Inclusive Economic Growth). A table of outcome and impact indicators will be developed for the Programme which will identify the:

- Contribution to the Borderlands **three Borderlands Inclusive Growth challenges:**

- a. Increase the working age population
 - b. Boost productivity
 - c. Deliver inclusive growth
- Contribution to Inclusive Growth Outcomes
 - Environmental/natural capital benefits

Monitoring Approach

- 6.47 Progress towards output and outcome targets will be evidenced by gathering performance data at the level of individual projects. Each project will have contracted targets quantified in line with the defined Programme output and outcome indicators.
- 6.48 Performance data will be gathered through Quarterly Monitoring Returns (QMRs) and will be aggregated by the Scottish Accountable Body. The data will be shared with the PMO who will maintain a programme database recording the performance of every individual project against output and outcome targets. This will be aggregated at the Programme level to evidence the overall progress towards output and outcome targets. Through the QMRs individual projects will also report on progress towards expenditure and funding targets.
- 6.49 Together, the outputs, outcomes and financial data will provide the evidence needed to assess the value for money delivered by the Programme, as part of the evaluation.

Evaluation Approach

- 6.50 An independent evaluator will be appointed at the commencement of the Natural Capital Scotland Programme to undertake a longitudinal evaluation covering the full 8-year life of the Programme. This will be a combined process and impact evaluation.
- 6.51 **Process evaluation** - Using qualitative methods (surveys, focus groups, interviews and case studies) to explore and understand the role of the Natural Capital Scotland Programme in delivering a greater understanding of the value of the natural capital of the Borderlands area. To include investigating the types of interventions that are most and least effective in delivering the Programme objectives and outcomes; the role of each pilot project in supporting and providing a scalable approach to natural capital investment; and the Natural Capital Scotland Programme model (including Local Authorities and public sector bodies working with specialist delivery partners) as an effective approach to natural capital investment.
- 6.52 **Impact evaluation** - Using a mix of quantitative and qualitative data to assess the progress of the Programme towards the strategic objectives and outcome targets, using a combination of project-level performance data as well as key environmental statistics.
- 6.53 The evaluation will commence with a comprehensive **baseline study** which will help establish the current natural capital of the Borderlands area; this work is already underway as part of the wider Borderlands Deal benefits realisation work.
- 6.54 This will be followed with a **comprehensive evaluation study**, repeated at regular intervals throughout the programme and funded from the Borderlands programme budget. As well as assessing progress towards objectives and outcome targets on an ongoing basis, each evaluation study will undertake a value for money assessment (based on actual costs per net additional output / outcome), enabling the Natural Capital Scotland Programme to understand those interventions that are delivering the greatest

impact and value for money, helping to shape potential future investment decisions and roll out of the pilot schemes. The study will also consider the gross and net additional impacts of the Programme.

- 6.55 The evaluation reports will generate evidence demonstrating the impact of the Programme across the different areas of the natural capital economy, as well as exploring changes at the level of the overall Borderlands natural capital and considering the extent to which it may be possible to attribute these changes to the effects of the pilot projects and the Programme investment.
- 6.56 The evaluation work across the Programme will support the development of a roll out plan for the pilot work. This plan will be led by the Programme Board, ensuring that the stakeholder groups and organisations represented on the Board are involved in embedding and delivering the work. More detail on the mechanisms for the scaling up and roll out of the pilots will be included in their business cases. This will then be further developed and refined as learnings emerge during the course of each pilot.

Appendix A - Strategic Policy & Objectives

A.1 The table below summarises the strategic and policy context across the following themes:

- Headline Land and Marine-Use and Economic Growth Strategies
- Economic Recovery
- Climate Change and Environmental Policy
- Sustainable Development Drivers
- Sector Specific Policy
- Policy relevant to the Borderlands region

Policy	Key Messages
Headline Economic Growth Strategies	
Scotland's National Strategy for Economic Transformation (2022)	Sets out the priorities for Scotland's economy as well as the actions needed to maximise the opportunities of the next decade to achieve the vision of a wellbeing economy. Rebuilding Natural Capital will be central to how Scotland transforms whilst creating more well-paid and secure jobs and developing new markets based on renewable sources of energy and low carbon technologies.
The Scottish Budget 2023/22	Highlights the green economy and strengthening Scotland's pandemic recovery as a major focus, outlining Scottish Government's ambition to build a stronger, fairer, greener economy for all Scotland's people and places, and to make the economy more sustainable and resilient in the long term
The 2022/23 Programme for Government	Outlines how the Scottish Government will deliver changes which will underpin a greener, fairer Scotland and how they will realise Scotland's potential to become a global green energy powerhouse
South of Scotland Regional Economic Strategy (2021)	"We will be a region of opportunity – where natural capital propels green growth, quality of life is unmatched, communities are empowered and cultural identity is cherished, attracting a new generation to live, work, visit, learn, and invest in the South of Scotland, enabling those already here to thrive"
South of Scotland RES Delivery Plan 2022-2025 (2021)	Has several key themes for delivering including Theme 5 Green & Sustainable Economy. Specific actions under this scheme include: <ul style="list-style-type: none"> • Action 5(A) – undertake natural capital opportunity mapping and work to develop specific investment propositions • Action 5(C) – develop proposals to increase opportunities and benefits arising from the region's natural capital assets including support for sustainable agriculture, woodlands and forests, restoring peatlands, water management, and increasing biodiversity.

	Action 5(D) – take forward the recommendations within the South of Scotland Community Wealth Building Pilot Report.
Circular Economy	<p>This Bill requires Scottish Ministers to introduce measures to help develop a circular economy. This includes:</p> <ul style="list-style-type: none"> • Publishing a circular economy strategy • Developing circular economy targets • Reducing waste • Increasing penalties for littering from vehicles • Making sure individual householders and businesses get rid of waste in the right way • Improving waste monitoring
Wider Landscape of Economic Strategies	
UK Industrial Strategy (2017)	Includes several grand challenges, including a Clean Growth priority area as well as commitments to investment in clean innovation, lowering carbon emissions and tackling local air pollution, further showcasing the linkages between a healthy environment and thriving economy
Levelling Up the United Kingdom White Paper (2021)	Sets out the programme to level up the UK with 3 key missions including spreading opportunities and improving public services; restoring a sense of community, local pride and belonging; empowering local leaders and community. It highlights the importance of natural capital to the UK, estimated to be worth £1.2tn in the UK. Increased R&D expenditure in the sector will include £140m over three years to scale up the Natural Capital and Ecosystem Assessment, in addition to the current Farming Innovation Programme
Scotland’s Economic Strategy 2015	“We will also protect and enhance our natural capital, our brand and reputation as a country of outstanding natural beauty, our commitment to low carbon and the opportunities our resources and assets provide for our economy and future generations”
Scotland’s National Planning Framework 3 and the Draft NPF4	“We have long sought to protect Scotland's environment, recognising that it is a dynamic resource rather than a fixed asset. To better reflect this, more proactive and innovative environmental stewardship is required. The pressing challenge of climate change means that our action on the environment must continue to evolve, strengthening our longer-term resilience. A planned approach to development helps to strike the right balance between safeguarding assets which are irreplaceable and facilitating change in a sustainable way. We must work with, not against, our environment to maintain and further strengthen its contribution to society.”
Economic Recovery	
The recent report from the Advisory Group on Economic Recovery (AGER) on a resilient wellbeing economy for	Identifies that a green economic recovery must combine job creation with the development of natural capital and a reduction in emissions

Scotland post-Covid 19	
UK Government's Covid-19 Recovery Strategy (2020)	Outlines the plan to recover from the Covid-19 pandemic, with the central aim of returning to life as close to normal as possible, for as many people as possible, as fast and fairly as possible, in a way that avoids a new epidemic, minimises lives lost and maximises, health, economic and social outcomes. This includes economic and social support to maintain livelihoods and restore the economy.
Headline Land Use and Environmental Strategies	
Update to the Climate Change Plan 2018-2032 - <i>Securing a Green Recovery on a Path to Net Zero</i>	"Scotland's Natural Capital is of great economic significance; it is believed to account directly for more than 60,000 jobs in Scotland. It is vital to our tourist industry, which employs more than 200,000 people across the country and it is essential to Scotland's food and drink sector."
Scottish Third Land Use Strategy 2021-2026 (2021)	Outlines a 2050 Vision: "A Scotland where we fully recognise, understand and value the importance of our land resources, and where our plans and decisions about land use will deliver improved and enduring benefits, enhancing the wellbeing of our nation." And several Land Use Objectives: <ul style="list-style-type: none"> • 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 • Urban and rural communities better connected to the land, with more people enjoying the land and positively influencing land use
Scotland's' Draft Biodiversity Strategy 2022-2045	Sets out an ambitious new Strategy to halt biodiversity loss by 2030 and reverse it with large-scale restoration by 2045
Scotland's 2020 Challenge for Scotland's Biodiversity	"This 2020 Challenge is Scotland's response to the Aichi Targets (2010) set by the United Nations Convention on Biological Diversity (2010) and the European Union's Biodiversity Strategy for 2020 (2011). These call for a step change in efforts to halt the loss of biodiversity and to restore the essential services that a healthy natural environment provides. Investment in the natural assets of Scotland will contribute to sustainable economic growth and support wellbeing and wealth creation."
Regional Land Use Partnerships and Frameworks	A Platform for change identified in the national Land Use Strategy to take forward deeper conversations about sustainable land use. RLUPs will help national and local government, communities, landowners and stakeholders work together to find ways to optimise sustainable land use in a fair and inclusive way - meeting local and national objectives and helping achieve Scotland's climate change targets through land use change and good land management that supports a sustainable future.
Wider Landscape of national and regional environmental policies	

UKG 25 Year Environment Plan	Sets out the importance of enhancing natural capital to boost productivity as the essential basis for resilient and inclusive economic growth over the long term. This proposal aligns closely with several of its focus areas, including to use and manage land sustainably, to increase resource efficiency and reduce pollution and waste, to connect people to the environment to improve health and wellbeing.
Climate Change (Emissions Reduction Targets) (Scotland) Act 2019	Outlines the target for emissions reduction in Scotland – net zero emissions by 2045.
Scottish Biodiversity Strategy: 'It's in your hands' 2004, & the 2020 challenge for Scotland's Biodiversity	<p>Scotland's 2020 Challenge aims to:</p> <ul style="list-style-type: none"> • protect and restore biodiversity on land and in our seas, and to support healthier ecosystems. • connect people with the natural world, for their health and wellbeing <p>and to involve them more in decisions about their environment.</p> <ul style="list-style-type: none"> • maximise the benefits for Scotland of a diverse natural environment and the services it provides, contributing to sustainable economic growth.
NatureScot: Delivering Scotland's Ambition to Secure Positive Effects for Biodiversity (2020)	The report outlines the ways in which the planning system should adapt to realise new ambitions to respond to the twin crisis of the climate emergency and biodiversity crisis as well as a green recovery post Covid-19.
Environment Strategy for Scotland: Vision and Outcomes	Outlines the vision for Scotland that by 2045: by restoring nature and ending Scotland's contribution to climate change, our country is transformed for the better – helping to secure the wellbeing of our people and planet for generations to come.
Dumfries and Galloway Climate Change Emergency Declaration (2019)	Declares a climate emergency and outlines commitments to urgently respond to climate change and transition to a carbon neutral region.
Scottish Borders Climate Change Route Map (2021)	In August 2019 SBC committed to implementing the UN Sustainable Development Goals and in September 2020 declared a Climate Emergency. This commitment and declaration frame the climate challenge we face. They give impetus to the Race to Zero by SBC members, employees, and partners to reach a Net Zero destination and to transition to a low carbon economy by 2045 and to avoid a catastrophic level of 'runaway' climate change.
Sustainable Development Drivers	
As a signatory to the UNSDGs, and the National Outcome Indicators for Inclusive Growth to include the 'Wellbeing Economy'	<p>The Scottish Government defines inclusive growth as “growth that combines increased prosperity with greater equity; that creates opportunities for all and distributes the dividends of increased prosperity fairly.” Outcomes include:</p> <ul style="list-style-type: none"> • Productivity – businesses are competitive and economic growth is resilient and sustainable. • Population – Scotland has a sustainable working age population.

	<ul style="list-style-type: none"> • Participation – Inequality of opportunity to access work is addressed and jobs are fulfilling, secure and well-paid. • People – Scotland’s population is healthy and skilled and economic benefits are spread more widely, with low levels of inequality. • Place – Communities across Scotland have the natural and physical resources to ensure they are strong and sustainable.
NatureScot’s Corporate Plan ‘Connecting People and Nature’: refers to sustainable prosperity and wellbeing	<p>It sets out our vision for Scotland’s nature and landscapes and is built around four interdependent outcomes:</p> <ul style="list-style-type: none"> • More people across Scotland are enjoying and benefiting from nature. • The health and resilience of Scotland’s nature is improved. • There is more investment in Scotland’s natural capital and its management to improve prosperity and wellbeing. • We have transformed how we work.
SEPA’s ‘One Planet Prosperity’ plans refer to the SDGs	<p>In 2014, the Scottish Parliament passed the visionary Regulatory Reform (Scotland) Act. This act gives SEPA the opportunity to create one of the first environmental regulatory systems in the world that is suited to the challenges of the 21st century. The challenges of the 21st century mean that an EPA must also increasingly help its society to tackle:</p> <ul style="list-style-type: none"> • Diffuse sources of pollution; • Over-use of natural resources; and • Major environmental challenges, such as climate change. <p>Furthermore, EPAs will need to do all of this work in ways that contribute to the social and economic success of the societies they serve.</p>
The statutory aims of SOSE	Include improving the amenity and environment of the South of Scotland as well as furthering sustainable economic and social development
Sector Specific Policy	
Scottish Forestry Strategy 2019 – 2029	“In 2070, Scotland will have more forests and woodlands, sustainably managed and better integrated with other land uses. These will provide a more resilient, adaptable resource, with greater natural capital value, that supports a strong economy, a thriving environment, and healthy and flourishing communities.”
Ambition 2030 – A Growth Strategy for Farming, Fishing, Food and Drink	Outlines the 2030 vision – “Farming, fishing, food and drink is Scotland’s most valuable industry, recognised at home and abroad as a model of collaboration and a world leader in responsible, profitable growth.” It outlines several key pillars of

	growth, including people and skills, supply chain and innovation.
Scotland's Historic Environment Strategy 2014 – 'Our place in time'	Outlines a vision for Scotland's historic environment – "Scotland's historic environment is understood and valued, cared for and protected, enjoyed and enhanced. It is at the heart of a flourishing and sustainable Scotland and will be passed on with pride to benefit future generations."
The Scottish National Marine Plan 2015	The policies and objectives of the Plan establish how Scottish Ministers intend marine resources to be used and managed. These include: <ul style="list-style-type: none"> • Achieving good environmental status descriptors • Achieving a sustainable marine economy • Ensuring a strong, healthy and just society • Living within environmental limits • Promoting good governance • Using sound science responsibly
Scottish Energy Strategy: The future of energy in Scotland 2017	Outlines a 2050 Vision for energy in Scotland: "A flourishing, competitive local and national energy sector, delivering secure affordable, clean energy for Scotland's households, communities, and businesses"
Scotland 2030 – 'Responsible Tourism for a Sustainable Future'	Outlines the vision for tourism in Scotland – "we will be the world leader in 21 st century tourism" and the mission "together we will grow the value and positively enhance the benefits of tourism across Scotland by delivering the very best for our visitors, our businesses, our people, our communities, and our environment."
Our Vision for Scotland as a leader in sustainable and regenerative farming (2022)	"We will transform how we support farming and food production in Scotland to become a global leader in sustainable and regenerative agriculture." "Scotland will have a support framework that delivers high quality food production, climate mitigation and adaptation, and nature restoration. High quality, nutritious food locally and sustainably produced is key to our wellbeing – in economic, environmental, social and health terms. We will support and work with farmers and crofters to meet more of our own food needs sustainably and to farm and croft with nature."
Solway Tweed River Basin Plan 2021-2027	Sets out a framework for protecting and improving the benefits provided by the water environment across Scotland
SEPA Flood Risk Management Plans 2022	Provide a route map for reducing the effects of flooding on Scotland's communities. It highlights flood hot spots within the Borderlands region and outlines the pressures from sea level change.
Policy Relevant to the Borderlands Region	
South of Scotland Enterprise (SOSE) Operating Plan	Outlines several investment priorities including: <ul style="list-style-type: none"> • Those communities and community organisations that are looking to test project ideas that support inclusive growth and job creation in their locality

	<ul style="list-style-type: none"> Those communities that are seeking to develop sustainable projects that deliver inclusive growth from community assets
Scottish Borders Woodland Strategy 2005 and 2012 update	Outlines a vision statement – “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 Borders people”.
Scottish Borders Land Use Strategy pilot	The aim of the framework was to test the principles of the national Land Use Strategy at a local level to see how they can be realised in a practical way. This was based on an ecosystem approach that may guide decisions that help integrate land management that could make best use of the land. A key output of the pilot was the production of a draft framework which aims to provide new information on the multiple goods and services provided by land use in the Scottish Borders, some of which are possible currently undervalued or overlooked.
Scottish Borders Local Biodiversity Action Plan 2018-28	<p>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 ‘Route map to 2020’ are intended to help address these negative impacts and to maintain and enhance the state of nature. These steps are based around practical, collaborative action for:</p> <ul style="list-style-type: none"> Ecosystem Restoration Investment in Natural Capital (e.g., enhancing peatland ecosystems as carbon stores, or investing in natural flood management) Quality greenspace for health and education benefits Conserving wildlife in Scotland Sustainable management of land and freshwater Sustainable management of marine and coastal ecosystems
Regional Land Use Partnership and Framework for the Scottish Borders and Dumfries and Galloway	Scottish Land Commission’s advisory paper to Scottish Government on the establishment of the RLUPs directly references the natural capital innovation of the Borderlands Deal.
Scottish Borders Economic Strategy 2023	The importance of making the best use of land and marine natural capital assets is highlighted in setting out a strategic approach to the development of a prosperous economy.
Dumfries and Galloway Regional Economic Strategy 2015-2020	“By 2020, Dumfries and Galloway will have a more diverse and resilient economy. One which is capable of taking advantage of opportunities by combining an appropriately skilled workforce and connected infrastructure to support more prosperous and inclusive communities where every member of every community has equality of access to that prosperity.”

<p>Dumfries and Galloway Forestry and Woodland Strategy</p>	<p>Outlines the vision for Dumfries and Galloway’s woodlands – “Developing the region’s forests and woodlands for the benefit of all, promoting economic development and healthy communities, enriching cultural heritage, landscape and the natural environment.”</p>
<p>Dumfries and Galloway Food and Drink strategy</p>	<p>“In 2016 the value (turnover) of the food and drink sector in Dumfries & Galloway was £1.2 billion, making food and drink our largest economic sector and representing 25% of our region’s total economic activity. This figure includes agriculture and fishing (£328 million), food and drink manufacturing (£585 million) and food and drink service (£287 million) ... Both environmental and economic sustainability will be at the heart of our food and drink economy. Our natural capital is a valuable asset that requires responsible management and curation.”</p> <p>“The natural assets of Dumfries & Galloway - landscape, environment and our native breeds – are an opportunity for our region to stand out in a crowded consumer marketplace. Capitalising on our natural capital through brand development can add premium to our exceptional natural larder.”</p>
<p>Dumfries and Galloway Local Biodiversity Action Plan</p>	<p>Outlines several aims:</p> <ul style="list-style-type: none"> ● Aim 1: Biodiversity conserved, enhanced, and re-created at the landscape and seascape scale. ● Aim 2: Genetic diversity conserved. ● Aim 3: Biodiversity incorporated into all relevant decision-making. ● Aim 4: Biodiversity awareness, understanding, and engagement improved. ● Aim 5: Natural processes allowed to operate wherever practicable. ● Aim 6: Local distinctiveness enhanced.
<p>Path to Sustainable Farming: An Agricultural Transition Plan 2021 to 2024</p>	<p>“On 1 January 2021 the agricultural transition period will start. Between 2021 and 2027, we will gradually reduce and then stop untargeted Direct Payments. We will invest the money that we free up to support agriculture in different ways. We will pay farmers to improve the environment, improve animal health and welfare, and reduce carbon emissions”</p>

Appendix B - Non-monetised Natural Capital Benefits Summary

B.1 The table below presents a summary of the natural capital benefits that are not monetised as part of the VFM assessment in the economic case.

<p>Agri-environment pilot – Species Rich Grassland (SRG)</p>	<p>Flower-rich grasslands support greater numbers and diversity of pollinating species than any other habitat type. Grassland networks for pollinators in southern Scotland can significantly increase their extent and improve connectivity.</p> <p>Carbon sequestration in grassland, although the improvement in sequestration rate depends upon the grassland management regime of the grassland prior to SRG restoration. There is potential to explore funding from emerging carbon credit schemes.</p> <p>In addition to Northern Brown Argus (NBA) conservation, SRG restoration can support other rare species such as, the Small Pearl-bordered Fritillary (vulnerable), Forester moth (UKBAP priority species), Dingy Skipper (vulnerable) and Grayling (endangered).</p> <p>Both rare and common species of butterfly and pollinators contribute to human well-being and can be ambassadors for species conservation. This can be enhanced by the planned programme of education, outreach, and research.</p> <p>Investigating the potential for selling accredited farm produce. Indications from Quality Meat Scotland (QMS) are that certification can achieve a 15% price premium relative to non-assured meat. However, any price premium can vary overtime (with market conditions) and care is needed in attributing any premium to specific elements as these can include a broad range of consumer concerns such as; animal welfare, traceability, and local supply as well as conservation measures. Hence it is very difficult to isolate the relationship between accreditation benefits and specific environmental outcomes.</p>
<p>Agri-environment pilot – Whole Farm Audits</p>	<p>Biodiversity improvements from 130 ha of grassland improvement, (in particular increased sward diversity), and new woodland/hedgerow creation, will support pollinators, insects and farmland birds such as lapwing, curlew and greenfinch. However, at this scale the improvement will be small.</p> <p>Flower-rich grasslands support greater numbers and diversity of pollinating species than any other habitat type. Grassland networks for pollinators in southern Scotland can significantly increase their extent and improve connectivity.</p>

	<p>Carbon sequestration in grassland, although the improvement in sequestration rate depends upon the grassland management regime of the grassland prior to SRG restoration. There is potential to explore funding from emerging carbon credit schemes.</p> <p>Enabling educational interactions, through talks/visits for land management based students and a possible PhD research opportunity are helpful but expected to be at a small scale.</p>
Woodland pilot	<p>Biodiversity – native woodland will help priority habitats and priority species such as Black Grouse. Riparian tree planting can benefit UK priority species such as: Atlantic Salmon, Otter, Water crowfoot, river lamprey, brook lamprey which are designated features of the Tweed SAC, but the areas of land involved are very small.</p> <p>Food produced by agro-forestry and venison as a by-product from deer management activity.</p> <p>Riparian benefits to fish stocks through shading and cooling of rivers, would be very important to the River Tweed if implemented at catchment scale.</p> <p>Improving water quality in river catchments through buffering & infiltration, reducing diffuse pollution at catchment scale.</p> <p>Natural flood risk mitigation benefits of woodland planting is very spatially specific and can only be evaluated through complex hydrological modelling, hence has not been evaluated here.</p> <p>Recreation, health and well-being. At greater scale an improved network of public access routes could substantially increase the number of recreational visits to outdoor spaces and hence corresponding recreational value and improvements to physical health and mental well-being.</p> <p>Reductions in soil erosion and run-off.</p> <p>Enabling engagement, education and volunteering opportunities. The project aims to set up 4 demonstration centres providing educational visits to around 375 students per year and around 3 volunteer days per year.</p> <p>Enhancing landscape character, whilst small at this scale would have a significant benefit if implemented at scale which noticeably alters land cover proportions.</p>
Marine pilot	<p>Habitat for biodiversity. Biogenic reef and seagrass habitats provide multiple benefits including improved biodiversity, nursery ground for commercial fish species, seabed stabilisation and coastal flood defences.</p>

	<p>Water filtration impacts on water quality of Native Oyster bed expansion. Sale of Native Oyster spat - as yet volumes are not known but offers potential.</p> <p>Educational opportunities including a PhD and other opportunities in the Centre for Excellence</p> <p>The sale of saltmarsh grazed lamb and beef offers opportunities for increased quality and price</p>
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Appendix C - Programme Costs

PROGRAMME LEVEL COSTS - aggregated from project information as at February 2023

	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	TOTAL
Capital								
Staffing	37,405	60,023	88,986	104,588	80,159	0	0	371,162
Engaging activities	0	0	0	0	0	0	0	0
On-site works	67,053	270,656	608,149	473,772	201,375	218,754	168,394	2,008,152
Site Monitoring and evaluation	7,950	17,597	29,503	34,278	18,604	10,188	2,567	120,686
Contingency removed								
Capital Total	112,408	348,276	726,638	612,638	300,138	228,941	170,961	2,500,000
Revenue								
Staffing	105,067	206,413	373,381	379,897	379,937	355,355	232,443	2,032,493
Engaging activities	12,863	20,742	36,281	32,987	27,622	26,973	9,929	167,397
Site Monitoring and evaluation	15,296	26,152	62,948	55,483	42,981	39,868	57,381	300,110
Contingency (removed)								
Revenue Total	133,226	253,307	472,611	468,367	450,540	422,196	299,753	2,500,000
Programme Total	245,634	601,583	1,199,249	1,081,005	750,678	651,137	470,714	5,000,000

Appendix D - Risk Register

Risk Category Level 1	Risk Category Level 2	Risk Category Level 3	Description	Mitigating Actions	Current Likelihood	Current Impact	Risk Owner	Target Completion
1- Strategic	1.2- External Events	1.2.3- Geopolitical, Environmental or Economic Shock	Costs in 2022 increased significantly, energy prices, material supplies, and the cost of living rose dramatically; this is forecast to continue and will affect all pilot projects	Overall programme costs monitored by the PMO to ensure the Programme stays within budget. Investigate options for match funding, changing scope or delivering projects in stages to allow for additional funding options. Managed through scale of project and duration (the delays to getting project approval have already reduced the delivery years and therefore the fixed costs)	3 - High	4 - High	Natural Capital Programme working group / Borderlands PMO	31/03/2026
1- Strategic	1.1- Programme Design & Delivery	1.1.4- Development	Projects do not align with Programme and Deal objectives, eligible interventions and target outcomes.	NC working group and Borderlands PMO will work closely together in the development of the programme and project business cases, to ensure they align and meet the Borderlands Deal objectives and outcomes	1 - Low	2 - Low	Natural Capital Programme working group / Borderlands PMO	31/06/2023

1- Strategic	1.2- External Events	3.2.3- Operations	Difficulties in sourcing materials, employees or contractors across the pilot projects	Sign off project business cases as soon as possible after the programme OBC, to secure funding to allow the procurement of staff and materials to begin.	2 - Medium	3 - Medium		30/06/2023
1- Strategic	1.1- Programme Design & Delivery	1.1.4- Development	Weak evidence base justifying intervention and demonstrating market failure.	Specialist consultants assisting with Programme business case development, working with all pilot projects	1 - Low	2 - Low		30/04/2026
1- Strategic	1.1- Programme Design & Delivery	1.1.4- Development	Delay to signing off Programme Business case will lead to subsequent delays in the sign off and start date of the pilot projects	Resource from Borderlands PMO to support the programme business case development and sign off. Close working with both Governments to ensure the review process is actively managed.	2 - Medium	4 - High		30/03/2023
1- Strategic	1.3- External Stakeholders	1.3.1- External Stakeholder Management	Lack of engagement with stakeholders for the overall Programme	Stakeholder engagement plan for the Programme will link with project engagement plans to ensure all stakeholders are involved and engaged	1 - Low	2 - Low		30/04/2026
1- Strategic	1.4- Capabilities & Resources	3.2.3- Operations	Risk of skills shortages to deliver the proposed projects – how can this be assessed and managed.	A range of mitigating actions being undertaken across the projects. For example, DGC pilots have allowed for good market salaries and are also working with their employability teams to highlight sectoral short falls and see where they might encourage local young people to gain these skills. The projects will include training places which will help bring along a	1 - Low	2 - Low		30/04/2026

				<p>pipeline of skilled individuals. For example, the Woodland pilot project aims to address these shortages by helping to facilitate training and skills needs, though assisting 10 Borders College Forestry Course Students with visits/work programmes on Borderland project sites in the Borders. Also helping 5 students from The Conservation Volunteers with visits/work programmes on Borderland project sites in the Borders.</p> <p>The skills gap around natural capital is being addressed both nationally and locally, with the Dumfries & Galloway Council looking into potential schemes that would creatively address this issue. Through the Borderlands projects, we will gain further knowledge of the skills gap and be able to fold this information into training programmes being developed.</p>				
1- Strategic	1.1- Programme Design & Delivery	1.1.4- Development	Natural Capital Programme Scotland unable to demonstrate value for money and additionality at UK and Scotland level.	This will be addressed in the Programme business case, developed by Hatch with support from NC specialist consultancy, eftec	1 - Low	2 - Low		30/11/2022

2- Financial	1.1- Programme Design & Delivery	3.2.3- Operations	Lack of match funding to support individual projects – may be exacerbated if a delay in programme and project sign offs	Most project do not require match funding. The Woodland project is government subsidy which will be available as long as project meet criteria which is known in advance	1 - Low	3 - Medium		30/04/2026
1- Strategic	1.1- Programme Design & Delivery	1.4.4- Siloed Ways of Working	Duplication with other funding programmes for natural capital	NC working group will ensure the programme doesn't duplicate other funding, working closely with other organisations both public and private sector	1 - Low	2 - Low		30/04/2026
1- Strategic	1.1- Programme Design & Delivery	1.4.4- Siloed Ways of Working	Lack of alignment with other natural capital investment programmes (including the developing Natural Capital Programme on the England side of Borderlands).	Coordination with the England NC programme in Cumbria/Northumbria will be managed by the PMO and existing Borderlands governance structures. NC working group and Board will lead on ensuring alignment with other NC investment programmes in the region and at national level.	1 - Low	3 - Medium		30/04/2026
3- Operational	1.4- Capabilities & Resources	3.2.3- Operations	Capacity in PMO to support programme management (management of working group and Programme Board, ongoing monitoring of pilot projects)	PMO recruitment (due to complete autumn 2022) will provide additional resource to lead the programme development and ongoing management	1 - Low	2 - Low		30/04/2023

3-Operational	1.1- Programme Design & Delivery	1.2.1- Policy Change	Pilot projects need to change elements of their projects through the project lifecycle	Change management process will be agreed as part of the Programme Business Case and actively managed by the Borderlands PMO	2 - Medium	3 - Medium		30/04/2030
3-Operational	1.3- External Stakeholders	1.3.1- External Stakeholder Management	Lack of engagement of stakeholders (landowners, farmers etc) and communities in development of Pilot Projects	All pilot projects will include a stakeholder engagement plan within their business case	1 - Low	2 - Low		30/04/2026
3-Operational	3.2- Internal Management & Critical Systems	3.2.3- Operations	Ongoing management of assets created / improved with Natural Capital funding	Sustainability and ownership of assets in long-term included in the appraisal process requiring applicant to set out proposed approach and how this will be managed.	1 - Low	2 - Low		30/04/2030
3-Operational	3.2- Internal Management & Critical Systems	3.2.3- Operations	Ensuring individual projects follow appropriate public procurement regulations	Procurement regulations are specifically included in the appraisal process requiring applicant to set out proposed approach and how this will be managed.	1 - Low	2 - Low		30/04/2028
3-Operational	3.2- Internal Management & Critical Systems	3.2.3- Operations	Ownership of assets created or improved through Borderlands Deal investment	Asset ownership is specifically included in the appraisal process requiring applicant to set out proposed approach and how this will be managed.	1 - Low	1 - Extremely Low		30/03/2023

Appendix E - Programme Gantt Chart

E.1 See separate excel document.

Appendix F - Confirmation of Stakeholder Support



Borderlands Natural Capital Working Group

14th December 2022

Dear Colleagues,

RE: Borderlands Partnership Support for the Natural Capital Programme (Scotland)

I am pleased to write on behalf of the Borderlands Partnership confirming our on-going support for, and commitment to, the Natural Capital Programme (Scotland).

At our Board Meeting of the 7th December 2022 the recommendations in the attached paper were approved. This includes continuing our efforts in supporting the governance arrangements for the working group and future programme board, development of the business cases for the pilots set out, and undertaking the appropriate Accountable Body role in due course. These will be taken forward in line with our Collaboration Agreement whereby Dumfries and Galloway Council is the Accountable Body for Deal activity in Scotland.

The importance and potential of the Natural Capital Programme and the component pilots was also reaffirmed recognising the value of our natural capital in enabling economic prosperity and growth in the Borderlands. We look forward to continuing to work with you as the pilot activity comes forward and in embedding this in our overarching Deal benefits realisation activity.

Yours sincerely

A handwritten signature in black ink that reads "James Davies".

James Davies – Borderlands PMO Manager



Appendix G - Natural Capital Scotland Working Group

- G.1 The Natural Capital Scotland Working Group was set up in September 2022, to provide a delivery group for the Programme, working with the lead Local Authorities, the Borderlands Partnership, through the Programme Management Office and the delivery partners for the Programme.
- G.2 The agreed Terms of Reference for the Group are included below.

NATURAL CAPITAL SCOTLAND PROJECT GOVERNANCE WORKING GROUP	
Terms of Reference (ToR)	
Purpose: To provide strategic oversight, communications, and decision-making on the delivery of the Natural Capital programme as to be defined in the Programme Business Case, and within the specific areas of remit and scope articulated in this document.	
<p>Remit:</p> <p>This ToR describes the governance structure in relation to a project that has a timeline through to 2031. It is, therefore anticipated that the remit will be reviewed at intervals as the programme and project strands progress. The ToR will be revised, and the establishment of a Programme Board will be progressed when the Programme Business Case has been approved by the Borderlands Partnership Board and the Scottish and UK Governments.</p> <p>Key areas of remit for the Working Group are:</p> <ol style="list-style-type: none"> 1. To provide overall support to project partners in the form of co-ordination and communication across partner organisations, to provide oversight and decision making with respect to the specification and delivery methods/models for the 6 Natural Capital projects, noting that: <ol style="list-style-type: none"> a. The Working Group comprises officers from a range of partner organisations that are key stakeholders in the project. The partners are – Scottish Borders Council (SBC) Dumfries and Galloway Council (DGC) South of Scotland Enterprise (SoSE) Borderlands Inclusive Growth Deal Programme Management Office (PMO) An agreed communications representative from the PMO b. The Working Group is designed to be representative of partner and stakeholder needs and areas of activity, particularly with respect to project scoping, financial 	<p>Scope</p> <p>The scope will be defined by the development of the overall Programme plan and individual project plans. A key role for the Working Group is to provide co-ordination and communications across the projects and partners to ensure effective conclusion of the Programme Business Case and progress to project delivery.</p> <p>The detailed deliverables and responsibilities across the partner organisations will be captured within the required project Business Justification Cases and Full Business Case. Items that are out of scope are those not defined in the Outline or Final Business Cases.</p> <p>Quorum, Advice & Decision Making:</p> <p>Chair:</p> <p>Chair from Scottish Borders Council</p> <p>Decision Making:</p> <p>Final decisions on scope and content of the Programme Business Case will be agreed by members of the Working Group. The Programme Business Case will be signed off by the Borderlands Partnership Board.</p> <p>Frequency of Meetings:</p>

<p>planning, procurement, risk mitigation and monitoring of outputs by delivery partners.</p> <p>Strategic decision-making will however sit with a Programme Board when the Programme Business Case has been approved as noted at above. (The Board will be established to oversee the delivery phase of the projects and made up of key partners and those with required authority as reflected in the quorum and decision-making framework.)</p> <p>c. The Natural Capital Working Group meetings will be chaired by Scottish Borders Council as lead body.</p> <ol style="list-style-type: none"> 2. Agree and implement a project plan for the finalisation and submission of the Programme Business Case, including key milestones, capital, operational and maintenance costs, the specific scope of activity across the partner organisations, and finalise project specifications to ensure procurement of services to deliver project outputs is effective. 3. Brief progress updates on project plan implementation to be provided to the Working Group via compiled highlight reports for each Working Group meeting. 4. Review project changes, risks, mitigations and issues, and agree on appropriate courses of action to address these. 5. To actively promote the benefits of the Natural Capital Programme by agreeing a stakeholder management approach and communications plan and any subsequent concerns or threats that such communications might identify. 6. Approve any additional governance arrangements that are required as the project progresses (i.e., establishment of a Programme Board). 7. Ensure financial reporting requirements/ controls are in place to take the Programme Business Case to completion. 	<p>Set at a monthly basis but to be reviewed as the project progresses.</p> <p>Attendance at the Working Group meeting may be either face-to-face or virtual.</p> <p>Papers to be issued 3 working days in advance using 2-page Plan, Do, Check, Act format.</p> <p>Minutes:</p> <p>Minutes and papers will be held in electronic copy</p> <p>Reporting:</p> <p>As defined by the requirements of the respective governance structures of the partner organisations, and Borderlands Inclusive Growth Deal requirements. The Working Group will produce a Highlight Report for the Programme Board on a quarterly basis. This will feed into the Partnership Board reporting as required.</p> <p>The Working Group will be responsible for managing an overall Programme risk register until the Programme Board is established.</p> <p>Support:</p> <p>The Borderlands Programme Management Office will provide technical and administrative support to the Working Group as agreed by members if the Working Group.</p> <p>When a Programme Board is established, the Working Group will act as a technical support resource. It will assist, critically support and guide focused areas of project development, test and challenge, provide subject specialisms, quality checks, and realise opportunities that contribute to achieving the overall objectives of the subject.</p>
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Appendix H - Proposed Natural Capital Programme Board

- H.1 A Natural Capital Programme Board will be set up to provide advice and “critical friend” support to the programmes in both Scotland and England.
- H.2 The Board will include cross border representation, in anticipation of the Borderlands Natural Capital England programme. The representatives will include a range of strategic stakeholders and specialists such as academics. This will ensure that cross border learnings and connections across projects can be established from the start. The Board will meet two to four times a year to receive updates from pilots, guide evaluation work.
- H.3 Membership of the Board will be nominated from a range of organisations, including but not limited to those listed below. In addition, representatives from each of the of the constituent Councils within the Borderlands Partnership will attend the Programme Board as advisors. The Chair or nominated representative of the Natural Capital Scotland Working Group, a representative from the Natural Capital England working group and a member of the Borderlands Programme Management Office will also attend as observers.
- Scottish Government
 - UK Government
 - Borderlands Economic Forum member
 - SEPA
 - Nature Scot
 - SOSE
 - Natural England
 - Environment Agency
- H.4 Terms of Reference for the Board has been drafted and will be developed and signed off as the Programme is approved. The draft ToR is included here but note that the full membership is still to be confirmed.

Natural Capital Programme Board Terms of Reference - draft

(March 2023)

1. Introduction

The Borderlands Inclusive Growth Deal will bring in up to £452m of investment into our area supporting businesses and communities to strengthen and grow. Setting out an ambitious approach to increase the working-age population, increase productivity and achieve inclusive growth, our deal is supported by the five local authorities: Cumberland Council, Dumfries and Galloway Council, Northumberland County Council, Scottish Borders Council), Westmorland and Furness Council, the Scottish Government and the UK Government. Covering an area that represents 10% of the UK landmass and home to over 1 million people the Borderlands are a varied area with very high quality of natural capital within a 2-hour drive of 14m people and a vibrant rural economy with tourism, heritage and agricultural assets as well as the city of Carlisle. Our Deal seeks to build on these advantages whilst also addressing the specific challenges the

Borderlands face in achieving our potential and providing a resilient place to live, work and visit. To deliver this we are focusing our investment around four key themes: Improving places; Supporting business, innovation and skills; Enabling infrastructure and Encouraging green growth

Within this approach our Natural Capital Programme represents a key component of encouraging green growth across the Borderlands, as well as contributing across all other areas of the Deal. The Programme is focused on investing in and improving the natural capital of the Borderlands using a series of pilots to build a body of evidence to lead to wider rollout of successful interventions. The Programme Board will oversee the delivery of the programme and make recommendations to the Borderlands Partnership Board for the Natural Capital Programme

2. Composition and Remit

2.1 Composition

The Programme Board will comprise of members who will include representatives of the following organisations. The final list will be confirmed following the sign off of the Natural Capital Scotland Programme OBC following consultation with the Natural Capital England Programme.

- 1 independent Chair with a knowledge of Natural Capital policy and delivery
- UK Government
- Scottish Government
- Borderlands Economic Forum representative
- SOSE
- SEPA
- Nature Scot
- Natural England
- Environment Agency
NFU
- Others to be confirmed

In addition, representatives from each of the of the constituent Councils within the Borderlands Partnership will attend the Programme Board as advisors. The Chair or nominated representative of the Natural Capital Scotland Working Group, a representative from the Natural Capital England working group and a member of the Borderlands Programme Management Office will also attend as observers.

2.2 Chair

The Chair will be approved by the Borderlands Partnership Board for a period of two years following an open process. This individual will have a knowledge of Natural Capital policy and delivery but be independent from the constituent authorities of the Borderlands partnership. The Chair will not be a salaried position.

The role of the Chair will be:

- To ensure the efficient conduct of each meeting of the Programme Board
- To act as the Programme Board's spokesperson in relation to the Borderlands Inclusive Growth Deal and engage with the wider Deal governance structures,
- To look for opportunities to add value and embed Natural Capital within other work streams

- To lead and champion the work of the Borderlands Natural Capital Programme beyond the Deal and across the Natural Capital policy space

If the Chair is unable to act as chair of a meeting of the Natural Capital Programme Board or is not present within 15 minutes of the start time another member of the Programme Board will be appointed to chair that meeting by the Chair and/or the membership present in the case of an unexpected absence.

2.3 Role and Purpose of the Natural Capital Programme Board

The Programme Board will oversee the delivery of the Natural Capital Programme within the Borderlands Inclusive Growth Deal. It will provide advice and “critical friend” role for the programmes on both sides of the border. A key role will be to join up the work in Scotland and England, to ensure cross border learnings are realised and opportunities for cross border working are delivered.

The Programme Board will be responsible for making recommendations to the Borderlands Partnership Board on all matters that require a decision, such as change control requests and pilot project future roll out plans.

The Programme Board will review and advise on the development of the pilot project business cases and their implementation. It will work closely with the officer led working groups established for the Natural Capital in both the Scotland and England areas of the Borderlands region. It will provide a link into policy experts across both governments and other private and public sector organisations. The Board will take a significant lead in overseeing the evaluation of the pilots collectively with ownership of the Benefits Realisation Plan. This will ensure that the pilot project outputs and outcomes are seen as a complete set of results to inform further project development and expansion. The Programme Board will receive reports on the performance of the programme overall and individual projects to ensure delivery remains on track, risks are identified, and suitable responses put in place and will be able to invite in projects to discuss progress and opportunities from their work projects.

2.4 Delegation and Decisions making

The Programme Board will receive reports on any proposed variation to projects in the Programme. Where the variation is within the scope of the original proposal it will be reported to the Programme Board for information. Where there is substantive change the Programme Board will consider this and make recommendations to the Borderlands Partnership Board as to the acceptance of those changes. This will be in line with the agreed Borderlands change control process.

All matters that require a decision will be considered by the Programme Board with recommendations made to the Borderlands Partnership Board for decision in line with the Borderlands Inclusive Growth Deal Collaboration Agreement.

All recommendations will aim to achieve unanimity of opinion however where this is not possible a vote will be taken with each member having one vote. Where an attendee has joined by electronic means this will be considered present and include an entitlement to vote. Where considered necessary a recommendation can be agreed by written procedure.

Subject to approval by the Borderlands Partnership Board decisions will be made public through the Borderlands Partnership website.

2.5 Duty to act in best interest of the Borderlands Inclusive Growth Deal

In carrying out their functions in relation to the Programme Board, members will act in a way which best promotes the overall success of the Natural Capital Programme and the Borderlands Inclusive Growth Deal.

3 Rules of Procedure

3.1 Quorum

All members should undertake best endeavours to be present at all meetings, with electronic and telephone attendance considered fully present. To enable recommendations to be made at least two-thirds of members will be required to be present.

3.2 Substitutes

Each member of the Board, except the independent Chair, will nominate a substitute member. Where a member is unable to attend including by electronic means or telephone the substitute member will attend in their place. The substitute will have the relevant voting rights of the individual they are substituting for.

3.3 Attendance by others

The Programme Board may, at its discretion, invite any individual to attend all or any part of any meeting of the Natural Capital Programme Board as an observer and/or to contribute information and advice to the discussion. Such individuals will not have any voting rights.

The Natural Capital Programme Board is not a public meeting, but the outcomes of decisions made by the Borderlands Partnership Board will be made public in line with national guidance through the Borderlands Partnership website.

3.4 Frequency of meetings

Meeting of the Programme Board will be held 2 to 4 times a year, with the option to arrange meetings more regularly if required.

For the avoidance of doubt meetings may take place virtually where required either fully or for individual members and all members will be considered fully present. Business may be conducted by written procedure on the advisement of the chair. Where decisions are made by written procedure the decision will be recorded at the following meeting.

3.5 Recording of meetings

A list of action points arising from each meeting will be circulated to all members within 2 business days of the meeting.

Minutes of the meeting will be circulated to all individuals listed to as being in attendance within 5 business days of the meeting.

Any comments on the minutes or suggestions for amendments should be notified to the PMO within 5 business days of receipt of the minutes and to all other recipients of the minutes for consideration (and, if considered appropriate, adoption) by the Programme Board at its next meeting.

3.6 Code of Conduct and Register of Interests

Each member of the Programme will be required to sign up to a Code of Conduct as determined by the Borderlands Inclusive Growth Deal Partnership Board.

Each member of the Natural Capital Programme Board will be required to provide a register of interests which will be available to the public as required.

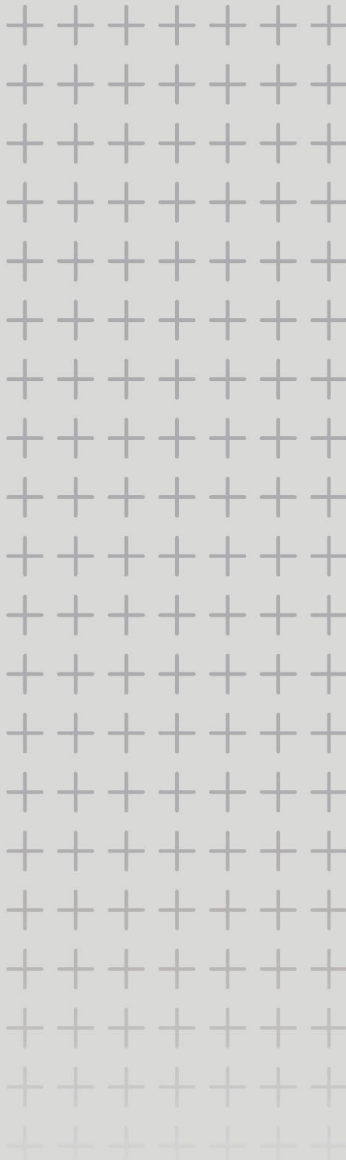
3.7 Support to Meetings

The Programme Management Office for the Borderlands Inclusive Growth Deal will provide the secretariat support to the Natural Capital Programme Board.

Appendix I - Monitoring and Evaluation framework and benefits realisation

- I.1 A draft Monitoring and Evaluation framework has been developed for the Programme. It will be further developed and finalised as the project business cases are developed and agreed. It is attached separately.

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