SCOTTISH BORDERS COUNCIL

PLANNING AND BUILDING STANDARDS COMMITTEE

5 OCTOBER 2015

APPLICATION FOR PLANNING PERMISSION

ITEM:	15/00792/FUL
OFFICER:	Lucy Hoad
WARD:	Berwickshire
PROPOSAL:	Installation of 125 KW anaerobic digester plant and associated work
SITE:	Land North East Of Ravelaw Farmhouse Whitsome Scottish Borders
APPLICANT:	Ivor Gaston
AGENT:	Bain Swan Architects

SITE DESCRIPTION

The site is located to the north west of Whitsome along a minor C class road which links between the B6437 and the B6460. The proposal lies to the east of Ravelaw Farm, 350m to the east of the farm buildings, farm cottages and private residential housing. Open fields surround the site, which lies adjacent to a small watercourse The Leet, tributary to River Tweed (SAC). An archaeological trace of a medieval feature known as Reavelaw Farmstead lies 20m to the north of the site.

PROPOSED DEVELOPMENT

The proposal is for an anaerobic digestion plant and associated works to generate electricity and inert fertiliser from manure. The plant would be sited within a low area of agricultural land to the east of the steading.

The plant comprises of a digester set underground (36.3m by 6.3m) with solids feeder, separator and tower, and an underground liquid digestate store (45.9.m by 9.3m), The digester tank would be constructed of concrete (outer membrane cover coloured green) and the store would be constructed of concrete panels with panel 'roof'.

The proposal also includes a feedstock bunker (18 x15 x 6m), a 124kWe combined heat and power unit (CHP) sited within a 6 x 6m farm building with lean to roof at ridge 6m, (box profile cladding Juniper Green), and a gas holder 8.0m diameter x 4.0m height (concrete base, outer membrane Green RAL 6026),

The anaerobic digester would use agricultural waste to produce electricity and heat energy. All feedstock would come from the farm, comprising farm yard manure (FYM) pig slurry and bedding/straw. The inert end product is then spread on the land as fertiliser. Gas from the digester tanks is fed to the CHP container. Electricity produced by the CHP unit will be exported to the grid; given the distance from the site to the farm steading no heat will be used within the farm buildings.

PLANNING HISTORY

There is a history of development at Ravelaw Farm to include the erection of modern sheds and new build dwelling houses having been granted consent previously.

01/00991/FUL	Erection of general purpose agricultural building 21.08.2001
05/00833/OUT	Erection of dwellinghouse Plot 1 21.07.2005
05/00834/OUT	Erection of dwellinghouse Plot 2 21.07.2005
05/00835/OUT	Erection of dwellinghouse Plot 3 21.07.2005
05/00836/OUT	Erection of dwellinghouse Plot 4 .21.07.2005
06/01148/REM	Erection of dwellinghouse, carport, workshop 11.08.2006
06/02455/REM	Erection of dwellinghouse 08.02.2007
07/01184/REM	Erection of dwellinghouse with integral garage 08.08.2007
09/00893/FUL	Erection of dwellinghouse/detached double garage 20.11.2009
11/00453/FUL	Erection of replacement agricultural building 06.06.2011
12/00549/FUL	Erection of agricultural building 14.06.2012

Other applications

06/01979/OUT	Erection of four dwellinghouses Refused 27.02.2007
07/00251/REM	Erection dwellinghouse/ integral garage withdrawn 14.06.2007
14/00296/FUL	Installation of anaerobic digestion sustainable energy plant Withdrawn 03.07.2014
14/00763/FUL	Installation of AD Sustainable Energy Plant Refused 08.12.2014
PPA-140-2051	Appeal dismissed by Reporter 22 April 2015

REPRESENTATION SUMMARY

Members are reminded that all comments are available for Members to view in full on the Public Access website.

A letter of support has been received from the National Farming Union, main points:

This development compliments the Scottish Government's promotion of the increased use of renewable energy sources.
Reduction of carbon emissions/greenhouse gas emissions.
Benefit in respect of climate change issue.
Diversification/ income generating stream.
Project will help sustain a local family farm business.
Part of wider rural development.
Contributes to healthy growing rural community.
Employment opportunities.
Positive for business.

The local community have expressed concerns over the proposed development. Representations (objections and some supportive remarks) have been received from 8 Households. The following issues have been raised:

<u>Siting Design and visual impact</u>
This is farm scale AD plant
Screening embankment and native planting welcome
The proposal would be visible from a wide range of local viewpoints.
An industrial unit in an open field out of keeping with the surrounding countryside.
Adverse visual impact.
The proposal would sit isolated and remote from existing farm buildings.

Development on greenfield/ prime agricultural land.
Piggery buildings should be moved closer to the proposed AD
Not an extension of any existing buildings or development.
May give rise to future development on green field site.
New development within 400 metres on non-associated dwellings.
Positive elements- distance from residential receptors and no use arable land for growing fuel crops.

Economic
No benefit to the wider community.
Unable to sell properties (not a planning matter).
Impact on local economy, tourism and leisure.

Access and traffic to site
Increase in traffic on pubic road
Single track road with dangerous bends

Amenity
Ravelaw is a private residential area and not just a farm
Noise and odour nuisance
Existing complaints to include mucking out and bedding
Contrary to local planning policies G1 and H2 INF7
Loss of residential amenity
Movement and storage of manure increasing
Quality of the odour management plan
Good that manure will be loaded on to trailer at entrance and not be stored outside livestock sheds.
Mucking out/bedding increasing
Most manure is stockpiled around the fields before being ploughed in.
No details of through-put tonnage for the AD plant.
Applicant states that 3,588 tonnes per year will be required.
Potential to add generating capacity in the future.
Environmental Health have no means of monitoring or measuring odour.
Refrain from mucking out when the wind is in the north
All pig manure now being transported close to houses to one stockpile
New development within 400 metres on non-associated dwellings.
Protection against odour nuisance during transportation
Residents sited downwind of Piggery operations in Northerly wind.
Proximity to dwellings - farm track (15 metres) pig shed (19 metres)
Positive elements- distance from residential receptors,
No use arable land for growing fuel crops.
Noise from bedding machinery.
Noise from vehicular movements.
Lack of baseline level of nuisance especially noise.
Timing of operation of farm machinery.
Noise of construction traffic

Watercourse and ecology
Contamination of Leet water
Impact on biodiversity to include otters and other wildlife.
Provision of a 10-metre buffer zone from Leet water. (River Tweed SAC)
Contamination of watercourse from construction
Disturbance to animals in their natural habitat.
Stability of tank in high water table

Process
Request for extension to make further comments.
Request for analysis details by EHO.

Conditions sought in respect of:
Removal, loading and transportation of FYM – suspend in northerly wind.
Plant operated in accordance with the environmental statement and odour management plan.
Noise limit conditions sought on associated machinery and vehicular movements.
Maximum annual tonnage that can be used at Ravelaw.
Conditions should be clear, specific and enforceable
History of lack of planning control through enforceable conditions.
Lack of clarity on conditions that may be proposed.

APPLICANTS' SUPPORTING INFORMATION

The application is accompanied by site location and layout plans, elevations and drawings, statements to include an environmental statement, odour management plan and manufacturer's report. These are available for Members to view in full on the Public Access System.

The main points covered include:

Business Case

The applicants seek to reduce both their energy costs and carbon footprint by reducing their present imported energy costs and a reduction /elimination in the use of artificial fertilizers. The installation of a small-scale Anaerobic Digester will provide a sustainable waste to energy development. The AD process will operate on a continual 24hr/day, 365 days/year basis. There will be employment opportunities in the construction phase and maintenance/running of the plant.

Siting, scale and design

- The proposed AD plant is a small-scale modular unit
- The site at low point has been selected to minimize/eliminate any audible and visual impact from neighbouring receptors
- Sited to minimize the visual impact particularly from the adjacent housing group and Whitsome village
- Surplus soil from excavation works to be used to form a contoured embankment to the west of the complex to fully screen the complex from the west
- The embankment is to be planted with native plants
- Planting to southern edge of burn to be retained/increased

All feed materials are sourced on the farm

- Farm Yard Manure (FYM) to be sourced from the existing livestock buildings
- The weekly tonnage approximately 69 T will be transported/fed to the AD
- The proposal will not require any increase in livestock numbers at Ravelaw (currently 1800-2000 pigs).
- No supplementary crops are grown as feedstock
- The AD plant will be inspected and fed once/day using a front loader vehicle

- No mucking out of FYM when there is Northerly wind

Traffic movement and supply

- The Farm Yard Manure is sourced directly from the livestock buildings
- No feedstock is transported by public road.
- No transportation of FYM when there is Northerly wind
- FYM would be transported along the existing track to the AD plant
- 10T FYM to be transported on a daily basis (one journey)
- Flexible to amend trips to weekly basis (5 trips)
- The concrete bunker has storage capacity of 2-3 weeks

Water supply and discharge

- Water for the AD is required to maintain the operating temperature range of 37-42degC by circulation of hot water through an internal heat exchanger, this water is re-circulated.
- The water supply will be sourced from a borehole on the farm with a maximum daily requirement of 10m3 maximum.
- There is no discharge of water from the AD
- Any surplus water is re-circulated through the Digester

Safety

- The construction process of the plant ensures that the installation is fully watertight
- The commissioning process is air tested to ensure no leaks with a commissioning certificate being issued only when no leakage is detected.
- The operation of the AD plant is fully automated via control systems located within the CHP building
- Full training is provided relating to the operation of the plant
- On-going service provided throughout its working life
- With most systems, in the event of a situation where the gas generated cannot be provided to the CHP there is a requirement to “flare off” the gas.
- With the Evergreen Gas system there is no flame “flare off”.
- As an alternative this is managed by the presence of a biogas hot water boiler which is specified to take up to 100% of the delivered biogas.
- This biogas is the fuel for the boiler to generate hot water which is circulated through a fan cooled radiator system thus providing the “heat dump” until the CHP is brought back on-line.

Odour

- Odour Management Scheme will be in place designed to minimise potential odours and deal with complaints.

Noise

- The Combined Heat & Power (CHP) is a 124kWe TED0M Cento (decibel reading of 70dB(A) at 1.0m from sound enclosure).
- Noise levels will be monitored as part of the system management documentation.

Construction works

- Works will be carried out in accordance with the HSE Construction (Design and Management) Regulations 2015.
- Traffic movement during construction would be daily
- Traffic delivery of parts 1.5 lorries average per week for 10 – 12 weeks.
- Preferred route of construction traffic is the minor access road from the North from its junction with the B6460 road near Blackadder West.
- This route relatively straight and includes 4No passing places

CONSULTATION RESPONSES:

Scottish Borders Council Consultees

Landscape Architect: No objection. The proposed site by the Leet Water is acceptable in landscape terms. The unit, although industrial in appearance, is quite small scale in the wider landscape and is also distant from sensitive receptors. The proposed boundary planting and colour treatment should more than suffice to address any visual impacts.

Environmental Health: No objection subject to conditions in respect of odour, noise control, plant maintenance, and time restriction of use of the hopper and movement of manure.

Odour: The information provided on how the anaerobic digester operates and the chemical reactions should mean that no odour is produced. The proposal includes the storage of farm yard manure near the anaerobic digester – FYM was being stored at this location on the day of the site visit and no odour was noted at the site or receptors from the muck heap. The submitted Odour Management Plan (August 2015) identifies the activities of potential risk for odour and how this will be managed. Should the plant be managed in this way there should be no odour issue at the nearest receptors from the anaerobic digester. A condition is advised to ensure the plant is operated in accordance with the Odour Management Plan unless otherwise agreed in writing with the Planning Authority.

Farm operations: The use of the hopper and movement of farm yard manure to the anaerobic digester shall only occur between the hours of 0900 and 1800 Monday to Sunday. Regarding mucking out in a northerly wind whilst this is omitted from the odour management plan may not be a matter to be controlled given this is also an existing practice at the farm. Vehicle movements will involve use of an established farm track to and from the plant. As this track is already in use and is part of a working farm with existing traffic movements it is not considered there will be additional amenity issues from its use as part of this proposal

Noise: The CHP generator will produce a noise level of 70dB(A) at 1 meter from the enclosure (to include use of silencer). Given the distance to noise sensitive dwellings and background noise to include masking effect of vegetation it is unlikely that the noise from the CHP would be heard at the receptors. A condition is advised to control noise levels to below Noise Rating Curve NR20 (2300-0700 hours) and NR30 at al other times (measured from nearest noise sensitive dwelling). The EHO has undertaken a basic desktop noise assessment and hemispherical point source calculation to inform her assessment details of which are available to view on the public portal. The operation of the hopper would provide a source of noise. The

hopper is to be used once a day. The noise is not inconsistent with daily farm operations. A condition is advised to restrict the timing of use of the hopper 0900-1800 hours Monday to Sunday).

A condition is advised that all plant must be rigorously maintained in accordance with the manufacturers' instructions.

Contaminated Land: No comment

Archaeologist: No objection. There are no known archaeological implications. The post medieval farmstead Reavelaw, 20m north of the proposal should be avoided by construction traffic.

Roads Planning: No objection. Main points raised:
Construction phase will increase traffic movements significantly on the single track public road for a limited period of time only
No need for input of materials outwith the farm
With use of internal farm tracks it is unlikely there will be any significant increase in traffic on public roads
Should any vehicle movements require to use the public road the C99 benefits from having a number of constructed passing places between the B6460 (Blackadder West) and B6437 (Whitsome). There are a number of informal passing places such as field entrances.

Ecologist: No objection subject to conditions and informatives in respect of protected species.

The development site is located on arable land adjacent to the Leet Water. A Construction Environmental Management Plan (adopting SEPA Pollution Prevention Guidelines PPG1 PPG5 and PPG6 should be submitted for prior approval. This could include a survey for otter presence. A Landscape and Habitat Plan, including measures for small woodland and hedgerow creation to benefit biodiversity and water quality, should be submitted for prior approval. Works to be carried out in accordance with the approved schemes. No site clearance or disturbance of habitats shall be carried out during the bird breeding season (March – August) without express written permission. Checking surveys and mitigation required if habitat clearance commences during the season.

Flood Risk Officer: No objections to the proposal on the grounds of flood risk. Informative advised in respect of use of water resilient materials and construction methods as appropriate. Indicative maps (SEPA) indicate that the site may be at risk from a flood event with a return period of 1 in 200 years. That is a 0.5% annual risk of a flood occurring in any one year. Only a small area in the South West of the site is anticipated to be inundated with flood waters during a 1 in 200 year flood. Significantly, no buildings are shown to be placed within this flood plain in the layout plan. There is a minimal risk to the buildings. It is estimated that no flood plan storage is to be taken up.

Statutory Consultees

SEPA: No objection to the development subject to condition (Construction Method Statement) and informatives in respect of regulatory advice

<u>Flood risk</u>
No objections on flood risk grounds.

Regulation
The plant will be regulated by SEPA under a Waste Management Licensing Regulation exemption. The activity is subject to statutory controls to prevent environmental pollution (including odour and noise) and harm to human health.

Layout
Provided there is a 10m buffer between the facility structure containing the effluent and the Leet Water the layout is acceptable

Site drainage and pollution prevention
Potentially contaminated surface water and effluent will be contained within the AD plant compound and discharges to the AD plant for treatment. There should be no direct or indirect discharge into the Leet water or ground water.

Clean roof water can discharges outwith the AD compound to ground or the Leet as appropriate in accordance with SUDs principles.

Particular care must be taken when constructing the facility due to its proximity to the Leet Water. A Construction Method Statement to be agreed with the authority (in consultation with SEPA). The CMs should include detail of how run off and pollution of oils will be controlled and the measures that will be employed to prevent discharge of concrete to the Leet Water.

Community Council: Supportive in principle, points raised:

Any conditions applied must be clear and enforceable
Conditions must reflect the methodology and safeguards outlined in the Environmental Statement and replies of the statutory consultees.
The location and scale of the proposed development, and the plans to mitigate the visual impact and other potential impacts are welcomed.
The lack of a need for crops to be used as feedstock is welcomed.
Construction traffic should utilise the road running north of Ravelaw to the B6460 to avoid passing properties to the south and dangerous bends. The CC wish to be included in any future consultations with regard to this matter.
As feedstocks to be used equates to what is currently being produced by existing livestock there should be no increase in numbers to supply AD
SEPA to provide advice on any risk to Leet Water/ground water in respect of siting and design and advise appropriate conditions
Further details sought with regard to:
Connection of output of CHP to farm via buried cable
Relationship of development to village of Whitsome/properties on lane south of Whitsome
Mucking out in wind directions should be clarified/controlled as part of the odour management statement

Other Consultees

None

DEVELOPMENT PLAN POLICIES:

Consolidated Scottish Borders Local Plan 2011

G1: Quality Standards for New Development

H2: Protection of Residential Amenity
Inf7: Waste Management Facilities
D1: Business, Tourism and leisure Development in the Countryside
D4: Renewable Energy Development

OTHER PLANNING CONSIDERATIONS:

Scottish Planning Policy 2014
Supplementary Planning Guidance: Renewable Energy June 2007

KEY PLANNING ISSUES:

- Whether the proposal would harm the environment, visual amenities of the area or residential amenities of occupiers of nearby residential properties.

- Whether the proposal would affect water supplies to neighbouring properties.

- Access and the impact of the proposal on the local road network

ASSESSMENT OF APPLICATION:

Background

Members will recall considering an earlier planning application for an anaerobic digester on a site immediately to the north of the farm complex at Ravelaw, which was refused for the following reason:

> *Having regard to the 250m appropriate separating distance between the proposed anaerobic digester and any sensitive receptors recommended by Scottish Planning Policy, the proposed development would give rise to unacceptable impacts on the living conditions of neighbouring residents, by particular reason of odour, contrary to Policies G1 and H2 of the Scottish Borders Local Plan.*

The subsequent appeal was dismissed by the Reporter, whose concluding paragraphs set out the reasons for her decision, were as follows:

> *21. The lack of specific information on likely odour and noise impacts at Ravelaw Farm and how they would be perceived at the houses, as I have described above, means that it is not possible for me to assess with any certainty what the impact on the residents to the south would be. I cannot tell whether this impact would be significantly worse than the existing situation or whether there would be no significant difference.*
>
> *22. As I have explained above, SPP guidance is that there should be a 250 metre buffer between sensitive receptors and anaerobic digestion operations. In this case there are only 68 metres between the edge of the proposed development and the nearest house. Even the distance to the anaerobic digesters themselves is only 115 metres. Where the distance would be so much less than the guideline figure, it is particularly important for sufficient information to be submitted to justify a possible exception. The lack of such information in this case is, therefore, a serious deficiency.*

23. As it is not possible to judge whether there would be an adverse impact on residential amenity, I cannot say whether the proposed development would comply with local plan policy H2. With regard to local plan policy G1 – Quality standards for new development, it is also not possible for me to conclude that the proposed development would be compatible with neighbouring uses. I reach a similar conclusion in relation to policy D1 – Business, tourism and leisure development in the countryside, as I cannot assess whether the proposed development would respect the amenity and character of the surrounding area. Policy D4 – Renewable energy development states that waste to energy schemes involving farm waste will be assessed against policy Inf7. However, as I have concluded that it has not been satisfactorily demonstrated that potential noise and odour impacts would be within acceptable levels, I consider that the proposed development would not comply with local plan policy Inf7. I consider that this policy conflict is sufficient for me to conclude overall that the proposed development does not comply with the development plan.

The full decision is available on the Public Access website in relation to the original planning application.

The primary concerns were derived from the location of the proposed digester within the 250m of the nearest houses; in essence, she considered there to have been insufficient evidence to accurately assess the effects of the development on these houses that would justify an exception to the 250m guidance set out in Scottish Planning Policy.

The current application seeks permission in a location away from the farm complex, some 350m away from the nearest houses.

Planning Policy

Policy D4 of the Scottish Borders Consolidated Local Plan Adopted 2011 states that the Council will support large and community scale renewable energy development where it can be accommodated without unacceptable impacts on the environment. The siting and design of all renewable energy developments should take account of the social, economic and environmental context. Renewable energy developments will be approved provided that there are no unacceptable adverse impacts on the natural heritage, water environment, landscape, biodiversity, built environment, archaeology, recreation or tourism or that any adverse impacts can be satisfactorily mitigated. Waste to energy schemes involving farm waste will be assessed against Policy Inf7: waste management facilities. This policy states that applications for waste management facilities including waste to energy schemes will be assessed against the principle of the development in terms of its location and the details of the application. In principle, the Council will support proposals for sustainable waste management facilities provided that certain criteria are met.

Policy D1 of the Local Plan states that business development in the countryside will be approved and rural diversification initiatives will be encouraged provided certain criteria are met; these will be addressed within this report.

Policy D1 requires that the development must respect the amenity and character of the surrounding area. The development should be appropriate to the rural character of the area and require a particular rural location and cannot be reasonable accommodated within the development boundary of a settlement. Policy G1 requires all development to be of high quality in accordance with sustainability principles,

designed to fit in with Borders townscapes and to integrate with its landscape surroundings. Policy Inf7 requires that the impact of the proposal on the environment, biodiversity, the landscape and archaeology are considered, minimised and managed.

The Council's Supplementary Planning Guidance: Renewable Energy June 2007 states that combined heat and power systems are not strictly speaking a form of renewable energy as they generally run on gas or diesel fuel. However, where the fuel source is renewable such as wood chip, then it is considered to be a form of renewable energy. The main advantage of a CHP system is that it is a more efficient way to generate heat and power. The cost-effectiveness of CHP schemes comes from the reuse of heat generated in the production of electricity.

Siting, Design and Visual Impact

Concerns have been raised by the community in relation to the nature and scale of the proposed development to include concerns over visual impact, landscape impact and the remote distance of the plant from the existing farm complex.

Given the nature of the development, the source of the feedstock and the overall purpose of the plant to be installed, it is reasonable that the proposal requires a rural location. Whilst the development is not immediately related to the existing farm buildings at the steading, being sited in the adjacent fields, the plant is situated within a natural dip in the landscape at a distance (350m approximately) from sensitive receptors, serviced by an existing farm track. The reasons for that relative isolation from the farm itself are a direct attempt to overcome the reasons for refusal of the earlier application and the subsequent appeal.

Consideration has been given to scale, mass and form, as well as design, materials and finishes. The buildings and plant to be installed would be of a size appropriate to agricultural uses. The CHP building is of a similar scale and height to the existing agricultural buildings. The buildings would be coloured green to ensure that their appearance would blend in with the rural environment.

Whilst there is separation in terms of distance from the steading, the site allows for an opportunity to reduce the vertical emphasis of the development with the plant being situated at a lower level in the landscape than the farm buildings. The proposal includes the partial underground installation of the digester plant which will also reduce visual impact.

Consideration has been given to topography and natural screening and landscaping capabilities. In long views into the site (1km) the farm is visible at a distance from properties to the north and north east, and from Whitsome Village and dwellings to the south (1km).

With the formation of an embankment and native planting to the west of the site and additional planting on the river bank, there will be limited visibility from surrounding roads or residential properties.

The Landscape Architect has been consulted on the application and has raised no objections to the proposals subject to a condition in respect of proposed landscape planting. The Officer is content that the proposed buildings are well screened and distant from potential sensitive residential receptors.

It is considered that the proposal would not be unduly prominent in the landscape and would not harm the visual amenities of the area or views into or out of the area. The character and appearance of the plant is similar to agricultural buildings evident in the local rural environment. A condition in respect of external finishes is recommended to ensure a high quality of design.

Flood risk

Policy G4 requires that development be sited in areas free from significant flood risk. Development will not be permitted if it would be at significant risk of flooding from any source or would materially increase the probability of flooding elsewhere. Concerns have been raised by the community in respect of the proximity of the site to the Leet Water, a small tributary to the River Tweed SAC. SEPA and the Council's Flood Officer have reviewed the siting and design of the plant and do not object to the proposal on flood risk grounds. SEPA's indicative mapping indicates that a small portion of the site may be at risk of flooding (South West of the site) during a 1 in 200 year flood. It is significant that no buildings are shown to be placed within this flood plain in the layout plan. The Flood Officer advises that that no flood plain storage is to be taken up and that there is minimal risk to the buildings. The proposal would comply with the requirements of policy G4 in that the siting of the plant is unlikely to increase the probability of flooding elsewhere, and the positioning of the buildings lies outwith the flood plain.

Protection of the Watercourse and Biodiversity

Policy NE3 advises that development should be sited and designed to minimise adverse impacts on biodiversity of the site including its environmental quality and, ecological status and viability. Policy NE5 seeks to protect the quality of the water resource and ensure that development does not adversely affect the complex components that comprise the water environment or degrade ecological or landscape status.

The development site is located on arable land adjacent to the Leet Water, a small tributary to the River Tweed (SAC). The community have raised concerns with regard to the proximity of the plant to the watercourse and potential impact on the water course from pollution, and the impact on biodiversity in the area, to include otter that frequent the river.

Site drainage and the construction phase of the plant are identified as key aspects of the development in terms of proximity to The Leet.

The Environmental Statement advises that the proposed development includes all associated new concrete aprons and hardstandings required by the development along with collection and storage of silage effluent and surface run-off with the contents of underground storage facilities being used as Feedstock for the Anaerobic Digester. The underground tank is designed to provide a minimum of six months storage. The tank will be fully sealed to prevent any ingress or egress of water/liquid.

Potentially contaminated surface water and effluent will be contained within the AD plant compound and will be discharged the AD Plant for treatment. Thus there should be no direct or indirect discharge to the Leet Water or ground water. The ES advises that clean roof water is to be discharged to soakawy adjacent to the building. SEPA has advised that the discharge to soakaway is acceptable outwith the plant to ground and/or the Leet, subject to Sustainable Urban Drainage (SUDs) principles. It is advised that details of SUDs be secured by condition.

At the pre-application stage, SEPA advised that the plant should be sited at a minimum of 10m away from the Leet watercourse. The submitted plans indicate that that, with the exception of the gas holder, all other elements of the plant are in excess of 10m from the watercourse. The agent advises that to reposition the site further north may impact on the medieval feature Reavelaw farmstead, through re-alignment of the existing track. SEPA in their subsequent response to the application have advised that, provided there is a 10m buffer between the facility structure containing the effluent and the Leet Water, the submitted layout is acceptable.

SEPA confirm that they will not object to the proposed development provided a Construction Method Statement is submitted for prior approval of the authority (in consultation with SEPA). The CMS should include detail of how run off and pollution of oils will be controlled, and the measures that will be employed to prevent discharge of concrete to the Leet Water. The Council's Ecologist has also recommended a Construction Environmental Management Plan (adopting SEPA Pollution Prevention Guidelines) to be submitted for prior approval and this requirement can be secured by condition. As a precautionary measure the CEMP should include a survey for otter presence (keystone species).

The applicant proposes additional planting/screening on the bund to the west and along the river boundary (north side) which will enhance the biodiversity value of the site by creating additional woodland and hedgerow. The Ecologist has advised that a Landscape and Habitat Plan be sought to protect the watercourse and secure enhancement of the value of the site, and precautionary measures be implemented in regard to any potential impact on breeding birds. The proposed planting would strengthen screening in views from the south/Whitsome village.

It is recommended that conditions be applied in respect of protected species and the watercourse to secure mitigation to reduce any risk to the watercourse and wildlife.

It is noted that the farm lies within the Nitrate Vulnerable Zone (South-East Scotland) and the spreading of fertilizer is restricted to March to October. The AD plant will produce digestate (relatively benign and odour free) as fertilizer on land in comparison to the pig muck currently spread on the land.

Residential Amenities

Concerns have been raised by the community with regard to the potential impact on residential amenity in particular from noise nuisance and odours. Residents consider the proposed development to be inappropriate in nature given the proximity of the development to residential houses.

An earlier application 14/00763/FUL for the installation of a larger AD plant immediately adjacent to the farm buildings was refused by committee in December 2014 for the following reason:

Having regard to the 250m appropriate separating distance between the proposed anaerobic digester and any sensitive receptors recommended by Scottish Planning Policy, the proposed development would give rise to unacceptable impacts on the living conditions of neighbouring residents, by particular reason of odour, contrary to Policies G1 and H2 of the Scottish Borders Local Plan.

The Reporter dismissed a subsequent appeal to the decision in April 2015 citing a lack of specific information on odour and noise, resulting in her being unable to

conclude that the proposed development would be an appropriate use of the land. The reporter cited a lack of assessment of data (baseline and proposed) at this site within the farm complex.

Buffer zone

Scottish Planning Policy recommends a 250m buffer may be appropriate for operations such as outdoor composting, anaerobic digestion, mixed waste processing, thermal treatment or landfill gas plant.

The current application proposes a smaller scale AD plant to be sited at a distance of approximately 350m to the east of the steading and sensitive receptors, thus falling well beyond the buffer zone as recommended for consideration by SPP.

In terms of separation distances SEPA have provided a general statement that considers the proximity of sensitive receptors to AD plants in terms of bio aerosols and refers to national advice that odour emissions should be no worse than from the pig farm itself and if there are open slurry tanks it might be better. The applicant has confirmed that there is an effluent tank at Ravelaw, to collect any liquid run-off from livestock buildings, which is cleaned out annually with a slurry tanker and spread on stubble land.

It should be noted that should permission be granted for the AD Plant, the applicant would need to apply to SEPA for an exemption under the Waste Management Licensing (Scotland) Regulations 2011. Although the activity may be exempt from waste management licensing, it is still subject to statutory controls to prevent pollution or harm to human health and would be subject to a condition that nuisance will not be caused through noise or odours.

The farm and private residential properties have co-existed at Ravelaw for a number of years. Mucking out and transport of manure is an essential and normal farm practice for the business. The applicant has proposed to locate the development to land east of the farm buildings, at a distance of approximately 350m away from the building group. Whilst the AD plant would be remote from the steading in layout terms the applicant seeks to locate the development at a much greater distance away from sensitive receptors in order to address neighbours' concerns.

Policy D1 of the Local Plan requires that development has no significant adverse impact on nearby uses, particularly housing. Policy H2 states that development that is judged to have an adverse impact on the amenity of residential areas will not be permitted. Policy Inf7 states that it must be satisfactorily demonstrated that the impacts of the proposal are within acceptable levels and can be properly managed including the impact on local communities in terms of noise, odours and traffic generation.

Consideration has been given to the potential impact of the development on residential amenities to include noise disturbance and odour.

Noise

Equipment that has the potential to generate noise nuisance has been identified by the Environmental Health Officer to include the proposed Combined Heat and Power (CHP) generator equipment and the Feed Hopper located at a distance of approximately 350m from residential properties.

The Combined Heat & Power (CHP) unit (which generates power from burning the gases produced by the Digester) would be a 124 kWe TEDOM Cento with noise levels monitored as part of the system management documentation.

Environmental Health has reviewed the details submitted by the applicant. The CHP generator will produce a noise level of 70db(A) at 1 metre from the sound enclosure. Given the distance to noise sensitive dwellings and background noise to include masking effect of vegetation it is unlikely that the noise from the CHP would be heard at the receptors. The EHO has undertaken a basic desktop noise assessment and hemispherical point source calculation to inform her assessment. A condition to restrict noise levels is advised in this instance. The operation of the hopper (to be used once a day) would provide a source of noise. However the noise is not inconsistent with daily farm operations. A condition is advised to restrict the timing of use of the hopper 0900-1800 hours Monday to Sunday).

Members will need to consider whether the inclusion of such a condition is appropriate, given that it would impinge upon normal farming activity, including mucking out, which may result in the unintended consequence of manure being cleared from the steading but unable to be put into the digester. A restriction on hours would also need to be derived from evidence based on likely disturbance, with the hours of operation themselves also being specifically justified.

Given the officer's assessment of low risk with respect to noise nuisance, the distances involved and the use of conditions to control noise, it is considered that noise disturbance would not be an issue significant enough to warrant refusal of the application.

Odour

As stated previously mucking out and transport of manure is an essential and typical farm practice for the business. It is noted that the applicant has advised that pig numbers at the farm are to remain static and that there will be no stock pile of manure created within the farmyard adjacent to dwellings with manure being loaded to trailers and removed to the plant (10T per day/1 trip).

Mucking out will take place more frequently than at present and it is anticipated that this should reduce the build-up of manure and subsequent odours. The applicant states in the Environmental Statement that he will refrain from mucking out and transporting of manure if there is a north wind which is likely to disperse pig manure odours towards neighbouring residential properties. Prevailing wind is from the south west. Under these conditions, the potential for nuisance is negligible.

The applicant's supporting statement advises that the resulting digestate from the anaerobic digestion process would be less odorous than raw slurry as the more odorous compounds in the slurry are broken down during the process. It concludes that negative impacts due to odours associates with animal slurries with therefore be reduced by the proposal. An odour management plan has been submitted as part of the application and reviewed by Environmental Health.

Digestate (relatively benign and odour free) will be spread as fertiliser on arable land by a tanker designed for this operation from March to October (Nitrate Vulnerable Zone).

Environmental Health has advised that the plant be operated in accordance with the Odour/Risk Management Plan August 2015 and that all plant must be rigorously

maintained in accordance with manufacturers' instructions. The applicant's submitted Environmental Statement and Odour Management Plan must be adhered to at all times to ensure there are no unacceptable impacts upon residential amenity.

Any consideration of these issues needs to acknowledge the ongoing operation of the farm, which is not affected by this application; livestock is already present at the farm and the normal husbandry, including any mucking out, associated with that livestock is necessary regardless of the decision on this application.

Given the mitigation proposed and the Officer's assessment of low risk with respect to odour nuisance arising from the development proposed, it is considered that odour would not be an issue that warrant refusal of the application.

The applicant has offered to be flexible to movement/number of trips.

Outlook and access to light

There are no immediate neighbours to the proposed plant and thus no issues of a loss of light or outlook.

Traffic and Access

The community have raised concerns about the transport of manure from the sheds to The AD site, rather than to individual fields within farm control for spreading. The applicant has explained that manure is removed from the pig pens located within the sheds on a rotational basis. The cycle of removal of manure from the pens timeously will result in less time/opportunity for the manure to degrade/omit odour into the air at the sheds. Rather than further breaking down and releasing chemicals whilst sitting in the fields, waiting to be ploughed into the soil, it is proposed that the manure be taken away from the sheds and fed into the digester where it will be broken down within a sealed environment.

The community have raised road safety concerns with regard to access to the site and an increase in traffic movement on the narrow single road. Policy D1 requires that accessibility is taken into account in assessment of the proposals.

Construction traffic would utilise the existing access to the farm from the public road with a significant increase in traffic movements during this phase. The supporting statement advises that all feedstocks would be sourced from the farm and the digestate will be spread back to the farm land. The proposed feedstock is based on the current slurry production on the farm and it is proposed to supply all feedstock using internal farm tracks. The Roads Planning Service has no objections to the proposed development. Given low traffic volumes and existing passing places available on the single track there are no significant road safety issues in respect of the local road network The farm yard manure which is to be fed into the digester is already contained within the farm steading, so it will not require to be transported to the farm.

Given the absence of any adverse comments from Roads Planning it is considered that road safety would not be an issue significant enough to warrant refusal of the application.

To ensure feedstock to the AD plant is sourced from Ravelaw Farm only, it is recommended that a condition be attached to any permission granted. Thus no importing of feedstock from outwith the farm would occur.

Storage of hazardous substances

Concerns have been raised by the community in respect of health and safety.

Policy G3 of the Scottish Borders Consolidated Local Plan Adopted 2011 states that proposals for hazardous developments as defined under the relevant legislation will be subject to strict controls on siting to maintain appropriate separation from residential areas and areas frequented by the public, major transport routes, and areas of national heritage importance.

Developments will be refused, if guided by the advice of the Health and Safety Executive (HSE) and other consultees as appropriate:

1. the proposal would cause unacceptable levels of pollution or public nuisance or result in an unacceptable hazard to the public, or the environment, or
2. the proposal is located in close proximity to existing facilities or infrastructure that would result in the development causing unacceptable levels of pollution or nuisance or result in an unacceptable hazard to the public or the environment.

Health and Safety

The applicant has provided documentation that states that the operation of the AD plant is fully automated via control systems located within the on-site CHP Building located as shown on the Layout Plan. The installed AD plant and controls are specifically designed and tailored by the manufacturer to the requirements of each AD installation relative to the feedstocks to be used in running the AD. Full training is provided relating to the operation of the plant along with an on-going service provided throughout its working life to ensure safe and efficient operation.

In most systems in the event of a situation where the gas generated cannot be provided to the CHP there is a requirement to “flare off” the gas. With the Evergreen Gas system there is no flame “flare off”. As an alternative this is managed by the presence of a biogas hot water boiler which is specified to take up to 100% of the delivered biogas. This biogas is the fuel for the boiler to generate hot water which is circulated through a fan cooled radiator system thus providing the “heat dump” until the CHP is brought back on-line.

The Planning (Hazardous Substances) (Scotland) Act 1997 states that a planning authority is a Hazardous Substances Authority when quantities of hazardous substances are held. Only if the Act comes into play will the HSE have any role. The Act states in Section 3 that the Secretary of State shall designate what substances are Hazardous Substances and in what Quantities they may be held. Biogas which is 55 - 65 % methane is a hazardous substance. The controlled quantity is 10 tonnes.

The above is confirmed by the Scottish Government's Planning Circular 2/2011 made under The Town and Country Planning (General Permitted Development) (Non-Domestic Microgeneration) (Scotland) Amendment Order 2011. Which states (paragraph 35) Hazardous Substances -

Biogas is a dangerous substance as defined by the Chemicals (Hazard Information and Packaging for Supply) Regulations 2009, with classification as extremely flammable (F+, R12). Where the storage and use of biogas exceeds 10 tonnes, The Control of Major Accident Hazards Regulations 1999, The Planning (Hazardous Substances) (Scotland) Act 1997, The Town and Country Planning (Hazardous

Substances) (Scotland) Regulations 1993 and The Planning (Control of Major-Accident Hazards) (Scotland) Regulations 2000 as amended will be applicable. It is for the individual operators of the Anaerobic Digestion equipment to determine whether The Control of Major Accident Hazards Regulations 1999 and the relevant hazardous substances consent legislation apply and notify the relevant enforcing authorities as required by the legislation."

The applicant has advised that the gas holder has a capacity of 100m^3 of gas at a maximum operating pressure of 20mbar. This equates to the same size gas holder proposed in the earlier application to which the agent confirmed the tonnage was around 4 tonnes. At this quantity, the storage would be under the 10 tonnes and thus Hazardous Substance Consent would not be required.

The HSE has advised that there are no Major Hazard Sites or Major Accident Hazard Pipelines near the location of Ravelaw Farm.

The Environmental Health Officer did not raise any adverse comments in relation to the issue of safety. In carrying out activities related to gas production, holding, transfer and use it is expected that the applicant will abide by all required common law and statutory requirements. A condition is recommended in order to ensure the plant will be operated and maintained in line with the manufacturer's instructions.

In terms of waste management SEPA have provided regulatory advice.

Regulatory requirements

The activity appears to be exempt from waste management licensing however, it is still subject to statutory controls to prevent environmental pollution and harm to human health, which are controlled by SEPA. SEPA advise that the applicant contacts the Borders Operations team if any further guidance is required with respect to the waste management exemption.

Water supply

Environmental Health have confirmed previously that Ravelaw residents' properties are supplied by a mains water supply. The applicant is installing a private borehole. Any water abstraction will require authorisation from SEPA under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR).

Prime Agricultural Land

This is a farm scale sized development. Given the footprint proposed it is not considered that there would be a significant impact on the resource.

CONCLUSION

The application is consistent with national and local policy on waste management and renewable energy. The installation of the anaerobic digester assists in the sustainable management of the land and minimises waste. Appropriate conditions will protect the environment, public health and safety.

The development will aid diversification of income generating streams to support the farm business through the conversion of waste to generate energy and reduction in farm costs (fertilisers) for improvement to yields. Employment opportunities will be created in associated business (construction/operation/maintenance).

It is considered that the proposal complies with policies G1, H2, NE3, NE4 Inf7, D1 and D4 of the Scottish Borders Consolidated Local Plan Adopted 2011. The location of the development 350m from nearest residential properties is such that impacts on those properties is not significant. Potential environmental effects can be controlled to an acceptable level by planning conditions so that the proposal does not harm visual amenities of the area or residential amenities of occupiers of adjacent properties.

RECOMMENDATION BY CHIEF PLANNING OFFICER:

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

1 The development hereby permitted shall be begun before the expiration of three years from the date of this permission.
Reason: To comply with Section 58 of the Town and Country Planning (Scotland) Act 1997, as amended by the Planning etc. (Scotland) Act 2006.

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

3 The details and samples of all external finishing materials of the gas holder and CHP building shall be submitted to and approved in writing by the Planning Authority. The development shall be carried out in the materials so approved.
Reason: To ensure the high quality design of the development in the interests of visual amenity.

4 Only waste/feedstock produced on Ravelaw Farm shall be used to feed the anaerobic digester plant.
Reason: To reduce the potential for further intensification of development at the site in the interests of the local residential amenities and to minimise vehicle movements on the surrounding road network.

5 Any noise emitted by plant and machinery associated with the anaerobic digester shall not exceed Noise Rating Curve NR20 between the hours of 2300 – 0700 and NR 30 at all other times when measured within the nearest noise sensitive dwellings (windows can be open for ventilation). The noise emanating from any plant and machinery used on the premises should not contain any discernible tonal component. Tonality shall be determined with reference to BS 7445-2
Reason: To protect the residential amenity of nearby properties.

6 The anaerobic digestion plant shall be constructed and operated in accordance with the Ravelaw Farm Environmental Statement (08 July 2015) and Odour/Risk Management Plan (05 August 2015) unless otherwise agreed in writing with the Planning Authority.
Reason: To safeguard residential amenities

7 All plant must be strictly maintained in accordance with manufacturer's instructions and timescales, as submitted as part of this planning application.
Reason: To safeguard residential amenities

8 Any works to be undertaken during the bird breeding season shall require to be carried out in accordance with details that have first been submitted to, and agreed in writing by the Planning Authority.
Reason: To ensure that impacts on breeding birds are minimised.

9 The facility structure containing the effluent shall be sited at a minimum distance of 10m away from the Leet Water.
Reason: A minimum 10 metre buffer is required to protect the water environment.

10 Prior to the commencement of works a Construction Environmental Management Plan, adopting SEPA Pollution Prevention Guidelines PPG1, PPG5 (general guidance and works affecting watercourses), and PPG 6 (construction and demolition) as appropriate, is to be submitted to for the approval in writing by the Planning Authority. Any works shall thereafter be carried out in accordance with the approved scheme.
In particular the CMS should include details of; i) how run off and pollution from oils will be controlled, and ii) the measures that will be employed to prevent discharge of concrete to the Leet Water.
Reason: To protect the watercourse and ecological interest

11 No development shall take place except in strict accordance with a scheme of soft landscaping works, which shall first have been submitted to and approved in writing by the Local Planning Authority, and shall include

i. indication of existing trees, shrubs and hedges to be removed, those to be retained and, in the case of damage, proposals for their restoration
ii. location of new trees, shrubs, extended hedges grassed areas and ponds
iii. schedule of plants to comprise species, plant sizes and proposed numbers/density
iv. programme for completion and subsequent maintenance.

Reason: To enable the proper form and layout of the development and the effective assimilation of the development into its wider surroundings.

12 Prior to the commencement of works, a Landscape and Habitat Management Plan, including measures for small woodland and hedgerow creation to benefit biodiversity and provide additional screening shall be submitted to and agreed in writing by the Planning Authority. Thereafter the works shall be carried out in accordance with the approved scheme.
Reason: To provide screening function to site and enhance ecological interest

13 Prior to commencement of works details of measures to be undertaken in order to ensure construction traffic avoids the post-medieval farmstead 'Reavelaw', as depicted on the Archaeology Map 1 (16 Aug 2015 attached)(approximately 20 metres north of the proposal) shall be submitted to and agreed in writing by the Planning Authority. Thereafter the development will be carried out in accordance with the approved plans.
Reason: To protect the archaeological feature.

14 All potentially contaminated surface water and effluent shall be contained within the AD plant compound and shall be discharged to the AD plant for treatment.
Reason: To protect the water course and ground water.

15 No development shall commence until a clearly identifiable datum point, or clearly identifiable datum points, located outwith the site and sufficient for the purpose of establishing the heights specified on drawing number 300B has be agreed on site with the Planning Authority. Thereafter the development shall be carried out in accordance with the approved details.
Reason: To ensure a satisfactory form of development.

Informatives

The Indicative River, Surface Water & Coastal Hazard Map (Scotland) known as the "third generation flood mapping" prepared by SEPA indicates that the site may be at risk from a flood event with a return period of 1 in 200 years. That is the 0.5% annual risk of a flood occurring in any one year. For further information please visit http://www.sepa.org.uk/environment/water/flooding/flood-maps/

The applicant is advised to adopt water resilient materials and construction methods as appropriate in the development as advised in PAN 69 and raise above ground equipment that may be sensitive to flooding above ground level or protected against flooding to avoid any residual impact and damages.

The plant will be regulated by SEPA under a Waste Management Licensing Regulation exemption – specifically under the terms of a Paragraph 51 exemption (the anaerobic digestion of agricultural or distillery waste). Although the proposed activity may be exempt from Waste Management Licensing it is still subject to statutory controls to prevent environmental pollution (including odour and noise) and harm to human health.

SEPA advise that the applicant contacts the Borders Operations team if any further guidance is required with respect to the waste management exemption. Contact SEPA on 01896 754797.

Any water abstraction will require authorisation from SEPA under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR).

The silage clamp will be regulated by way of the Silage, Slurry and Agricultural Fuel Oils Regulations.

The abstraction of water from the borehole will be regulated under the terms of General Binding Rules of the Water Environment (Controlled Activities) (Scotland) Regulations (CAR).

Details of regulatory requirements and good practice advice for the applicant can be found on the website at www.sepa.org.uk/planning.aspx

Supplementary checking surveys and appropriate mitigation for breeding birds will be required if habitat clearance is to commence during the breeding bird season.

DRAWING NUMBERS

100A Site Location Plan 10 August 2015

200A	Site Layout Plan	10 August 2015
300B	Elevations	10 August 2015
L/01	Location Plan	08 July 2015

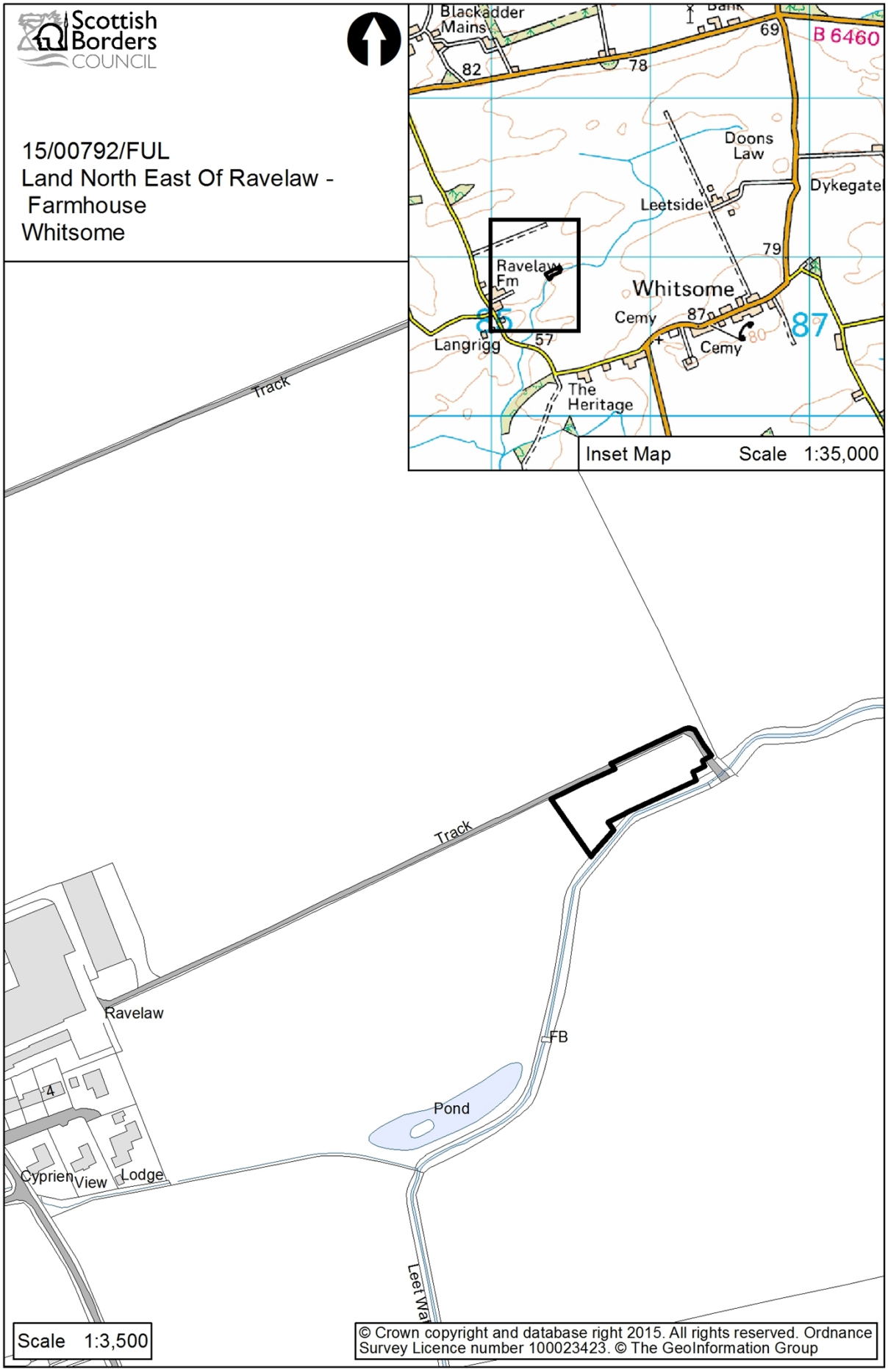
Approved by

Name	Designation	Signature
Ian Aikman	Chief Planning Officer	

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

Author(s)

Name	Designation
Lucy Hoad	Planning Officer


Scottish Borders COUNCIL
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Land North East Of Ravelaw -
Farmhouse
Whitsome
Blackadder Mains
82
78
69
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Doons Law
Dykegate
Leetside
79
Ravelaw Fm
Whitsome
Cemy
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Langrigg
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The Heritage
Inset Map
Scale 1:35,000
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Pond
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