



Cloich Forest Wind Farm

Volume 4 – SEI Report Non-Technical Summary
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PREFACE

This Non-Technical Summary (NTS) summarises the findings of the Environmental Impact Assessment Report (EIA Report) and Supplementary Environmental Information Report (SEI Report) that has been undertaken on behalf of Cloich Windfarm Partnership LLP ('the Applicant'), wholly owned by EDF Energy Renewables Limited, to accompany the Section 36 application for consent to install and operate Cloich Forest Wind Farm and associated infrastructure with a generation capacity exceeding 50 megawatts (MW) ('the Development').

The EIA and SEI Reports have been prepared in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017¹, referred to hereafter as the 'EIA Regulations'.

The EIA Report comprises of the following documents:

- **Volume 1** – EIA Report Text;
- **Volume 2** – EIA Report Figures;
 - **Volume 2a** – Figures excluding LVIA;
 - **Volume 2b** – LVIA Figures;
 - **Volume 2c** – LVIA Visualisations;
- **Volume 3** – EIA Report Technical Appendices; and
- **Volume 4** – EIA Report Non-Technical Summary.

In addition to the above, the EIA Report is accompanied by a Planning Statement, Project Comparison Report, and a Pre-Application Consultation Report.

The SEI Report comprises of the following documents:

- **Volume 1** – SEI Report Text;
- **Volume 2** – SEI Report Figures;
 - **Volume 2a** – SEI Report Figures excluding LVIA;
 - **Volume 2b** – SEI Report LVIA Figures;
 - **Volume 2c** – SEI Report LVIA Visualisations;
- **Volume 3** – SEI Report Technical Appendices; and
- **Volume 4** – SEI Report Non-Technical Summary.

In addition to the above, the SEI Report is accompanied by an Updated Planning Statement.

This EIA and SEI Report will be publicised in accordance with Part 6 of the EIA Regulations.

The SEI Report and supporting documentation, together with the EIA Report, is available on the Cloich Forest Wind Farm project website at: <https://www.edf-re.uk/our-sites/cloich-forest/>

In addition, copies of this SEI Report alongside the EIA Report in its entirety, will be made available for public inspection during the consultation period at the following locations during their normal opening hours:

- Peebles Library, Chambers Institute, High St, Peebles EH45 8AG.
- Scottish Borders Council, Council Headquarters, Newtown St. Boswells, Melrose, TD6 0SA.
- Scottish Government Library at Victoria Quay, Edinburgh, EH6 6QQ.

¹ The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 [Online] Available at: <https://www.legislation.gov.uk/ssi/2017/101/contents/made> (Accessed 21/06/2021)

DVD copies of the complete SEI Report and EIA Report are available free of charge upon request. Hard copies may be obtained at a reasonable charge reflecting the cost of printing the volumes requested.

To request a copy of the application submission, EIA Report and/or this SEI Report, please contact:

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1 INTRODUCTION

This Non-Technical Summary (NTS) summarises the Environmental Impact Assessment Report (EIA Report) and the Supplementary Environmental Information Report (SEI Report) which accompanies the application by Cloich Windfarm Partnership LLP ('the Applicant'), wholly owned by EDF Energy Renewables Limited, for consent to install and operate Cloich Forest Wind Farm and associated infrastructure with a generation capacity exceeding 50 megawatts (MW) ('the Development'). The Development comprises of up to 12 wind turbines, associated infrastructure, and a Battery Energy Storage System (BESS). The Development is located within Cloich Forest approximately 5.5 kilometres (km) north-west of Peebles ('the Site') (NTS Appendix A: Figure 1). The Development represents a re-design of the previously consented Cloich Forest Wind Farm ('the Consented Scheme'), which was granted S36 consent and deemed planning permission following a Public Local Inquiry (PLI), on 8 July 2016 (Planning and Environmental Appeals Division (DPEA) Reference: WIN-140-1).

As the Development exceeds 50 MW, the Applicant is seeking consent from the Scottish Ministers under Section 36 of the Electricity Act 1989 (as amended)², with deemed planning permission under Section 57(2) of the Town and Country Planning (Scotland) Act 1997³.

Given the nature of the application, the EIA and SEI has been undertaken in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017⁴, referred to as 'the EIA Regulations'.

1.1 SEI Update

Since the EIA Report was submitted and on receipt of consultation responses, the Applicant has taken the decision to amend the location of Turbine 8 (T8) and the infrastructure components associated with this turbine (the SEI Layout), the effects of which need to be reassessed under the EIA Regulations. The SEI Layout also includes an additional Temporary Construction Compound (TCC) for Scottish Power Transmission (SPT) to use during the installation of grid connection infrastructure and provision for an additional control building within the wind farm's substation compound.

This NTS supersedes the NTS that was submitted as part of the EIA Report and can be read as a standalone document.

1.2 The Applicant

The Applicant is Cloich Windfarm Partnership LLP, a wholly owned subsidiary of EDF Energy Renewables Limited (EDF-ER), part of one of the world's largest electricity companies, whose investment and innovation in the UK is bringing down costs for consumers with significant benefits for communities. The EDF-ER operating portfolio of 36 wind farms and battery storage units (almost 1 GW) are providing some of the much needed new affordable, low carbon electricity to the UK.

EDF-ER is operated within the United Kingdom under the brand EDF Renewables.

² UK Government, (1989), Electricity Act 1989 [Online] Available at:

<http://www.legislation.gov.uk/ukpga/1989/29/contents> (Accessed 10/05/2021)

³ UK Government (1997) Town and Country Planning (Scotland) Act 1997 [Online] Available at:

<http://www.legislation.gov.uk/ukpga/1997/8/section/57> (Accessed 10/05/2021)

⁴ The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 [Online] Available at:

<https://www.legislation.gov.uk/ssi/2017/101/contents/made> (Accessed 10/05/2021)

1.3 The Site

The Site is situated within Cloich Forest, covering an area of approximately 1,080 hectares (ha), centred on National Grid Reference (NGR) 320648, 647881 (NTS Appendix A: Figure 2). The Site and the Development is wholly located within the administrative boundary of Scottish Borders Council ('the Council').

The Site includes the operational commercial forest of Cloich Forest, including approximately 12 km of existing forestry tracks which will be shared by the Development. Existing forestry tracks will be utilised to minimise the environmental impact of new infrastructure footprint associated with the Development; new access tracks will branch off existing forestry tracks to proposed turbine locations.

The topography of the Site, and immediate vicinity, is complex, with elevation ranging from approximately 280 metres (m) Above Ordnance Datum (AOD) in the north-east part of the Site to approximately 476 m AOD at the peak of Craillie Hill in the south. The Site encompasses the rolling Cloich Hills, including Peat Hill (466 m AOD), Ewe Hill (462 m AOD), White Rig (325 m AOD), and Craillie Hill (476 m AOD). The hills are dissected by a number of watercourses, including Middle Burn, Flemington Burn, Martyr's Dean, Courhope Burn and Harehope Burn. All watercourses eventually feed into the River Tweed. There are no other waterbodies within the Site.

Coniferous plantation, at various stages of the planting, growing and felling cycle, is the primary land use within the Site; however, the area around Courhope in the south of the Site consists of improved upland pasture, utilised for sheep grazing, and improved grassland which remains clear of forestry.

In addition to the operational commercial forest of Cloich Forest, the Site and immediate vicinity consists of further areas of commercial forestry and rural farmland, primarily used for grazing and other farmland activities.

The Site contains two public roads, as shown on Figure 3 (NTS Appendix A), which form the Site access from the A703; these public roads are as follows:

- D17 Whim – Shiplaw; and
- D18 Cloich.

There are no residential properties within the Site; however, Cloich Farm is located adjacent to the Site, at NGR 321655, 649105, approximately 1.2 km north-west from the closest turbine (T10). There is a portion of land within the southern section of the Site which is excluded from the Site Boundary; within this land there is a derelict cottage owned by Forestry and Land Scotland (FLS), at approximate NGR 320316 646455. The property is not occupied, is not in a physical state to be lived in; and owners, FLS, have no intention of returning the building back into use as a dwelling.

2 SITE SELECTION & DESIGN EVOLUTION

The selection of an appropriate site which has the potential to support a commercial wind farm development is a complex and lengthy process. It involves examining and balancing a number of environmental, technical, planning and economic issues. Only when it has been determined that a site is not subject to major known environmental, technical, planning or economic constraints is the decision made to invest further resources in developing the proposal and conducting an EIA.

In accordance with the EIA Regulations the design alternatives need to be studied with key reasoning, taking into account the potential environmental effects. The Site was selected as a suitable site for wind farm development by the Applicant because it met the following criteria:

- Previous consent at the Site for the Consented Scheme demonstrates an established planning principle for an onshore wind farm in this location, and a legal fall-back position should consent not be granted for the Development;
- A sufficiently high annual mean wind speed across the Site;
- Viable grid connection in proximity to the Site;
- Suitable road access;
- Located within an area in which the Development design can respond appropriately to the adjacent cumulative context;
- The layout of the Development is able to maintain sufficient distance from residential properties to ensure and maintain compliance with ETSU-R-97 noise limits, as well as to avoid or reduce the potential for adverse effects on residential visual amenity and shadow flicker effects; and
- The Site does not support any international or national ecological or landscape designations, and Scheduled Monuments within the Site can be safeguarded.

The Development layout has evolved throughout the duration of the EIA and SEI. An iterative approach to the siting of the turbines has been taken which has considered the consultation responses, and the findings of the environmental surveys, to guide the evolution of the Development's design.

The design of the Development was achieved through detailed assessments of the environmental effects and consideration of the identified spatial constraints combined with consideration of the appearance of the Development from selected viewpoints. A series of design workshops, with project team input and site visits, were held to inform the design process. These involved members of the EIA and technical team who provided information on potential constraints following the baseline assessments. The process was also informed by detailed civil engineering requirements to ensure technically viable design solutions.

2.1 SEI Update

Following submission of the EIA Report in June 2021, the Energy Consents Unit (ECU) of the Scottish Government consulted relevant statutory and non-statutory organisations, the majority of which provided consultation responses.

Following the consultation responses, the Applicant has amended the layout of the Development, relocating one of the 12 turbines (T8) 150 m south of the position considered within the EIA Report in order to reduce effects on the setting of a nearby Scheduled Monument, Whaup Law, cairn. An additional TCC was incorporated into the design for SPT and the substation compound will contain an additional control room. There will also be additional management and infrastructure felling because of the additional TCC and T8 relocation. In the EIA Report the total felling was assessed as 200.25 ha, in the SEI Report this will now be 203.06 ha. Of this, 132.06 ha will be

replanted with diverse native broadleaved woodland onsite. This has resulted in the final 'SEI Layout'.

3 DEVELOPMENT DESCRIPTION

The layout of the Development is shown on Figure 4a-d in NTS Appendix A.

3.1 Development Components

The Development comprises a wind powered electricity generating station known as Cloich Forest Wind Farm with a generation capacity exceeding 50 MW. It will involve the construction and operation of a wind farm and associated infrastructure, battery energy storage system (BESS), and include widening works along the main public road access, as described in Table 3.1 below.

The Development will comprise:

- Up to 12 wind turbines including external transformers and associated infrastructure including:
 - Widening works along public road;
 - A substation compound & two control buildings;
 - An approximate 20 MW battery energy storage system (BESS); and
 - Forestry felling.

The Site is currently used as a commercial forestry plantation with existing good quality forestry tracks which will serve as wind farm tracks where possible. The components of the Development are summarised in Table 3.1 and shown on Figure 4a-d. The SEI updates to the layout are indicated in Table 3.1.

Table 3.1 Key Parameters of the Development

Element	EIA Details	SEI Details
Turbines	Up to 12 turbines with a maximum tip height of 149.9 m. Depending on the final turbine choice, a small transformer may be located at the base of each turbine. Each turbine will have a foundation with a diameter of approximately 24 m, with a depth of up to 3 m.	T8 and its associated infrastructure have been relocated 150 m to the south of the position assessed within the EIA Report.
Public Road Access (D17 Whim – Shiplaw & D18 Cloich)	From the junction with the A703, the route to the main body of the Site will be afforded via the 'D17 Whim – Shiplaw' & 'D18 Cloich' public roads. The Public Road Access consists of approximately 2.4 km of public road and will be subject to road widening works. The existing surfaced road's width varies between approximately 3 and 5 metres. The road upgrade works will create a width of at least 4.5 m along its length, suitable for the delivery of turbine components and cranes. For much of the route, widening works can be carried out in the road verge, with some re-alignment of field boundaries where appropriate. The widening works are illustrated in Appendix A: Figure 4a-d.	No change.

Element	EIA Details	SEI Details
Site Entrance	<p>The Site encompasses both the 'D17 Whim – Shiplaw' & 'D18 Cloich' public roads which lead to the Site Entrance located on existing forestry track, which will form part of the Onsite Access Tracks, at the western extent of the Site; additionally, there will be a Secondary Entrance in the eastern portion of the Site, which will be used by vehicles etc. already inducted via the Site Entrance at an earlier date.</p> <p>Appendix A: Figure 4a-d illustrates both the Site Entrance and the Secondary Entrance.</p>	No change.
Onsite Access Tracks	<p>Onsite Access Tracks occur from the point at which public road (the D18 Cloich) ceases, as shown on Appendix A: Figure 4a-d. The Onsite Access Tracks are served by two main access points; eastern and western.</p> <p>Onsite Access tracks within the wind farm will have a width of approximately 5 m, with the exception of the proposed connecting track that is for light vehicle use connecting the northern and southern areas of the Site. This approximately 1.4 km long section of track will be constructed to FLS Civils Specifications and will not be used for transporting oversized turbine components or cranes. It is anticipated to be 3m wide.</p> <p>Access tracks will consist of approximately 7.6 km of existing forestry tracks (with some minor upgrading in locations), and approximately 8.2 km of newly constructed track.</p>	Minor amendment to the location of the access track serving T8 following the relocation of the turbine.
Electrical Infrastructure	<p>Onsite cabling will be laid underground alongside the access tracks where possible, linking the turbine transformers to the wind farm control building and substation. Transformer units for wind turbines will be located in kiosks (3m x 2.5m x 2.5m) adjacent to turbines.</p> <p>A substation compound will be located at approximately NGR 320611, 649305. The compound measuring approximately 100 m x 50 m will include a single storey control building, external electrical infrastructure, battery storage components, recycling and storage, and vehicle parking.</p>	Minor change to the substation compound, which now contains 2 control buildings, one for the windfarm operator and one for the grid operator. The two buildings are expected to be approximately 20 m x 7 m for the wind farm and 13 m x 20 m for the SPT building, as shown on Figure 4a-d.

Element	EIA Details	SEI Details
Battery Energy Storage System (BESS)	<p>An approximate 20-Megawatt (MW) BESS facility will be located within the substation compound, as shown on Figure 4. It is proposed that the BESS will comprise of four 'energy storage units' (ESU), where one ESU contains:</p> <ul style="list-style-type: none"> • 2 x battery containers; • 1 x transformer; • 1 x HVAC Cooler; • A perimeter fence; and • Electrical cabling connecting to the nearby substation. 	No change.
Crane Hardstanding	<p>Crane hardstandings will be required adjacent to each turbine, this will consist of an area of approximately 1250 m² at each turbine.</p> <p>In addition to the main hardstanding area, there will be an auxiliary crane area which will consist of a temporary flattened area for crane assembly and turbine blade storage which will not be formed of hardstanding.</p>	Minor amendment to the location of the crane hardstanding at T8 following the relocation of the turbine.
Temporary Construction Compound	<p>A temporary construction compound will be required during the construction of the Development, forming an area of hardstanding providing space for temporary construction cabins, parking and lay down areas; this will measure approximately 100 m x 50 m and be located in the western area of the Site, at approximately NGR 320548, 649205.</p>	<p>An additional TCC is required for SPT during construction of the Development to install the grid connection infrastructure. This will measure approximately 82 m x 60 m in the western area of the Site, at approximately NGR 320660.6, 649377.1 (Appendix A: Figure 4a-d).</p>
Borrow Pits	<p>Up to two onsite borrow pits are proposed. One is located approximately 130 m north-east of T12, along one of the main access tracks into the Site and will extend an existing quarry; the second borrow pit is to be located in the west of the Site, approximately 170 m north of T5, and will extend an disused quarry.</p> <p>Given that the track layout reuses 7.6 km of existing access track, less aggregate will be required when compared to a typical wind farm of this size, and the use of both borrow pits may not be required.</p>	No change.

3.2 Construction Phase

The construction period for the Development would be approximately 18 months in duration. The starting date for construction activities will largely be dependent upon the date that consent may be granted and grid availability.

Construction activities will be limited to the working hours of 07:00 to 19:00 on weekdays and 07:00 to 13:00 on Saturdays, with the exception of any emergency working or turbine deliveries. Additionally, a Traffic Management Plan (TMP) would be agreed with the Council in advance of construction.

The construction phase will be controlled via a series of detailed construction method statements (CMSs), which will be prepared by a civil engineering contractor appointed by the Applicant, who will have overall responsibility for environmental management on the construction site. A Construction Environmental Management Plan (CEMP) will be prepared to support the construction method statements. The CEMP will be the overarching document which combines the principles of all other management plans and environmental plans required to support the construction.

3.3 Operational Phase

During operation, general servicing is required. Each turbine manufacturer has specific maintenance requirements, but typically, routine maintenance or servicing of turbines is carried out at least once per year. In the first year, there is also an initial service shortly after commissioning.

3.4 Decommissioning Phase

The Development has been designed with an operational life of 30 years. At the end of the operational period, it would be decommissioned, and the turbines dismantled and removed. Any alternative to this action would be subject to further consenting process.

4 EIA PROCESS AND METHODOLOGY

Environmental Impact Assessment (EIA) is the process undertaken to identify and evaluate the likely significant effects of a proposed development on the environment and to identify measures to mitigate or manage any significant adverse effects. The assessment must be carried out following consultation with statutory consultees, other interested bodies and members of the public. The purpose of identifying significant effects is to ensure decision makers are able to make an informed judgement on a proposal. Where one or more significant effects are identified, it does not automatically follow that a proposal should be refused.

The EIA and SEI Reports have been prepared following a systematic approach to EIA and project design.

The process of identifying environmental effects is both iterative and cyclical, running in tandem with the iterative design process. The key elements in EIA are:

- Scoping and ongoing consultation, including consideration of responses and how these should be addressed;
- Technical environmental assessments, including baseline studies, input to the design process and identification of potential significant environmental effects;
- Preparation of the EIA Report; and
- Submission of the Section 36 application and EIA Report, including publicity of the submitted EIA findings.

The aim of the scoping process is to identify key environmental issues at an early stage, to determine which elements of the Development are likely to result in significant effects on the environment and to establish the extent of survey and assessment required.

A Scoping Request for the Development was made to Scottish Ministers in October 2019, which described the Development and its potential environmental effects. A number of statutory and non-statutory consultees responded to the scoping request which in turn informed the EIA process.

Prior to the current COVID-19 restrictions taking effect, the Applicant hosted one round of Public Exhibitions during February 2020. The second and final round of Public Exhibitions required alternative arrangements to engage with the local community in light of COVID-19 restrictions; this was achieved through an 'Online Public Exhibition', in line with the Scottish Government's COVID-19 advice and guidelines⁵.

A number of environmental disciplines have been assessed to identify any effects that may be significant in the context of the EIA Regulations. Mitigation is proposed where possible to prevent significant effects.

In accordance with the EIA Regulations, the assessment has considered 'cumulative effects' where applicable.

4.1 SEI Update

Following submission of the Cloich Wind Farm application for consent (ECU00003288), consultation responses were received from various statutory and non-statutory consultees. Where necessary additional information has been provided and minor design modifications have been made to address consultee comments to result in the SEI Layout.

⁵ The Scottish Government (2020) Online Public Exhibition established in accordance with COVID-19 Scottish Government advice and regulations [Online] Available online at: <https://www.gov.scot/publications/coronavirus-covid-19-planning-guidance-on-pre-application-consultations-for-public-events/> (Accessed 20/05/2021)

5 LANDSCAPE AND VISUAL AMENITY

5.1 Landscape Effects

The Development will introduce wind turbines into the Plateau Outliers Landscape Character Type (LCT), a large-scale undulating landscape of moorland and coniferous forest. There are no operational wind turbines within this LCT, however the landscape is influenced by human development including wind farms outside of the LCT, forestry and development in neighbouring valleys. Overall sensitivity of the Plateau Outliers LCT is considered to be medium.

Significant effects are predicted on the landscape resource of the Site itself (Major) during construction and operation. Significant effects on landscape character are predicted for the Plateau Outliers (host LCT), Dissected Plateau Moorland, Rolling Farmland – Borders, Upland Fringe Rough Grassland and Pastoral Upland Valley LCTs. Although existing wind farms (notably Bowbeat, 6.9 km to the east of the Site) have influenced the character of some of these LCTs, the Development will extend this influence within the following area: northwards to Auchencorth Moss; eastwards across the Eddleston Valley as far as the summit of Dundreich; southwards as far as the summits of Black Meldon and White Meldon; and westwards to Whiteside Hill, Hag Law and Wether Law. A significant effect on landscape character will be experienced within this area.

The Site is not within a designated landscape but is in proximity to several including the Upper Tweeddale NSA and Tweed Valley SLA to the south. Although significant effects on landscape character will be experienced from the fringes of these designated areas, the overall integrity and reasons for their designation are not anticipated to be affected.

5.2 Visual Effects

Significant effects on views are predicted at 10 of the 26 representative viewpoints, all of which are located within 10 km of the Development. Major effects are predicted from Viewpoint 1: Cross Borders Drove Road (West) and Viewpoint 2: Cross Borders Drove Road (East), which are both locations on the long-distance route and on one of Scotland's Great Trails, immediately west and east of the Site, respectively, where close views of the Development can be experienced. Major effects are also predicted from Viewpoint 3: Old Post Road Core Path (east of Observatory), from a view which is representative of residents and walkers. In addition, major effects are predicted from Viewpoint 4: Black Meldon and Viewpoint 6: Core Path 154 near Eddleston which both represent views experienced by recreational receptors to the south and east of the Site, respectively.

Significant (moderate) effects are predicted from: Viewpoint 7 Minor Road near Spylaw and Wester Deans; Viewpoint 9 Portmore House; Viewpoint 14 Haswellsykes; Viewpoint 17 Glentress Forest, Makeness Kipps; and Viewpoint 19: Cademuir Hill Fort.

In terms of settlements, significant effects are identified at Eddleston, where properties in the more elevated eastern areas would have views of the turbines across the Eddleston Valley. No significant effects were identified at Romannobridge, West Linton, Dolphinton or Peebles.

Significant effects will be experienced from localised sections of the A703, Meldons Road and the John Buchan Way. A significant (major) effect will be experienced from localised sections of the Cross Borders Drove Road which passes through the Site.

All these significant visual effects will be experienced within 10 km of the Site. From some receptors the Development will be seen in successive views with Bowbeat Wind Farm in the Moorfoot Hills to the east of the Site.

5.3 Cumulative Landscape and Visual Assessment

Operational wind farms and those under construction are included as part of the baseline for the LVIA and considered as part of the primary LVIA assessment. Scenario 1 of the CLVIA considers the addition of the Development to a landscape with operational, under construction and consented wind farms.

The CLVIA focused on consented wind farms within 20 km of the Development, of which there are two: Glenkerie Extension, a 6-turbine scheme (100 m to tip) located approximately 21 km to the south-west of the Development, alongside the operational Glenkerie Wind Farm; and Camilty, a 6-turbine scheme (149.9 m to tip) located approximately 17.5 km to the north-west.

Glenkerie Extension will be perceived to extend the influence of an existing wind farm across a small part of the Southern Uplands. Camilty will be perceived to extend the influence of other wind farms, notably Harburnhead and Pearie Law, across the upland fringes between the Pentland Hills and settled West Lothian lowlands. Given this, as well as the distance between the Development and both of these cumulative schemes, no significant cumulative landscape or visual effects have been identified.

5.4 SEI Update

5.4.1 Landscape Effects

Due to the minimal change in location of one turbine (T8), effects on landscape character and receptors in settlements and along routes were scoped out of the updated SEI landscape assessment.

5.4.2 Visual Effects

The overall significance of effects on the landscape and visual amenity of the Study Area will remain the same as that assessed in the EIA Report.

The relocation of T8 as part of the SEI Layout will result in minimal change in the appearance of the Development from all LVIA viewpoints. Overall, the magnitude of change and level of effect for the landscape and visual receptors considered within the assessment will remain the same as that set out in the EIA Report.

5.4.3 Cumulative and Visual Assessment

As part of the SEI, the cumulative baseline was updated. The most notable change was from schemes previously assessed at 'Application Stage' in the CLVIA in the EIA Report receiving consent. There were a number of new wind applications, the closest being 17.7 km from the Development (Greystone Knowe), followed by Grayside (25.2 km from the Development) and Junction 2a Dunfermline (39.1 km from the Development). Given the limited change in the SEI layout, and the intervening distance (over 17.7 km) from new cumulative schemes, changes to cumulative effects will be barely perceptible, and remain as set out in the LVIA in the EIA Report.

6 ARCHAEOLOGY AND CULTURAL HERITAGE

Chapter 6 of the EIA Report evaluates the effects of the Development on archaeological and cultural heritage receptors.

The assessment of archaeological and cultural heritage effects takes into account both potential direct effects arising from proposed construction activities, as well as indirect (primarily visual) effects as a result of changes to the settings of cultural heritage assets. Consultation was undertaken with Historic Environment Scotland (HES) and the Council's Historic Environment Team.

The assessment was informed by a Desk-Based Assessment (DBA) which aided understanding of impacts on known (buried) archaeological remains within the core study area, and the potential for unknown (buried) archaeological remains to be present. The DBA revealed that the archaeological interest of the core study area is limited by existing forestry operations but is high around known records and along the waterways, and a programme of archaeological work is recommended to include watching brief for all works in proximity to SM2756 Kilrubie Hill Ring Enclosures. This would ensure direct effects are not significant for the Development. In addition, mitigation is embedded within the wind farm forestry plan to remove trees from SM2756 Kilrubie Hill Ring Enclosures in order to preserve surviving elements of the monument. As detailed below, mitigation is also included for SM2755 Whaup Law Cairn to open up viewsheds from Whaup Law Cairn (SM2755) towards the wider landscape.

The assessment considered the potential effect of the turbines in relation to the setting of heritage assets within and beyond the core study area. This included consideration of all Scheduled Monuments and Listed Buildings out to 5 km from the Development and selected heritage assets between 5 and 15 km, as agreed during consultation with HES. The key aim of the assessment was to determine whether the turbines altered the settings of historic assets so that the cultural significance of these assets was diminished.

There are twelve significant indirect (settings) effects at nine locations, generally concentrated at elevated hill forts at White Meldon (SM114, SM3075), Black Meldon (SM2703), Milkieston Rings fort (SM2416), Whiteside Hill (SM2955), Cademuir (SM2716, SM3044, SM3045), and Woodhouse (SM3051) with other significant effects in close proximity either within the site at Whaup Law Cairn (SM2755) and adjacent at Green Knowe enclosures and barrows (SM2734). A localised significant effect in one view looking across Category A Portmore House (LB2037) was also identified. Other effects as a result of changes to setting were negligible to slight and not significant.

For designated heritage assets within the Site, the Development's forestry felling includes embedded mitigation for SM2756 Kilrubie Hill Ring Enclosures and SM2755 Whaup Law Cairn. SM2756 Kilrubie Hill Ring Enclosures is currently covered in forestry with this area to be felled and not replanted in order to preserve surviving elements of the monument. The top of Whaup Law would be felled and not replanted as part of the Development's forestry proposals in order to open up viewsheds from Whaup Law Cairn (SM2755) towards the wider landscape, most notably SM2738 Wether Law Cairn to the north-west, which currently does not exist due to surrounding forestry.

Other designated heritage assets where significant effects were identified are not within the Site. Given that many of the most sensitive receptors are elevated prehistoric monuments such as hillforts, screening is not a viable option for mitigation. Light Detection and Ranging Survey (LIDAR) over key hill forts in the area would provide an opportunity to enhance the appreciation and understanding of heritage assets though would not reduce the effect of the Development in consideration of the overall planning balance.

No additional significant cumulative indirect (setting effects) from the Development and other wind farm developments is likely. All cumulative effects are assessed to be **not significant**.

6.1 SEI Update

Following submission of the EIA Report, HES cited concern over the potential impact to the setting of the Whaup Law cairn, Scheduled Monument. Their concern related specifically to T8 which has since been relocated 150 m south of the position assessed within the EIA Report (resulting in the SEI Layout).

The SEI Layout and revised forestry proposals, as agreed in consultation with HES, has resulted in an improvement of intervisibility between Whaup Law Cairn (SM2755) and Wether Law Cairn (SM2738), but there remains a moderate effect upon the assets as a result of the Development which is the same as EIA Report. This is **significant** in terms of the EIA Regulations.

Operational effects were reassessed in the SEI Report which concluded that twelve **significant indirect** (settings) effects remain likely upon Cultural Heritage receptors in the surrounding historic environment as a result of the SEI Layout. This is the same as the EIA Report.

7 ECOLOGY

Chapter 7 of the EIA Report evaluates the effects of the Development on Ecological Receptors.

Chapter 7 considered the potential effects on the ecological features present at the Site associated with the construction, operation and decommissioning of the Development. The assessment method followed the guidance detailed by CIEEM⁶.

It was possible to scope out most species and habitats recorded in the Ecology Survey Area from the assessment by virtue of their low conservation value, the type and frequency of field signs present, the small extent of the sensitive habitat, or the negligible scale of potential effects. The 10 Important Ecological Features (IEFs) taken forward for assessment were bats, otter, badger, Atlantic salmon, brown trout, brook lamprey, river lamprey, sea lamprey, the River Tweed Special Area of Conservation (SAC) and the River Tweed SSSI (Site of Special Scientific Interest).

No significant construction, operational, decommissioning or cumulative effects are predicted as a result of the Development.

As no significant effects are predicted upon IEFs as a result of the Development, no specific mitigation is required in addition to the embedded mitigation to be implemented (such as presence of an ECoW, turbine set-back distances from watercourses and plantation edge).

Residual effects on IEFs are therefore assessed to be at worst, low, and **not significant**.

7.1 SEI Update

The SEI Layout has resulted in no change to the results of the assessment on ecology and the conclusions of the EIA Report remain extant which concludes effects to ecology are **not significant**.

Additional mitigation has been proposed, in line with a consultation response from NatureScot. Blades will be stopped from idling during periods when bats are likely to be active (i.e. April to October inclusive, from 30 minutes prior to sunset to 30 minutes after sunrise), which is further detailed in the latest bat guidance⁷.

⁶ CIEEM. (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. [Online]. Available at: <https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-Sept-2019.pdf> [Accessed 07/07/2022]

⁷ NatureScot, Natural England, Natural Resources Wales, Renewable UK, ScottishPower Renewables, Ecotricity Ltd, the University of Exeter and the Bat Conservation Trust (2019): Bats and Onshore Wind Turbines: Survey, Assessment and Mitigation. Version: August 2021.

8 ORNITHOLOGY

Chapter 8 of the EIA Report evaluates the effects of the Development on Ornithological Receptors.

Baseline ornithology Surveys were completed between March 2019 and February 2020 (inclusive) in order to update the historical 2011/12 surveys undertaken for the Consented Scheme. The survey programme comprised the following: year-round Flight Activity Surveys, Foraging Goose Surveys, Black Grouse Surveys, Breeding Raptor Surveys and a Moorland Breeding Bird Survey. The results of these surveys, together with an ornithology Desk Study, were used to identify those bird species and designated sites that would potentially be affected by the Development.

Two statutory designated sites of international ornithological importance were identified within 20 km of the Site: Westwater Special Protection Area (SPA), Ramsar site and SSSI, which is designated for non-breeding pink-footed goose and its non-breeding waterfowl assemblage; and Gladhouse Reservoir SPA, which is also designated for non-breeding pink-footed goose. The results of the 2019/20 surveys showed there was little to no pink-footed goose flight activity over the Site and pink-footed geese did not forage near to the Site. Therefore, potential effects on these statutory sites were scoped out of the assessment. One nationally important ornithologically designated site (Moorfoot Hills SSSI) lies within 10 km of the Site, however, as it lies out with the core foraging range for its notified species it was also scoped out of the assessment.

Low to moderate levels of flight activity by a total of nine target species were recorded during the update 2019/20 baseline Flight Activity Surveys. Of these, only five (pink-footed goose, greylag goose, goshawk, osprey and curlew) are considered by NatureScot as priority species when assessing wind farms developments. Curlew had the highest flight activity with 22 flights recorded. All other priority species had less than 10 flights recorded.

No black grouse were recorded during any of the surveys. Goshawk and osprey were the only target raptor species recorded during Breeding Raptor Surveys. Goshawk were considered to have a single breeding territory within the Site and osprey were not considered to be breeding within the Site or wider survey area. In addition, four wader species (lapwing, curlew, woodcock and snipe) were breeding in low numbers (1-2 territories of each species) within 500 m of the Site during 2019/20. The only other notable species recorded was crossbill, which was considered to be breeding in low numbers.

Based on these results, two bird species were identified as having the potential to be affected by the Development: breeding goshawk and breeding crossbill. A detailed assessment of potential effects on these species during all phases of the Development (construction, operation and decommissioning) was completed. This included potential effects due to habitat loss, disturbance and collision risk. The combined effects of the Development together with other developments in the wider area were also considered.

A Breeding Bird Protection Plan (BBPP) will be produced to ensure that all breeding birds (not only the two species identified above) are protected during construction and decommissioning of the Development as well as during any major works required during the operational phase. Following full implementation of the BBPP, effects of the Development on bird species will be of low to negligible magnitude and **not significant**.

8.1 SEI Update

The SEI Layout has resulted in no change to the results of the assessment on ornithology and the conclusions of the EIA Report remain extant which concludes effects to ornithology are **not significant**.

9 GEOLOGY, GROUND CONDITIONS, AND PEAT

Chapter 9 of the EIA Report evaluates the effects of the Development arising from the construction, operation, and decommissioning phases on the Geology, Ground Conditions and Peat resource.

The assessment for the Development was based on a desk study, site surveys, and consultation with the SEPA. Embedded design mitigation measures to reduce effects upon peat consisted of maximising use of existing access tracks, avoiding sensitive environmental constraints including any blanket bog/peatlands and avoiding deep peat (>1.0 m).

Peat depth surveys were undertaken across the Site, through which it was established that the majority of the Site was not underlain with peat. Isolated, and limited, pockets of peat and deep peat were identified across the Site with the average depths across the Site of 0.26 m.

As such, one of the key design objectives was to ensure that no turbines are located in peat greater than 0.5 m; and no new Development infrastructure was located in peat greater than 1.0 m. An outline peat management plan assessed the excavation and re-use potential of any excavated peat, with all excavated soils being re-used on site, while the assessment also analysed the risk of peat slide, with the entire Site ranked in either negligible or low peat slide risk areas.

No significant effects were identified prior to the implementation of good practice mitigation measures; therefore, residual effects from the Development on Geology, Ground Conditions and Peat are assessed to be **not significant**.

9.1 SEI Update

Additional peat probing was undertaken at the revised T8 location, and the additional TCC location. Both locations displayed shallow peat depths with the SEI T8 location showing 100% of peat at a depth of <0.50 m, shallower than the previous T8 location, as assessed within the EIA Report.

Overall, the SEI Layout would result in a slight reduction in the impact of the Development on Geology, Soils and Peat. No additional mitigation was proposed as part of the SEI Report. The effects on Geology, Ground Conditions and Peat associated with the revised Development are assessed to be **not significant**.

10 HYDROLOGY AND HYDROGEOLOGY

Chapter 10 evaluates the potential effects of the Development on the hydrological resources.

All turbine infrastructure associated with the Development is located within Lyne Water and Eddleston Water catchments. All turbine infrastructure is located out with areas identified as medium to high risk of flooding from all sources.

The Development does not lie within a designated Drinking Water Protected Area (DWPA).

Consultation with the Scottish Borders Council confirmed that there are 64 private water supplies (PWS) within 3 km of the Site. An additional five private water supply sources as identified in a previous assessment and a further five private water supplies and sources identified during the mail shot resident consultation process, conducted in 2020. A Private Water Supply Risk Assessment is appended to Chapter 10 and identifies the risk to specific supplies, along with outlining mitigation where necessary.

Two statutory designations are hydrologically connected to the Development; the River Tweed SAC (onsite) and the River Tweed SSSI approximately 5 km downstream and to the south.

Potential GWDTE communities identified through habitat surveys were assessed from a hydrological perspective to be not groundwater dependent (ombrotrophic).

Peat deposits were generally shallow within the Site. More detail on the peat deposits within the Site is provided in Section 9: Geology, Ground Conditions and Peat.

Embedded good practice construction methods provided in the outline Water and Construction Environmental Management Plan (WCEMP) and a 50 m buffer of surface watercourses, where possible, along with specific mitigation for PWS, will limit the potential for significant effects on the hydrological environment.

All effects on the hydrology and hydrogeology assets within and surrounding the Site have been assessed as negligible or minor, following mitigation, and are **not significant** in terms of the EIA Regulations.

10.1 SEI Update

The SEI provided an updated Private Water Supply Risk Assessment which included details of site investigation works that were carried out since the EIA Report was submitted. The site investigation has identified that T3 may encounter seasonally high groundwater and may encroach the groundwater table during the winter season (wetter months) however, as a result of the proposed mitigation, it will not have a significant effect on water quality or quantity of private water supplies.

Additional mitigation is proposed within the SEI Report in relation to the PWS at Stewarton. This outlines that the location of T3, including any cranepad or hardstanding areas, should not be micro-sited in any closer proximity to the PWS at Stewarton, nor topographically higher than its existing location in the SEI Layout.

The SEI Report reviews construction, operational and decommissioning effects and overall the SEI Report concludes that the potential effects on hydrology and hydrogeology are **not significant**. This is the same as the EIA Report.

11 NOISE

An assessment of the effects of noise due to the Development has been undertaken.

During construction, noise may result from the use of plant and machinery to carry out construction activities. However, due to the substantial separation distance between the Development and residential dwellings no significant effects are anticipated. Notwithstanding this, best practice measures will be adopted to manage noise emissions during construction, including restrictions on working hours. It is anticipated that the planning conditions related to construction noise for the Consented Scheme will be retained, and applied to any consent for the Development.

During operation, wind turbines can generate noise from the machinery housed within the turbine and from the movement of blades through the air. Modern turbines are designed to minimise noise and planning conditions are used to ensure compliance with specified noise limits. The assessment has been undertaken in accordance with the recommendations of ETSU-R-97, the method of assessing wind turbine noise recommended by Government guidance, and following the current best practice methods described in the Good Practice Guidance (GPG)⁸, as endorsed by the Scottish Government. It has been shown that noise due to the Development would comply with the requirements of ETSU R-97 at all receptor locations, and is therefore **not significant**.

Furthermore, it has been found that the predicted noise levels due to the operation of the Development are lower than those presented in the 2012 Environmental Statement for the Consented Scheme at all assessed receptors and wind speeds. In addition, noise levels are also lower than those presented at the 2015 Public Local Inquiry (PLI) for the Consented Scheme at the large majority of receptors and wind speeds. The operational noise limits considered and consented as part of the 2015 PLI remain appropriate, and it is anticipated that the respective planning condition will be retained, and applied to any consent for the Development.

The Development includes a battery energy storage system (BESS), which will comprise of eight battery containerised modules, forming four units in total. The primary noise sources will be the air conditioning units used to regulate the temperature of the storage system, meaning the BESS will emit relatively low levels of noise. Given this, coupled with the substantial (approximately 1.7 km) separation distance between the BESS and the closest noise-sensitive receptor, no significant effects are anticipated.

Noise produced during decommissioning of the Development is likely to be of a similar nature to that during construction, although the duration of decommissioning will be shorter than that of construction. Any legislation, guidance or best practice relevant at the time of decommissioning would be complied with, and no significant noise impacts are expected to arise.

11.1 SEI Update

The SEI Layout has resulted in no change to the results of the assessment on noise and the conclusions of the EIA Report remain extant which concludes effects to noise are **not significant**.

⁸ A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind turbine Noise, IOA, 2013.

12 ACCESS, TRAFFIC AND TRANSPORTATION

Chapter 12 of the EIA Report identifies the potential effects of changes to road traffic expected as a result of the Development.

Most traffic generated by the Development is associated with the construction phase which is anticipated to last up to 18 months. The main approach considered in this assessment assumes that wind turbine components will be transported as abnormal loads from Grangemouth Port, and that the potential access corridor for the study area can be defined as:

- A904;
- M9;
- M8;
- A720;
- A7
- B63692;
- A6094;
- A703
- D17
- D18; and
- Site Access

Baseline traffic flow information was obtained from data published by the Department of Transport (DfT) located on the construction traffic route. Traffic growth has been applied to the base traffic flow by applying traffic growth factors from the National Trip End Model (NTEM) forecasts using the Trip End Model Presentation Program (TEMPO).

It is assumed that most construction traffic will approach the Site from the north via the main approach corridor, as detailed above. The main potential transportation impacts would be associated with the movement of abnormal loads, heavy goods vehicles (HGVs), light goods vehicles (LGVs), and cars to and from the Site during the construction phase.

It is estimated that a total up to 54,864 vehicle movements would be associated with the construction phase of the Development, as a worst case. This figure includes 9,360 HGV and abnormal load delivery movements and 45,504 light vehicle (car and van) movements.

Over the construction period, the total daily vehicle movement numbers peak during month six where a total of 3,973 vehicles movements are predicted. This is principally due to the deliveries of concrete and stone for the access tracks, crane hardstanding's and turbine foundations.

The increase in overall traffic flow and HGV flow was identified to have one potential significant effect on one sensitive receptor, pedestrian amenity, at a number of locations along the access route. In order to mitigate the effect on pedestrian amenity, mitigation measures will be adopted in the Traffic Management Plan as follows:

- As far as reasonably possible, deliveries should be scheduled outside of church service times;
- Drivers of all delivery vehicles to be made aware during induction of the presence of schools, hospital and other amenities within these settlements;
- Delivery times will be scheduled to ensure that deliveries do not arrive in a convoy;
- Timing of the deliveries will be outlined within the Construction Traffic Management Plan to ensure construction vehicles avoid potentially congested networks at peak hours; and
- If possible, onsite batching should be considered to reduce the maximum monthly anticipated vehicle movement of concrete deliveries during turbine foundation

construction. The ability to accommodate batching onsite would be confirmed following post-consent site investigations; and

- Communications with local communities should be undertaken for planned activities such as turbine deliveries and concrete delivery days (if onsite batching is not possible).

With the implementation of the above measure the residual effect on pedestrian amenity is **not significant** in terms of the EIA Regulations. The Traffic Management Plan will be developed in agreement with the Scottish Borders Council and Transport Scotland detailing the exact measures to be implemented during construction of the Development.

During operation traffic generation would be minimal and within the residual capacity of the road network and no significant effects were identified.

Prior to decommissioning of the Development, a traffic assessment would be undertaken with the relevant consultees to agree the mitigation implemented via Decommissioning Traffic Management Plan.

No developments, which may be implemented simultaneously with the Development, have been identified and as such no further consideration is given to cumulative effects.

12.1 SEI Update

Traffic movements were reassessed as part of the SEI Report which concluded a marginal increase in overall total number of traffic movements throughout the construction of the Development as a result of the marginal increase in the amount of track and additional TCC now required within the SEI Layout. However, no change to the estimated vehicle movements during the peak months of construction are anticipated. Therefore, no change to the effects detailed in the EIA Report would occur and effects on traffic and transport remain **not significant**.

13 FORESTRY

The Development lies within an existing commercial forestry plantation, Cloich Forest, actively managed by the Forestry and Land Scotland (FLS). Cloich Forest represents an extensive forestry block extending to a total combined area of approximately 1,080 hectares (ha). The crops are comprised largely of commercial conifers with areas of mixed broadleaves and open ground.

The forest within the Site is covered by an approved Land Management Plan (LMP) dating from 30th October 2017. The LMP documents the proposed felling and restocking to be implemented within the forests over the next 10-year period.

Construction of the permanent infrastructure required for the Development would require the removal of some areas of trees from the Site and for these areas to be subsequently maintained free of trees to accommodate equipment and ensure access for maintenance during the lifetime of the Development. This area would be replaced by an appropriately designed new compensatory planting scheme on a substitute site. The location of that substitute site would be subject to detailed agreement with Scottish Forestry in advance of construction commencing on the Development.

Tree clearance adjoining the areas to be felled to construct infrastructure will be required due to the predicted instability of these adjoining stands of trees. Areas felled for windblow mitigation would be replanted with a replacement crop.

The significance of the temporary loss of forestry crops from within the Site is viewed as low, given the scale of the woodland resource within the Site and the nature of the forestry asset which is commercial plantation forestry rather than natural or semi-natural woodland. The mitigation work to re-establish the areas of crops removed by both restocking within the Site and new supplemental compensatory planting outwith the Site, will ensure the necessary areas of forestry crops are maintained.

13.1 SEI Update

The SEI Layout results in a slight increase in required management and infrastructure felling to accommodate the revised position of T8 and the additional TCC, however the overall significance of the Development on the existing forestry crops is still considered to be negligible and **not significant**, as per the result of the EIA Report.

14 AVIATION AND RADAR

Chapter 14 of the EIA Report evaluates the effects of the Development on Aviation and Radar.

Operational wind turbines have the potential to affect the safe operation of aviation interests, including airfields, radars, meteorological radars and military low flying exercises. The general approach to wind farm development is to avoid adverse effects on aviation infrastructure where possible, and to find appropriate technical mitigation solutions where this cannot be achieved.

The potential effects of the Development on aviation activity has been assessed technically and operationally. Through Scoping, consultation has been undertaken with the relevant stakeholders, including the MoD, Edinburgh Airport, Glasgow Prestwick Airport (GPA) and Highlands and Islands Airports Ltd (HIAL). Both GPA and HIAL had no objections to the Development; Edinburgh Airport confirmed that as every turbine is well screened by terrain, there will be no effect on the facilities or operations at the airport. Following submission of the EIA Application Edinburgh Airport objected subject to delivery of an Instrument Flight Procedure (IFP) Assessment. Edinburgh Airport have completed an initial IFP Assessment and there are ongoing discussions to resolve a potential issue with T8 that is likely to relate to an inaccuracy within the terrain data used. If an IFP Scheme is required then suitable mitigation will be designed and approved with Edinburgh Airport, the Civil Aviation Authority and NATS. There are no unlicensed aerodromes within or close to consultation distance. The closest shown on aviation charts is Kirknewton, over 18 km to the north of the Development, therefore, consultation was not required.

There are no MOD airfields in the region, however, there is an ATC facility at RAF Spadeadam. Radar modelling was undertaken against the two main radars for Spadeadam located at Deadwater Fell and Berryhill; in the case of Berryhill there is no radar line of sight below 500 m across the Development. The results show that all of the turbines are in radar line of sight of the Spadeadam Deadwater Fell radar and will create an area of clutter on the radar displays at the unit; however, discussions with the MOD have enabled them to conclude that they will have no objection due to the fact that the turbines are in airspace sufficiently separated from the Spadeadam Area of Interest.

It is proposed that turbines are fitted with infrared lighting scheme, as requested by the MoD through consultation. Subject to the agreement and installation of a suitable lighting scheme in accordance with MoD requirements, significant effects are not predicted for any MoD infrastructure and civil aviation infrastructure.

An assessment has been made of the potential for significant effects of the Development on the aviation resource. This assessment did not identify potential significant effects on any receptors during the construction, operation and decommissioning of the Development.

The Development Site lies within the Eskdalemuir Consultation Zone and is subject to MoD approval for seismic budget. Whilst the size of the candidate turbine has increased since the allocation of this budget it is possible to build out the Development within the current seismic budget allocated by the MoD for the Consented Scheme. The Development is situated approximately 42 km from the Array, and as such has a minimal seismic signature. Ongoing work at wind farms in the vicinity of Eskdalemuir also has the capability to increase the available budget for the entire Eskdalemuir consultation Zone and potentially identify additional seismic budget at the Development.

14.1 SEI Update

The SEI Layout has resulted in no change to the results of the assessment on aviation and radar and the conclusions of the EIA Report remain extant which concludes effects to aviation and radar are **not significant**.

15 SOCIO-ECONOMICS, LAND USE, TOURISM AND RECREATION

Chapter 15 of the EIA Report evaluates the effects of the Development on Socio-Economics, Land Use, Tourism and Recreation.

15.1 Socio-Economics

The Development will result in contract opportunities for local and regional contractors both for construction activities themselves and throughout the supply chain. It is estimated that, during the construction phase, the Development will be worth approximately £35.3 m to the UK economy. Of that £35.3 m, £27 m is expected to be spent in Scotland and £9 m is expected to be spent within the local region.

It is anticipated that a temporary workforce averaging up to 75 people will be employed during the 18-month construction period. It is also likely that there will be some local employment generated as an indirect result of the construction of the Development. This could include supply chain spin-offs for local businesses and sub-contracted work relating to the transportation of labour and materials. Local shops, cafes, accommodation providers and hotels often experience an increase in turnover during the construction phase as they have opportunities to provide additional services to the developer and their contractors. There are numerous accommodation providers in the local area, and it is expected that local services will be used by temporary construction contractors.

The construction will bring about short-term, beneficial, direct, indirect and induced effects to the area, through the increase in employment and expenditure on capital costs.

The Development will have both direct and indirect effects on employment during operation. The Development will be regularly maintained by a specialist maintenance team. Employees are likely to include a part-time maintenance engineer (local site operator) and a small number of staff to periodically service the turbines. Induced effects will include local spending by the Applicant and maintenance contractors.

Overall, the operation of the Development will bring long-term, beneficial, direct, indirect and induced effects to the area, through the increase in employment and business opportunities.

The Development will contribute £5,000 per megawatt installed capacity to a community benefit fund. This will result in an annual value of up to £285,000 (based on an estimated capacity of 57 MW). With 30-years operation, this would provide approximately £8.5 million to the fund.

There will therefore be beneficial long-term effects associated with the operation of the Development.

The combined socio-economic effect of the Development in conjunction with other wind farms is unlikely to lead to a fundamental change in socio-economics within the Scottish Borders and therefore, no significant cumulative effects are anticipated.

15.2 Land Use

The Site is comprised of commercial forestry operations, including one active quarry, with some public access tracks, although access to these is limited during periods of active forestry operations.

The total new land take of the Development, consisting of the turbine infrastructure (wind turbine foundations, crane hardstandings, new and upgraded access tracks, substation and control building) equates to approximately 34.8 ha. Following construction and restoration, the footprint of the Development infrastructure on the surface of the ground will be 17.5 ha. This equates to approximately 1.6% of the total land in the Site.

Permanent felling associated with the Development equates approximately 71 ha; the area of forestry permanently removed will be subject to compensatory planting requirements. Where felling is required for mature stands of trees, it is often necessary to remove the whole forest compartment as 'wind-firm' forestry edges are broken, otherwise leaving the compartment liable to significant wind-blow. Approximately 132.06 ha of forestry of this nature will be felled, much of which is already scheduled to be felled in the early years of the Development. Of this 132.06 ha, 123.85 ha will be replanted on the Site following construction of the Development; with approximately 8.21 ha remaining as integrated open ground within the forest in line with UK Forestry Standard.

During operation, the remaining areas of the Site, not used for the Development and associated felling, will continue to host commercial forestry operations and quarry operations managed by FLS, as agreed with the Applicant. The Development infrastructure, including turbines, are located at a distance which would not restrict the ability to work the on-site quarries.

The construction phase is considered to have a negligible effect on land use within the Site, which is **not significant** in terms of the EIA Regulations. The operational phase is considered to present a long-term, negligible effect, which is **not significant** in terms of the EIA Regulations.

15.3 Tourism and Recreation

The Site itself is not considered very sensitive for tourism and recreation; however, the neighbouring lands and regional area is sensitive for tourism and recreation, with various well-established outdoor attractions within 10 km of the Site (Primary Study Area), including:

- White Meldon;
- Black Meldon;
- The Great Polish Map of Scotland;
- Portmore House & Gardens;
- John Buchan Way;
- Glentress Forest – 7 Stanes Mountain Biking and Facilities; and
- Pentlands Hills Regional Park.

In addition, there are many recreational routes within the Site, and in the surrounding area within 5 km of the Site (Secondary Study Area). These include:

- Cross Borders Drove Road (within the Site);
- Post Road through the Meldons;
- Core Paths;
- Promoted Paths (within the Site); and
- Public Rights of Way (within the Site).

There are a number of settlements near to the Site which offer a range of accommodation; the nearest settlement offering accommodation is Eddleston approximately 3 km east of the nearest indicative turbine (T5). Additionally, Peebles, West Linton & Penicuik are all nearby settlements offering a wide-range of accommodation.

The EIA Report identified that for tourism and recreation receptors identified within the Primary Study Area, construction effects, including increased construction traffic and visual construction effects, were limited to either no effect, or short-term negligible or minor construction effects. For tourism and recreation receptors identified within the Secondary Study Area, construction effects were limited to either no effect, or short-term negligible or minor construction effects, with the exception of the Cross Borders Drove Road which was assessed as receiving a moderate, short-term and significant construction effect due to construction disruption. The Cross Borders Drove Road

significant construction effect is proposed to be mitigated by management measures and an access management plan; after which, the Cross Borders Drove Road is subject to a residual effect which is not significant.

Surveys of the public's attitudes to wind farms provide no clear evidence that the presence of wind farms in an area has a negative impact on local tourism and recreation. Tourists using the local core paths and local tourist attractions may have a particular sensitivity to visual effects; however, access to tourist facilities will be unaffected, and no significant effects as a result of the operation of the Development are predicted.

During operation the Site will be accessible to the public with the exception of temporary exclusions for health and safety reasons such as during maintenance.

15.4 SEI Update

The SEI Layout has resulted in no change to the results of the assessment on socio-economics, land use, tourism and recreation and the conclusions of the EIA Report remain extant which concludes effects to socio-economics, land use, tourism and recreation are **not significant**.

16 CLIMATE CHANGE AND CARBON BALANCE

Chapter 16 of the EIA Report evaluates the effects of the Development on Climate Change and Carbon Balance.

A carbon balance assessment for the Development was generated using the methodology and carbon calculator provided in Calculating Carbon Savings from Wind Farms on Scottish Peatlands – A New Approach as recommended by the Scottish Government. Based on this guidance, the Development has an expected payback time between approximately 1 and 4 years. The CO₂ 'payback time' is the period of wind farm operation required until there is a net saving of CO₂.

The predicted future baseline conditions are highly unlikely to affect the operation of the Development. Given the climate's very high sensitivity, the Development in isolation will influence climate change, and the Development will have a positive effect on carbon savings and a **significant** positive effect, when considered cumulatively, with UK-wide renewable energy deployment.

16.1 SEI Update

The conclusions of the EIA Report remain unchanged in regard to climate change and carbon balance which concludes that cumulative effects are overall positive and **significant**.

17 OTHER ISSUES

Chapter 17 of the EIA Report evaluates the effects of the Development on Other Issues, including:

- Shadow Flicker;
- Telecommunications & Utilities;
- Human Health & Safety (Including major accidents and Disasters); and
- Waste.

17.1 Shadow Flicker

The assessment of shadow flicker is a desk-based assessment, and as such, no on-site survey specific to shadow flicker has been undertaken, with the exception of more general site visits conducted by the Applicant and other Arcus technical teams verifying the location and nature of surrounding properties.

In line with the Scottish Borders Council's scoping opinion and Supplementary Guidance for Renewable Energy, the effects of shadow flicker have been assessed within a distance of 2 km around each turbine location.

It has been calculated that theoretical shadow flicker is likely to occur at eight of the twelve assessed properties identified. Cloich Farm Peebles is expected to receive the highest levels of shadow flicker effects, calculated 10.9 likely hours per annum⁹. This figure, alongside all other properties, is well below the guidance threshold of 30 hours per year. As such, shadow flicker due to the Development is therefore considered not significant. Shadow flicker effects upon settlements and isolated properties beyond the 2 km zone are likely to be negligible.

The nearest wind farm is Bowbeat Wind Farm, a 24-turbine development located 8.6 km east of the Development. As this distance exceeds the Council's 2 km distance for likely shadow flicker effects, cumulative shadow flicker effects from Bowbeat Wind Farm have therefore not been considered further.

Shadow flicker effects have been assessed as **not significant**; and no mitigation is required.

17.2 Telecommunications & Utilities

Consultation undertaken with the telecommunications consultees has confirmed that there are no fixed communication links operating across proposed turbine locations. Therefore, the Development will not interfere with telecommunications and electromagnetic signals. Effects on television reception are unlikely, and technical solutions are readily available as suitable mitigation measures should unexpected adverse effects arise. Adverse effects on infrastructure such as utilities would be avoided through safe systems of work. Therefore, there are no significant effects predicted upon telecommunications and utilities as a result of the Development.

17.3 Human Health & Safety (Including major accidents and Disasters)

In relation to Health and Safety, due to the location of the Development and Site management through CDM Regulations and any future CEMP, major accidents and disasters are considered negligible and not significant in terms of the EIA Regulations.

17.4 Waste Management

A Site Waste Management Plan (SWMP) will detail how waste streams are to be managed, following the Waste Hierarchy of prevention, reuse, recycle, recover and as a last resort,

⁹ Assumes 33% bright sunshine.

disposal to landfill. The SWMP will be agreed with the Local Planning Authority and implemented prior to construction commencing on Site.

Therefore, waste is scoped out of assessment within the EIA Report.

17.5 SEI Update

The SEI Layout has not resulted in any changes to the conclusion of the EIA Report. The conclusions of the EIA Report remain the same which concluded that **no significant** effects are predicted on shadow flicker, telecommunications and utilities, human health and safety or waste management receptors.

18 SUMMARY

An EIA and SEI for the Development has been carried out in accordance with the regulatory requirements and relevant good practice guidance, which involves the compilation, evaluation and presentation of any potentially significantly environmental effects resulting from the Development.

The design strategy has created a wind farm that represents optimum fit within the technical and environmental parameters of the Site. Throughout this process, an iterative approach has allowed the findings of the public consultation exercises, along with the EIA, to guide the evolution of the Development allowing the design to be modified in order to avoid environment effects where possible.

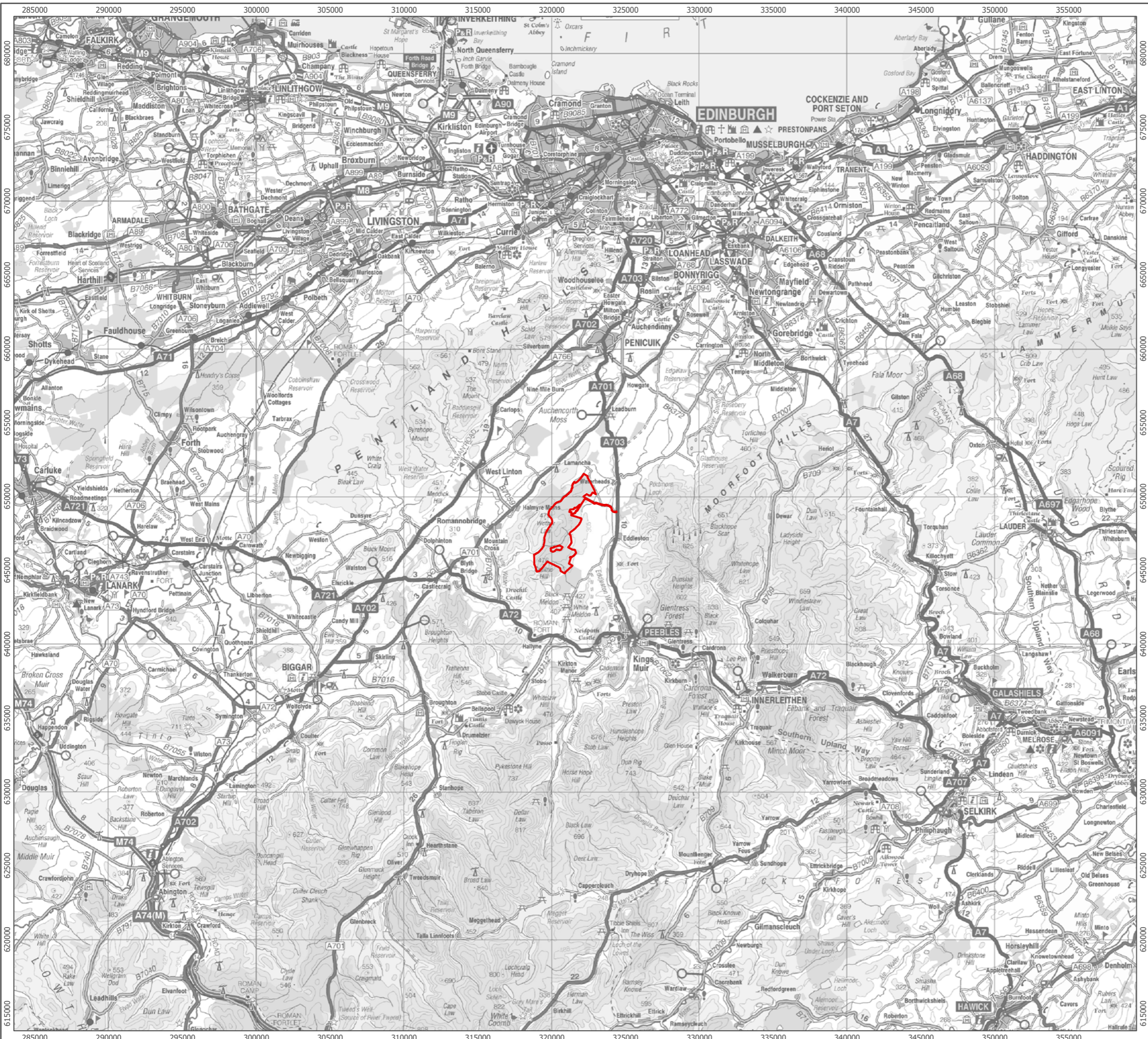
Through embedded design and proposed mitigation, major and significant adverse effects as a result of the construction and operation of the Development have been avoided; however, some significant landscape and visual, and cultural heritage effects will remain. Given the nature of the Development, these effects cannot be avoided in their entirety.

The Development presents an important environmental benefit as a renewable energy generator contributing to Scotland's ambitious renewable energy targets and offsetting fossil fuel energy sources which produce CO₂ and contribute to climate change. In terms of payback periods for the Development, this equates to approximately between 1 and 4 years. Beyond the payback periods, the Development will make a positive net contribution to CO₂ emissions savings for the remainder of its operational period.

The renewable industry is an important economic asset to the UK and Scotland, and supports a substantial and growing number of employment opportunities. The Development will further contribute to the positive effects of renewable energy, and associated skills base within the UK and Scotland, and the spend and employment is positive for the local area.

Overall, this EIA and SEI shows that, given the iterative design process, and with the committed good practice measures and proposed further site-specific mitigation in place, most significant potential environmental effects associated with the construction and operation of the Development can be avoided or minimised.

NTS APPENDIX A: FIGURES



Site Boundary

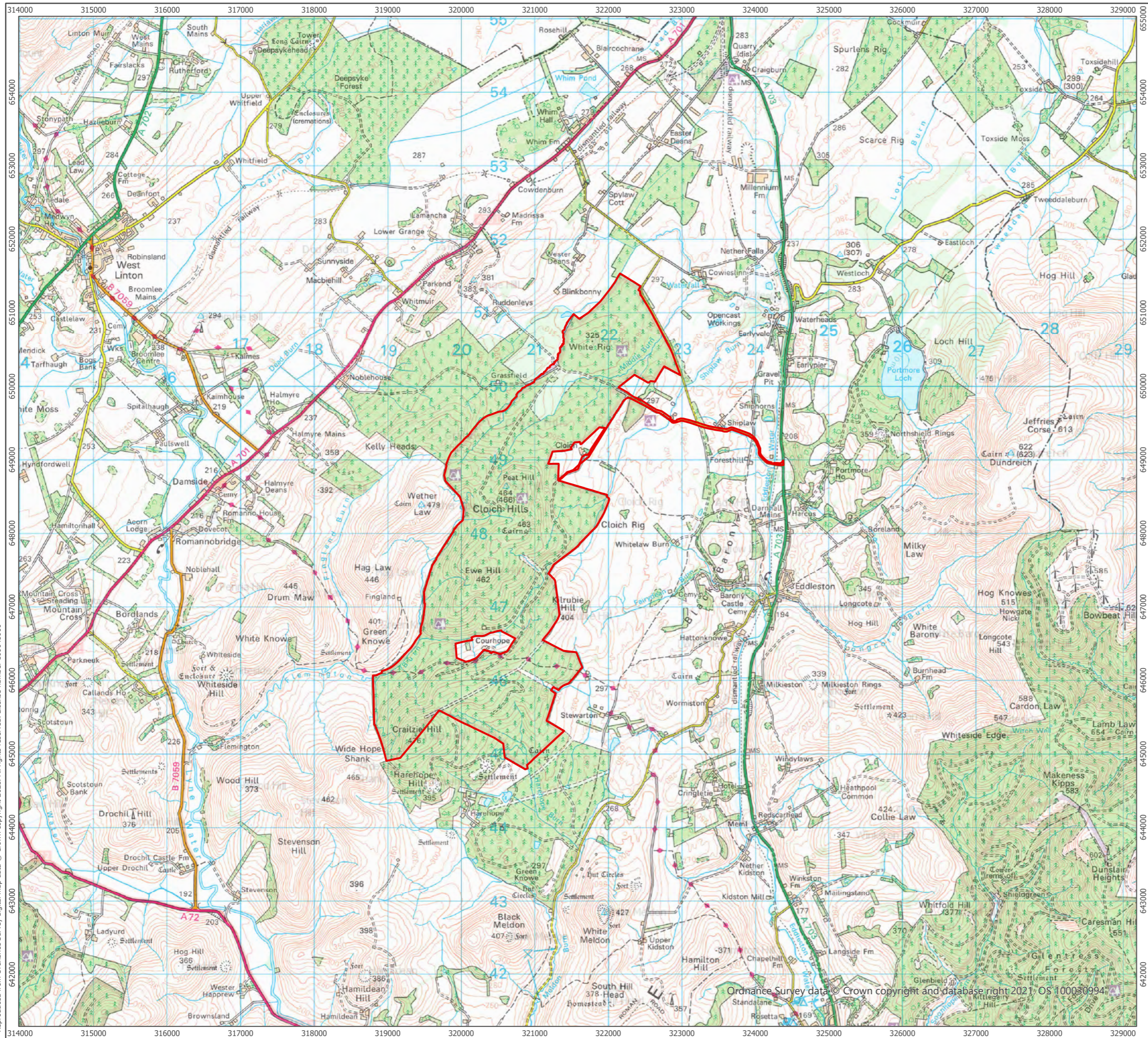
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 0 5 10 km

Produced By: LS	Ref: 3439-REP-108
Checked By: SC	Date: 21/05/2021

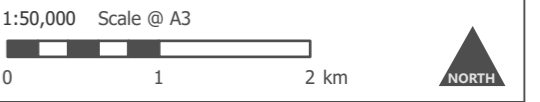
Site Location
 Figure 1

Cloich Forest Wind Farm
 Non-Technical Summary

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Site Boundary



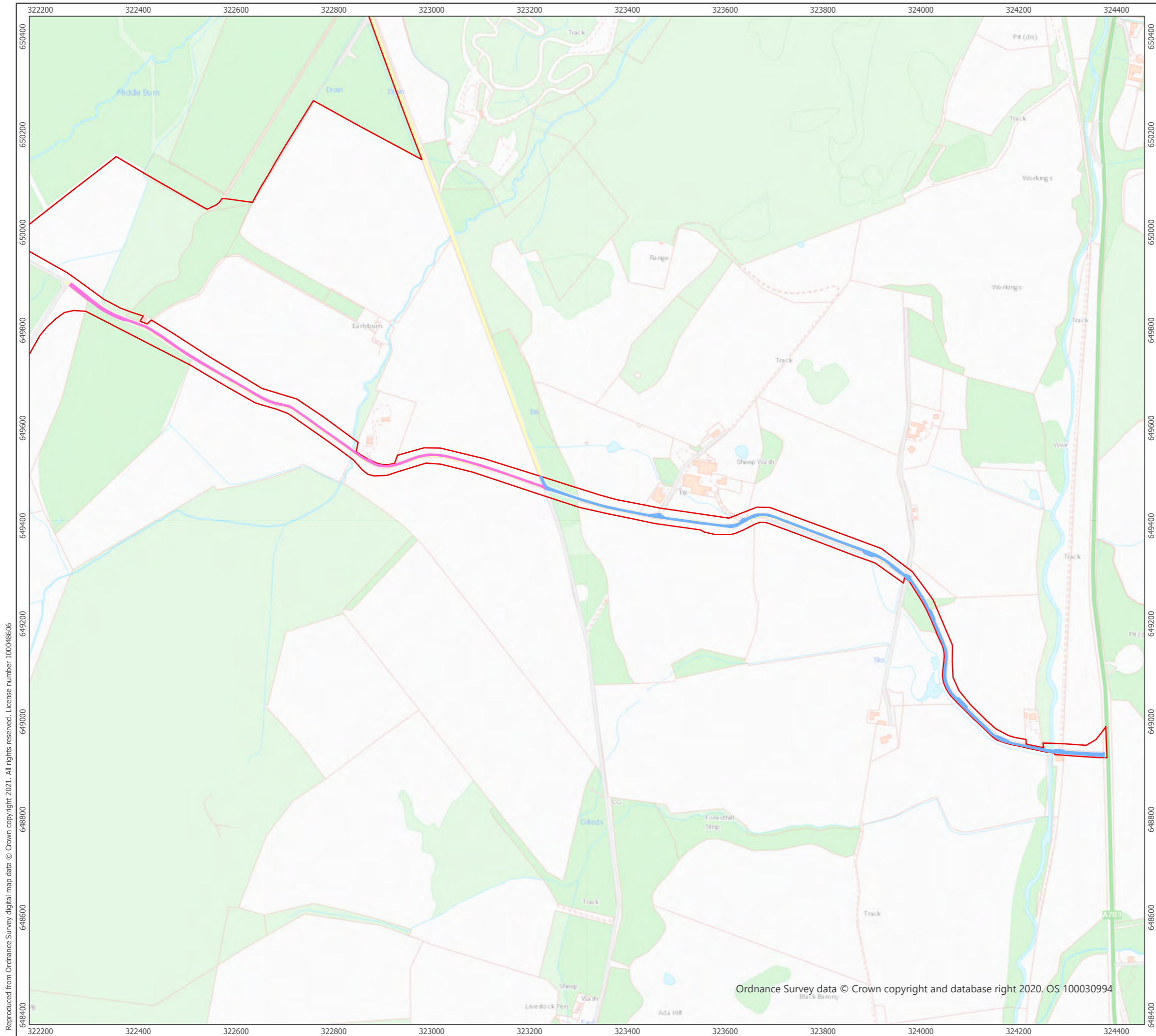
Produced By: LS	Ref: 3439-REP-109
Checked By: SC	Date: 21/05/2021

Site Boundary
Figure 2

**Cloich Forest Wind Farm
Non-Technical Summary**

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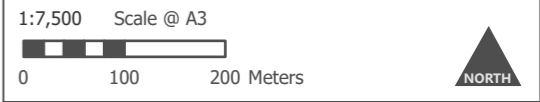


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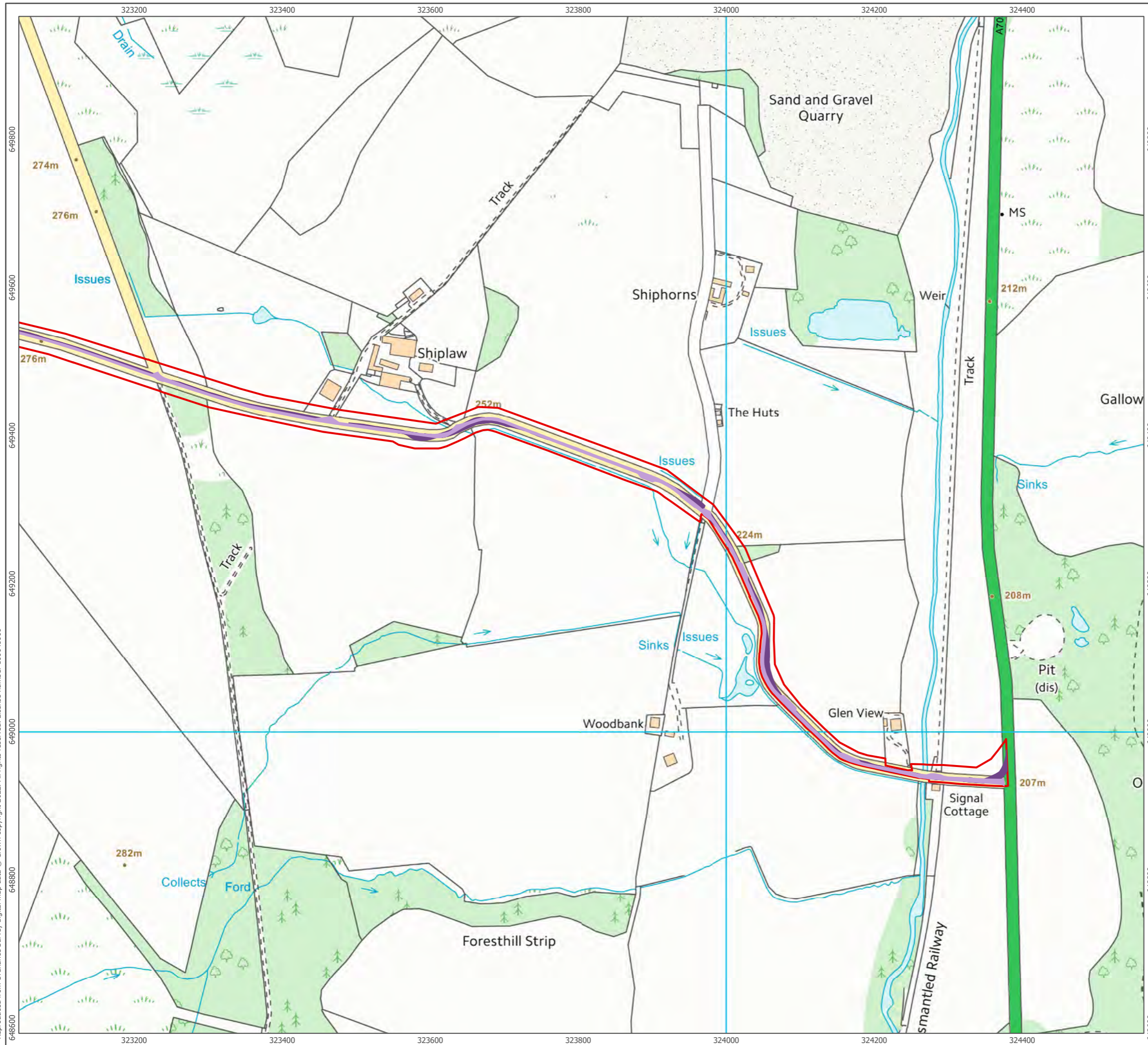
- Site Boundary
- Public Road
- D17 Whim - Shiplaw
- D18 Cloich



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D17 and D18 Public Roads
Figure 3

Cloich Forest Wind Farm
Non-Technical Summary



- Site Boundary
- Site Infrastructure
 - Public Road
 - Public Road Widening Works

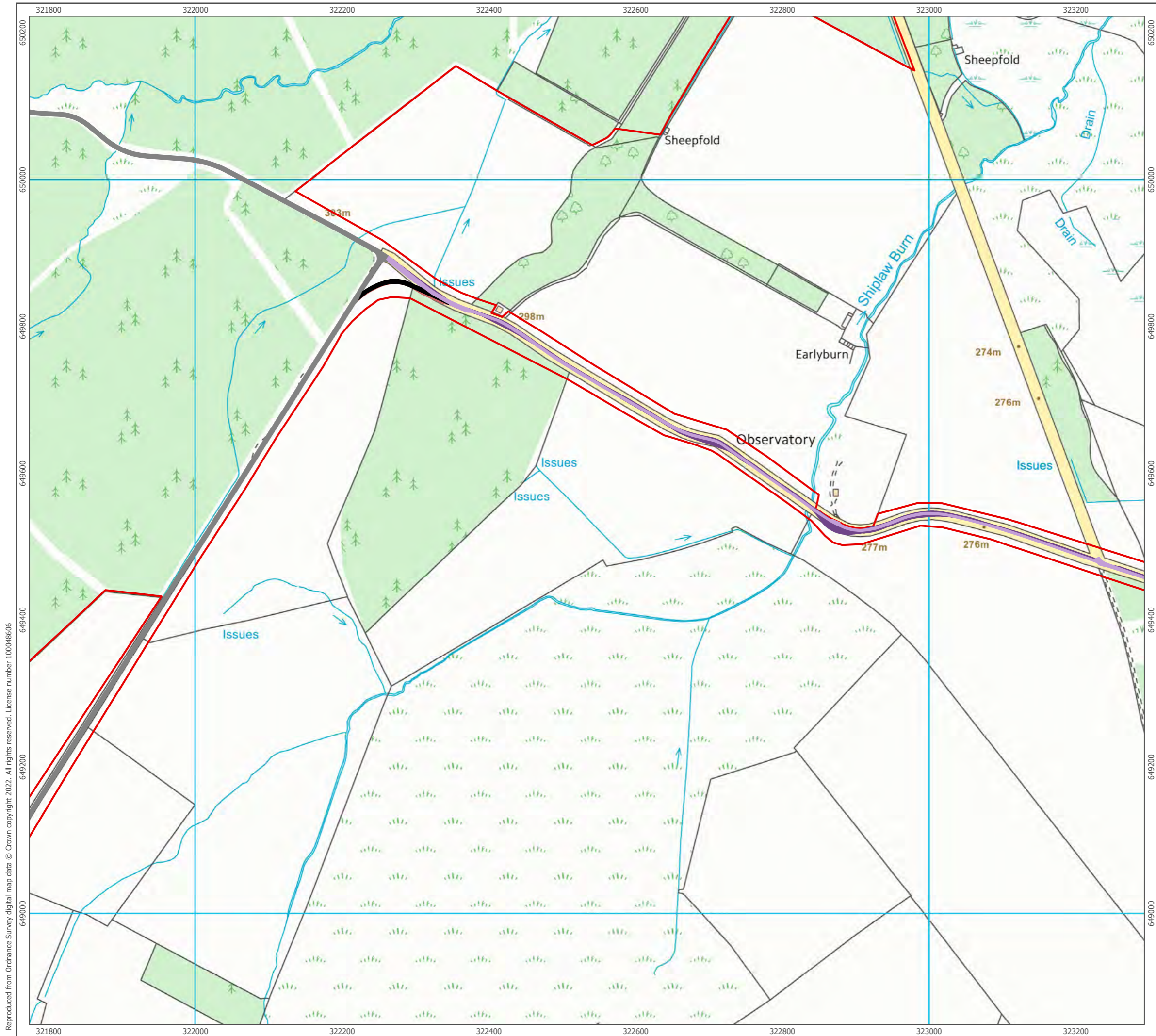


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**Detailed Development SEI
 Site Layout
 Figure 4a**

**Cloich Forest Wind Farm
 Non-Technical Summary**

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- Site Boundary
- Site Infrastructure**
- New Access Track
- Existing Track (Subject to Localised Upgrades)
- Public Road
- Public Road Widening Works
- Earthworks

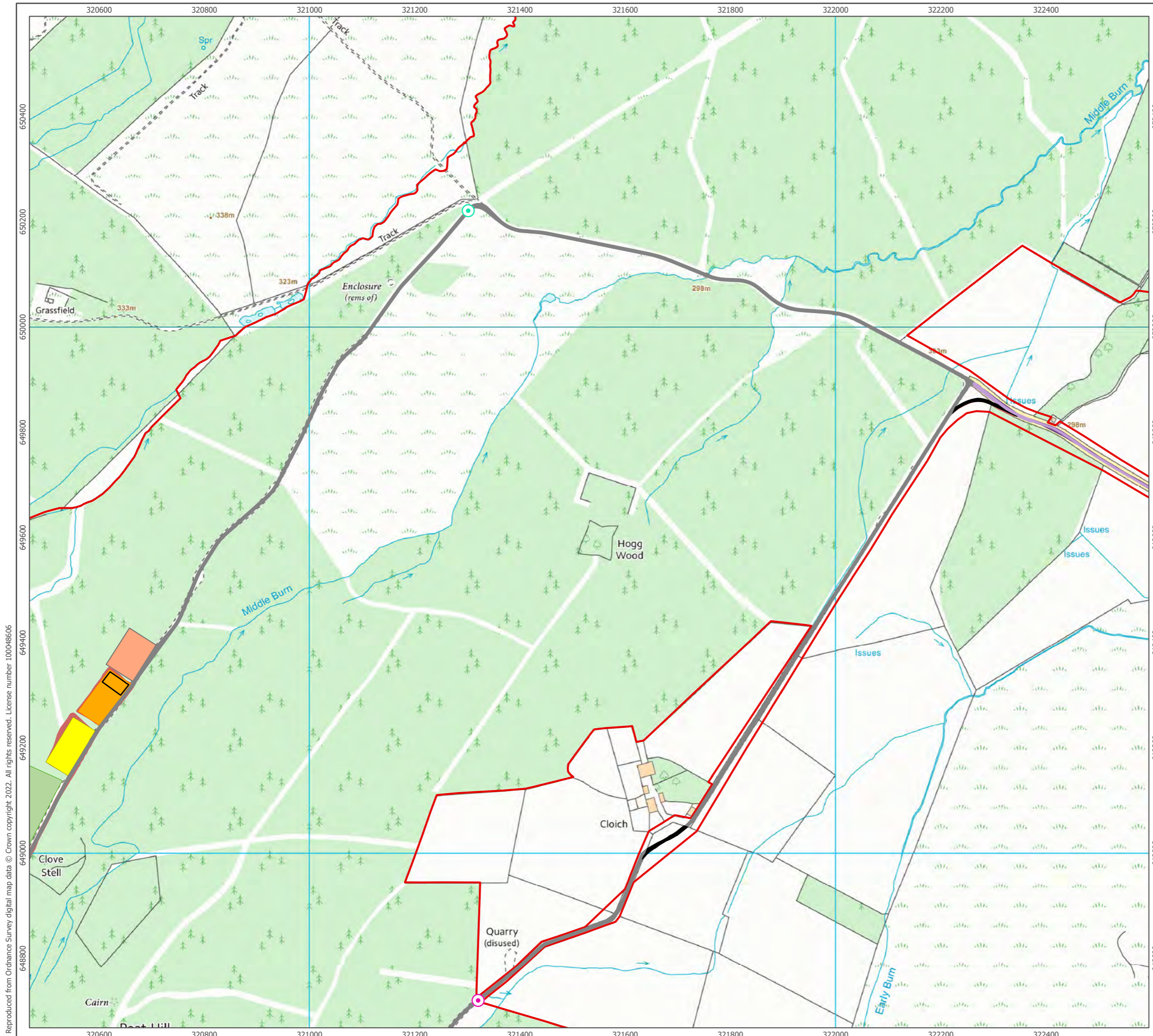


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**Detailed Development SEI
Site Layout
Figure 4b**

**Cloich Forest Wind Farm
Non-Technical Summary**

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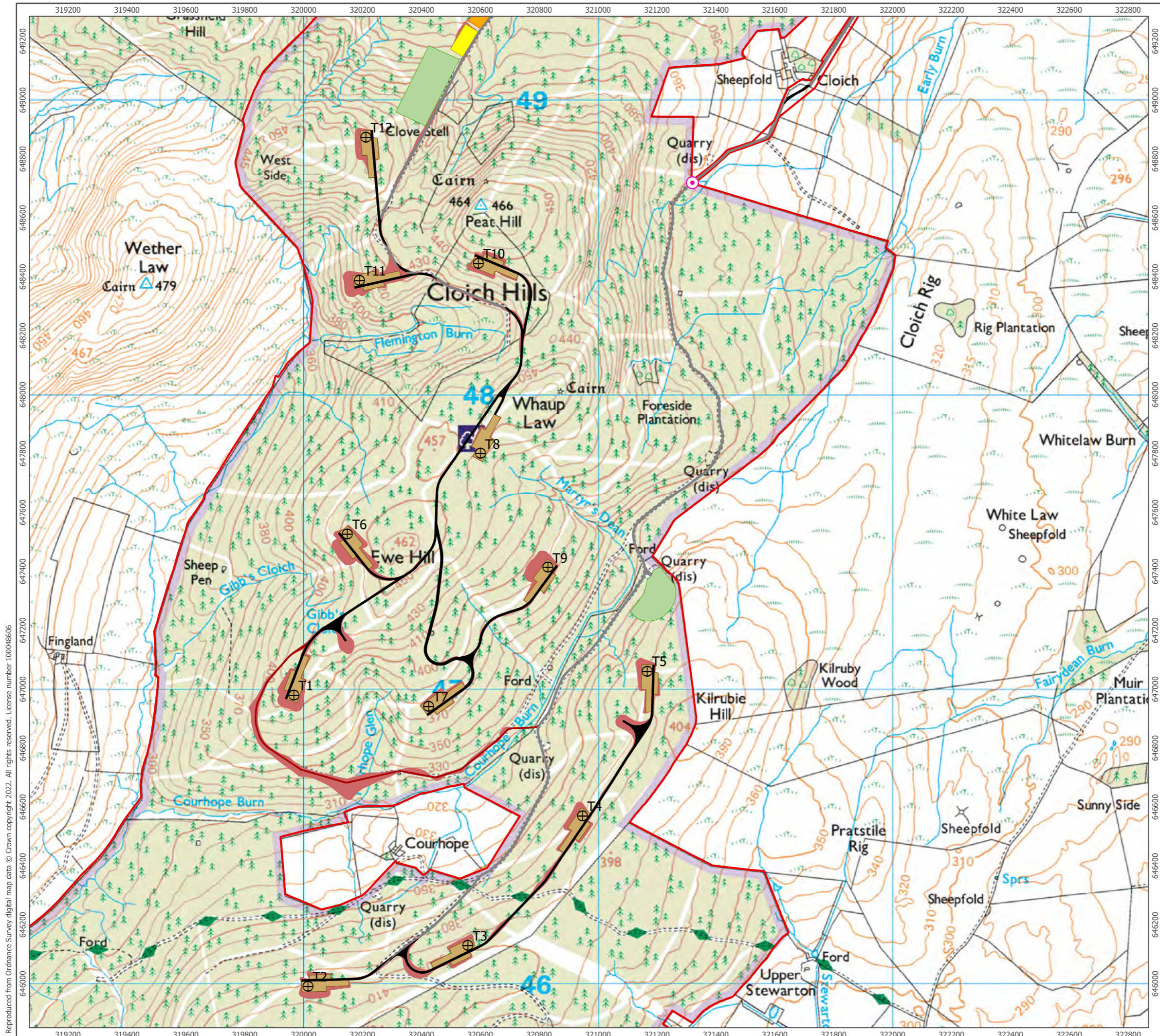
- Site Boundary
- Secondary Entrance
- Site Entrance
- Site Infrastructure**
- Borrow Pit
- Temporary Construction Compound
- BESS Location
- Substation Compound
- New Access Track
- Existing Track (Subject to Localised Upgrades)
- Public Road
- Public Road Widening Works
- Earthworks
- SPT Temporary Construction Compound



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**Detailed Development SEI
 Site Layout
 Figure 4c**

**Cloich Forest Wind Farm
 Non-Technical Summary**



- Site Boundary
- ⊕ Proposed Turbine Location
- ⊙ Secondary Entrance
- Site Infrastructure
 - Borrow Pit
 - Temporary Construction Compound
 - Crane Hardstanding
 - Substation Compound
 - New Access Track (Construction Traffic Only)
 - New Access Track
 - Existing Track (Subject to Localised Upgrades)
 - Earthworks

1:12,500 Scale @ A3
 0 100 200 m
 NORTH

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**Detailed Development SEI
 Site Layout
 Figure 4d**

**Cloich Forest Wind Farm
 Non-Technical Summary**

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