



Dalquhandy 2018 Energy Project Environmental Impact Assessment Report For Section 42 Application

Non-Technical Summary

December 2018



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Glossary

CEMP	Construction Environmental Management Plan
CfD	Contracts for Difference
DEMP	Decommissioning Environmental Management Plan
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
ES	Environmental Statement
FCS	Forestry Commission Scotland
FiT	Feed in Tariff
ha	Hectare
km	Kilometre
m	Metre
NATS	National Air Traffic Services
NMV	Non-Material Variation
NTS	Non-Technical Summary
NVC	National Vegetation Classification
ROC	Renewable Obligation Certificates
SEI	Supplementary Environmental Information
SEPA	Scottish Environment Protection Agency
SLC	South Lanarkshire Council
SNH	Scottish Natural Heritage
TMP	Traffic Management Plan
WoSAS	West of Scotland Archaeology Service

1 Background

- 1.1 This document is a Non-Technical Summary (NTS) of the Dalquhandy 2018 Energy Project EIA Report. It is included as part of the application by Dalquhandy Wind Farm Limited (the Applicant) to South Lanarkshire Council (SLC) under Section 42 of the Town and Country Planning (Scotland) Act 1997 (as amended), to amend the design of the consented Dalquhandy Wind Farm (site location shown in **Figure 1**).
- 1.2 The consented Dalquhandy Wind Farm (ref. CL/12/0042 amended by P/18/0047/V) comprises 15 wind turbine generators with a maximum tip height of 131 m, and associated infrastructure including access tracks, a substation, and temporary construction compounds. It is hereafter referred to as the “Consented Development”.
- 1.3 In 2015, the UK Government removed policy support to onshore wind development. Since then, the financial viability of onshore wind projects in the UK mainland has become much more challenging. Developers must seek to maximise electricity yield through optimising site design, typically requiring consideration of higher capacity turbines with larger rotors and higher hub and tip heights than those which have been installed previously.
- 1.4 The Applicant has therefore reviewed the Consented Development design and is seeking a Section 42 revision to the consent to amend the turbine dimensions, maximising electricity generation while ensuring that environmental effects remain acceptable. Other minor changes to infrastructure and layout of the site are also proposed, as described in section 2.
- 1.5 The application seeks to revise the turbine dimensions to allow turbines up to 149.9 m tip height, with the exception of the four turbines nearest residential properties (turbines T1, T2, T3 and T8 as shown on **Figure 2**), which would be restricted to 131 m tip height.
- 1.6 The development to which the Section 42 application relates is called the Dalquhandy 2018 Energy Project (hereafter referred to as the “Proposed Development”), to avoid any confusion with the Consented Development.

2 The Proposed and Consented Developments

- 2.1 An application for planning consent was registered by South Lanarkshire Council (SLC) on 1st February 2012 (ref. CL/12/0042). Following consideration of the Environmental Statement and submission of Supplementary Environmental Information (SEI), and completion of a legal agreement, planning permission was granted by SLC in July 2018.
- 2.2 In October 2018 a Non-Material Variation (NMV) to the planning permission was granted by SLC (ref. P/18/0047/V) to increase the tip height of turbines from 126.5 m to 131 m.
- 2.3 The Proposed Development which is the subject of the current Section 42 application is described below, noting all proposed changes from the Consented Development design.
- The Proposed Development comprises 15 wind turbine generators with associated access tracks, substation (plus alternative substation location, see below), and temporary construction compounds.
 - The maximum turbine tip height of the Consented Development turbines is 131 m. The Proposed Development would comprise eleven turbines with a maximum tip height of 149.9 m,

and four turbines remaining with a maximum tip height of 131 m. The turbines proposed to be restricted to 131 m tip height are T1, T2, T3 and T8 (see **Figure 2**).

- The Proposed Development location of T3 is 50 m west of the Consented Development T3 location, to avoid recently planted trees. No other changes to turbine locations are proposed.
- There are minor changes to the proposed track layout, including the addition of two new track sections and the removal of two sections. Additionally, the orientations of proposed crane hardstandings at T2, T7 and T8 have been amended to suit the revised track design.
- To provide flexibility with respect to grid connection arrangements, an alternative substation location is also proposed in the west of the site. This is proposed in addition to the original substation location in the east, but only one of these substation options would be selected and constructed.
- Again, to provide additional flexibility, particularly if the western substation location is selected, a temporary construction compound location is proposed in the western site area, in addition to the construction compound locations included in the Consented Development design.
- An increased micro-siting allowance of 100 m is sought for the turbine locations, to allow for localised ground conditions that are likely to have unusually high variability due to the nature of the previous surface mining and restoration activities undertaken.

2.4 **Figure 2** shows the Proposed Development layout with turbine co-ordinates and maximum tip heights noted. **Figure 3** illustrates the differences between the Proposed Development and the Consented Development layout.

3 Environmental Impact Assessment (EIA)

3.1 ITP Energised (ITPE) was appointed by the Applicant to undertake an Environmental Impact Assessment (EIA) of the Proposed Development in accordance with the Town and Country Planning (Scotland) Act 1997 (as amended), and the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 ('the EIA Regulations'). The EIA process is the systematic process of identifying, predicting and evaluating the environmental impacts of a proposed development. The EIA process is reported in this EIA Report, which identifies the methodologies used to assess the environmental effects predicted to result from the construction, operation and decommissioning of the Proposed Development. Where appropriate, it also sets out mitigation measures designed to prevent, reduce and, if possible, offset potential significant adverse environmental impacts. An assessment of residual effects, i.e. those expected to remain following implementation of mitigation measures, is also presented.

4 The EIA Report

4.1 The EIA Report details the results of the EIA described above and comprises four volumes in addition to this NTS, as follows:

- Volume 1 – Main chapters;
- Volume 2 – Figures;
- Volume 3 – Technical appendices; and

- Volume 4 – Landscape and Visual Impact Assessment visualisations.
- 4.2 Copies of the EIA Report will be available for viewing during opening hours at the following locations:
- South Lanarkshire Council Planning and Building Standards HQ Office – Hamilton**
Montrose House
154 Montrose Crescent
Hamilton
ML3 6LB
- Coalburn Miners’ Welfare One Stop Shop**
42 Coalburn Road
Coalburn
ML11 0LH
- 4.3 A copy of the NTS will also be made available on the site web page at <http://brockwellenergy.com/our-projects/onshore-wind/dalquhandy>
- 4.4 The EIA Report will be available to purchase for a cost of £300 for hard copies, or £15 for CD copies, from the Applicant.

5 Representations to the Application

- 5.1 Any representations to the application should be made directly to the SLC Planning Department at:
- Planning and Building Standards**
Montrose House
154 Montrose Crescent
Hamilton
South Lanarkshire
ML3 6LB
Email: planning@southlanarkshire.gov.uk

6 Site Location and Description

- 6.1 The site is located approximately 0.9 km south-west of Coalburn and 12 km from Lanark, South Lanarkshire. The elevation of the site at its highest point is approximately 320 m above ordnance datum, falling to the north east. The site occupies an area of circa. 409 hectares (ha). The site location and site boundary are shown on **Figure 1**.
- 6.2 The site comprises a restored surface coal mine. There are localised undulations on site, and seasonal and permanent water bodies, including one large water body in the final area of mining on site. The Poniel Water, partially diverted by works associated with coal mining operations, flows from west to east across the southern part of the site. The Hagshaw Burn flows into the Poniel Water from the south, towards the south-west corner of the site. At the southern end of the site there are areas of commercial forestry, one area having been recently felled under licence.

7 Description of the Development

7.1 This section provides an overview description of the Proposed Development and how it will be constructed. Further details are provided in Volume 1, Chapter 2 of the EIA Report.

The Proposed Development

7.2 The Proposed Development will comprise up to 15 wind turbines. Eleven turbines will have a maximum height from ground to blade tip, when vertical, of up to 149.9 m. Four turbines (T1, T2, T3 and T8) will remain with the consented tip height of 131 m.

7.3 The Applicant intends to utilise as much of the existing access tracks across the site as possible in order to minimise the extent of new tracks to be constructed.

7.4 The proposed access to T1, T2 and T8 has been amended. This results in the net reduction of approximately 220 m of track length in this part of the site, although a slightly greater proportion would be new track rather than upgraded existing track.

7.5 Due to potentially difficult ground conditions in the southern part of the site, between T14 and T15, an alternative track route to provide access to T14 is proposed. The proposed alternative route comprises a stretch of approximately 500 m of track which was not included in the consented design. However, it should be noted that only one of the two alternative T14 access routes would be ultimately selected and constructed.

7.6 Access tracks will need to cross the Poniel Water via an existing crossing, and the Hagshaw Burn via a new crossing. The new crossing of the Hagshaw Burn would either be between T12 and T15 (as per the Consented Development) or further north-east between T13 and T14 (proposed alternative route).

7.7 The proposed site substation would be located either at the previously consented location in the east of the site, or at the proposed alternative location shown on **Figure 2** at the west of the site.

7.8 Cabling arrangements between turbines will remain as per the Consented Development, with underground cables being located adjacent to access tracks.

7.9 Three temporary construction compounds are proposed, each measuring 150 m x 75 m and comprising a hardcore surface with temporary site welfare facilities, stores and lay down areas.

7.10 Vehicular access to the site is gained from the private access road which extends from the roundabout at Junction 11 of the M74. The site is also accessible for walking, cycling and horse riding via a series of access tracks and paths accessible from various locations around the site boundary.

Forestry

7.11 The approach to the Proposed Development's forestry strategy, as detailed in the 2012 ES, involved clear felling the existing commercial forestry blocks around Turbines 11, 14 and 15 in the south-west of the site, with a substantial area of compensatory planting provided in the north-east of the site.

7.12 The proposed approach was amended, as described in the June 2014 SEI report, in response to consultee comments received from the Forestry Commission Scotland (FCS) and further direct discussions between FCS and the Applicant. Proposals were for felling of woodland blocks with key-hole replanting around turbines and infrastructure located within the woodland areas.

- 7.13 Since then, the forestry block around T11 has been felled under licence. The forestry around T14 and T15 remains in place and will require felling to construct the Proposed Development. The Proposed Development forestry strategy involves key-hole replanting around turbines and infrastructure. Compensatory planting of at least the equivalent area felled and not replanted will be undertaken, or alternative strategies will be progressed involving planting of slow growth tree species or short rotation forest management within the key-hole areas. The forestry management strategy will be confirmed in consultation with FCS and SLC.
- 7.14 It is suggested that planning conditions can cover the requirements of the forestry management strategy required following removal of trees, to allow construction activities to commence at the Proposed Development.

Construction

- 7.15 The construction period for the Proposed Development is anticipated to be approximately 24 months, including forestry felling works and a period for reinstatement of temporary working areas.
- 7.16 Normal construction working hours will be Monday to Friday 07:00 to 19:00, and Saturday 07:00 to 13:00. With the exception of emergency works and dust suppression, no works will be carried out on Sundays or national bank holidays.
- 7.17 Prior to commencement of construction activities, a pollution prevention strategy, contained within a Construction Environmental Management Plan (CEMP), will be agreed with SEPA and SLC to ensure that appropriate measures are put in place to protect watercourses and the surrounding environment.
- 7.18 The CEMP will include or cross-reference and correspond with a Traffic Management Plan (TMP), to be prepared in consultation with SLC and agreed prior to commencement of construction. The TMP will detail the management of traffic to and from site, including abnormal loads and daily workers' commutes. It will also include mitigation for effects on the local transport network as appropriate. The contractor and/or Applicant will amend and improve the TMP as required throughout the construction period.

Operation and Maintenance

- 7.19 The lifetime of the Proposed Development is envisaged to be 25 years from final commissioning to commencement of decommissioning. Regular maintenance and servicing will be performed on each turbine. Additionally, there may be a need to conduct irregular, ad hoc maintenance in the event of breakdown.

Decommissioning

- 7.20 At the end of the Proposed Development's operational lifespan, it will be decommissioned, unless a further planning application is approved at that time. It is expected that decommissioning will take approximately 12 months. The environmental effects of decommissioning are considered to be the same, or less, as during construction but over a shorter time period.
- 7.21 Prior to decommissioning, a Decommissioning Environmental Management Plan (DEMP) will be produced to reflect legislation and policy prevailing at that time, and will be agreed with the relevant statutory authorities.
- 7.22 Subject to the decision of the land owners and in consultation with the local community, access tracks will be retained on the site following the decommissioning of the development.

8 Ecology and Nature conservation

- 8.1 The full assessment of effects on ecology and nature conservation is provided in Volume 1, Chapter 5 of the EIA Report.
- 8.2 The ecology assessment provides an updated assessment of ecological effects on relevant receptors, based on the Proposed Development layout and turbine dimensions.
- 8.3 All previous data from the 2012 ES and subsequent SEIs are still valid and are used to inform baseline conditions. However, following consultation with Scottish Natural Heritage (SNH), additional protected species surveys were undertaken in May 2017.
- 8.4 Baseline surveys for the 2012 ES included surveys for otter, badger, water vole, red squirrel and newts (with associated habitat suitability assessments). Phase 1 Habitat and National Vegetation Classification (NVC) surveys were also carried out for the 2012 ES. Bat surveys were reported within the SEI (2013).
- 8.5 The majority of the site is a restored surface mine with habitats being established over the past 10-15 years. In addition, there is an existing network of access tracks within the site boundary which has been utilised as part of the design.
- 8.6 Terrestrial habitats are represented largely by newly established vegetation over the restored mine surface (covering around 50% of the site). Other semi-natural habitats present within the site include lesser amounts of coniferous plantation, marshy grassland, heath, grassland, bog, bracken, dense scrub, scattered conifers and plantation broadleaved woodland.
- 8.7 The Applicant has committed to implementing appropriate mitigation measures to ensure effects on ecological receptors are minimised. Mitigation includes: implementing a Habitat Management Plan and Species Protection Plan; employing an Ecological Clerk of Works (ECoW) to monitor construction and ensure environmental commitments are met; ensuring a buffer between turbine tips and woodland edges of at least 50 m to protect commuting and foraging bats; and undertaking pre-construction protected species surveys to update the baseline and confirm any requirement for amended or additional mitigation measures.
- 8.8 Overall, as a result of the revisions to the proposed layout and dimensions, there is considered to be no change in the significance of the effects for any ecological features, as a result of the Proposed Development when compared to the Consented Development. Taking account of the committed mitigation measures, **no significant residual effects** are predicted.

9 Ornithology

- 9.1 The full assessment of effects on ornithology is provided in Volume 1, Chapter 6 of the EIA Report.
- 9.2 The ornithology assessment provides an updated assessment of ornithology effects, based on the current Proposed Development layout and turbine dimensions.
- 9.3 Following consultation with SNH, additional breeding bird surveys were undertaken between April and July 2017. Additional flight activity surveys were not required, and the revised collision modelling was undertaken using the same data as used for the collision modelling presented in the SEI (2013) and Non-Material Variation (NMV, 2018).

- 9.4 Breeding wader distribution across the Proposed Development remained similar between 2012 and 2017 with activity focussed around the various waterbodies leftover from surface mine working. Abundance of most wader species did however decline compared to 2012, with redshank and ringed plover absent in 2017. Golden plover were only recorded during the baseline surveys (July 2011 to October 2012), considered to be non-breeding individuals.
- 9.5 An increase in snipe territories was recorded between the 2012 and 2017 surveys. The slight variation may be due to detection rates/identification of individual territories rather than a change in the local breeding population.
- 9.6 Collision risk modelling for curlew, lapwing and golden plover for the Proposed Development concluded no significant effects on the populations of these species.
- 9.7 The Applicant has committed to implementing appropriate mitigation measures to ensure effects on ornithological receptors are minimised. Mitigation includes: implementing a CEMP and HMP; employing an ECoW to monitor construction and ensure environmental commitments are met; avoiding unnecessary disturbance to habitats by minimising ground clearance as far as practicable; and undertaking a pre-construction breeding bird walkover survey to update the baseline and confirm any requirement for amended or additional mitigation measures.
- 9.8 Overall, as a result of the revisions to the proposed layout and dimensions, there is considered to be no change in the significance of the effects for any ornithological features, as a result of the Proposed Development when compared to the Consented Development. Taking account of the committed mitigation measures, **no significant residual effects** are predicted.

10 Landscape and Visual

- 10.1 The full assessment of effects on landscape and visual impact is provided in Volume 1, Chapter 7 of the EIA Report.
- 10.2 As would be anticipated for any large-scale wind energy development, and as was the case for the Consented Development, significant effects on landscape receptors within and in close proximity to the site are predicted. There are very few, if any, existing or proposed wind energy projects that will not have significant effects on the landscape and visual resource, and it may be assumed that the development of a wind energy project will result in such effects.
- 10.3 Landscape features within the Proposed Development site, and landscape character areas with boundaries within approximately 6 km of proposed turbines, are predicted to experience significant effects during construction/decommissioning and operation. Character areas further from the Proposed Development are assessed as experiencing not significant effects. The only landscape character areas assessed as experiencing significant effects for the Proposed Development, where that was not the case for the Consented Development, are Plateau Moorland and Upland River Valley. These character areas are immediately adjacent or very near to the Proposed Development site.
- 10.4 Significant visual effects arising from the construction/decommissioning and/or operation of the Proposed Development are predicted at nine of the 21 viewpoint locations considered. Apart from viewpoint 9 Tinto, these viewpoint locations are all within 10 km of the Proposed Development. Six of these were predicted to experience significant effects as a result of the Consented Development; the other three (viewpoint 2 Hillcrest Lesmahagow, viewpoint 3 dwellings between Reddochbraes and Middleholm, and viewpoint 18 Hill Street Douglas) were assessed as experiencing moderate

effects, not considered significant in accordance with the methodology applied at the time. Viewpoints 2, 3 and 18 are all within 5 km of the Proposed Development. Receptors at the remaining viewpoints are assessed as experiencing not significant effects, with no change in significance from the Consented Development assessment.

- 10.5 The cumulative landscape assessment identifies an increase in landscape effect upon the character areas within the site, and within 5 km of the Proposed Development there are two areas (Plateau Farmland and Rolling Moorland foothills) that are identified as experiencing an increase in the effects identified to moderate-major adverse (significant) in comparison to those for the Consented Development. The remaining character areas will not experience an increase in effect that is considered significant.
- 10.6 Of the ten viewpoint locations considered within the cumulative assessment, effects of moderate adverse or greater (significant) are identified for receptors at eight of the 21 locations, however, only one of the viewpoint locations, viewpoint 7, is identified as experiencing an increase in visual effect from not significant, to significant.
- 10.7 In summary, the assessment has identified significant landscape effects at receptors within and in close proximity to the site, with receptors more than approximately 6 km away generally subject to non-significant effects. This is broadly similar to the assessment for the Consented Development, with increased significance only predicted for landscape receptors in the immediate proximity of the site. Within the visual assessment, significant effects are predicted at viewpoints generally within 10 km of the Proposed Development. Again, the assessment is broadly similar to that for the Consented Development, although with three additional viewpoints within 5 km of the site predicted to experience significant effects.

11 Archaeology and Cultural Heritage

- 11.1 The full assessment of effects on archaeology and cultural heritage is provided in Volume 1, Chapter 8 of the EIA Report.
- 11.2 The assessment provides an updated assessment of effects on archaeological and cultural heritage assets resulting from the Proposed Development. As part of this revised assessment the Historic Environment Record data and Historic Environment Scotland datasets have been refreshed and reviewed. Site visits were made to assets with the potential for setting impacts and the local area was toured to gain an understanding of the topography of the area.
- 11.3 Construction impacts on cultural heritage assets are considered to remain the same as those identified for the Consented Development, given that the proposed site layout is largely unchanged. **No significant effects** are predicted, given that no previously recorded archaeological assets have been identified in the proximity of the Proposed Development infrastructure. The potential for previously unrecorded assets cannot be entirely ruled out, therefore mitigation will involve monitoring during ground disturbance in the sections of the site that are undisturbed from previous surface mining, through a programme of works to be agreed in advance through West of Scotland Archaeology Service (WoSAS) through a written scheme of investigation.
- 11.4 Operational impacts have been assessed. **No significant effects** on the settings of cultural heritage assets were identified for the Consented Development, and this is considered to remain unchanged for the Proposed Development.

12 Noise and Vibration

- 12.1 The full assessment of effects on noise and vibration is provided in Volume 1, Chapter 9 of the Proposed Development EIA Report and provides an updated assessment of noise and vibration effects.
- 12.2 The potential for significant noise and vibration effects during the construction and decommissioning phase, and for significant noise effects during the operational phase, of the Proposed Development have been assessed. In the course of the assessment, consultation has been undertaken with SLC, the 2012 ES has been reviewed and the baseline data and construction noise and vibration predictions adopted accordingly. Predictions of operational noise have been undertaken for the Proposed Development in isolation and cumulatively with neighbouring developments. The predicted noise and vibration levels have been evaluated against appropriate criteria.
- 12.3 **No significant noise or vibration effects** were identified during the construction phase, and therefore no specific mitigation requirement has been identified. Appropriate good practice measures will, however, be adopted, in line with the recommendations of BS5228.
- 12.4 During the operational phase, potentially significant noise effects have been identified in the absence of mitigation, as a result of the predicted exceedance of cumulative noise limits in certain wind conditions. Therefore, appropriate mitigation measures will be implemented such that noise limits are met at controlling properties. Either the chosen turbines built at the site will have a lower sound power level than the candidate turbine models considered, or a schedule of mitigation will be devised such that the Proposed Development meets appropriately apportioned noise limits. Following the implementation of mitigation, **no significant operational noise effects** will remain.

13 Shadow Flicker and Reflectivity

- 13.1 A shadow flicker assessment is provided in Volume 1, Chapter 10 of the Proposed Development EIA Report.
- 13.2 The potential for the effect known as ‘shadow flicker’ to be caused by the Proposed Development and for this to impact upon neighbouring residential and commercial receptors has been assessed in the EIA Report. The study area within which receptors could potentially be affected by shadow flicker extends 10 rotor diameters and 130 degrees either side of north (relative to each turbine). In the case of the Proposed Development, this area extends up to 1,360 m from each turbine.
- 13.3 The baseline conditions for this assessment are relatively unchanged from the conditions in the original ES, however the study area is slightly larger given the larger proposed rotor diameters compared to the Consented Development. Eight residential receptors were identified within the study area with the potential to experience shadow flicker. These are located to the west, north-west and north-east of the Proposed Development.
- 13.4 Shadow flicker modelling has shown that the maximum occurrence of shadow flicker for a “realistic scenario” amounts to approximately 13 hours per year or a maximum of 10 minutes per day at the most affected receptor. These durations are well within the accepted limits for shadow flicker (i.e. either 30 minutes per day or less than 30 hours per year).
- 13.5 It is important, however, to note that these results do not take into account existing screening features (structures and vegetation), dwelling orientation and local mitigation measures such as

blinds or curtains which will reduce potential effects further. Receptors may also be in rooms that are not generally used at the affected times, therefore, the amount of time when shadow flicker is actually 'experienced' will likely be significantly less than what has been predicted.

- 13.6 Committed mitigation measures in this case relate to the implementation of a written scheme to be agreed with SLC which could include a programme of selective automatic shutdown of certain turbine(s) under certain conditions, if required.
- 13.7 The residual effect of shadow flicker is, therefore, expected to be of **no significance** for all receptors during the operational phase of the Proposed Development.
- 13.8 Turbine components will be finished with industry standard non-reflective paint to reduce the occurrence of glinting.

14 Socio-Economic, Recreation and Tourism

- 14.1 The full assessment of socio-economic effects, including effects on tourism and recreation, is provided in Volume 1, Chapter 11 of the EIA Report.
- 14.2 The assessment undertaken for the Consented Development indicated an expected effect of **minor positive** significance associated with employment creation during construction and operation of the Proposed Development. The payment of developer contributions (e.g. to the Renewable Energy Fund, or directly to the local community council), was also assessed as representing an effect of **minor positive** significance. Given that the Proposed Development remains of a similar scale (up to 15 turbines, with similar development footprint), the proposed amendment to the turbine dimensions and scheme layout is assessed as resulting in **no change** to the significance of these effects.
- 14.3 The effect of the Proposed Development on recreational receptors has previously been assessed as being of **minor positive** significance, due to the Applicant's stated commitment to upgrade access tracks, where possible, during construction works, to form a new wind farm access track network. The proposed amendment to turbine dimensions and minor amendments to site layout will result in **no change** to this effect.
- 14.4 Given the distances from and limited views to the site from surrounding key tourism receptors, and the capacity of the landscape to absorb the development, the original 2012 assessment concluded that the effect on tourism would be of negligible significance. It is assessed that the amendment to the turbine dimensions and minor alterations to the site layout would result in no change to effects on tourism receptors, with effects remaining as **negligible significance**.

15 Aviation, Radar and Telecommunications

- 15.1 The full assessment of effects on aviation, radar and telecommunications is provided in Volume 1, Chapter 12 of the Proposed Development EIA Report.
- 15.2 The proposed change in turbine dimensions and minor alterations to the site layout are not considered to change the assessment of **negligible effect** on television reception. Planning Condition 47 of the original consent requires that, if a complaint regarding television reception is received, the operator will investigate and, if applicable, implement a technical mitigation solution. The Applicant confirms that the requirements of this Planning Condition will be met.

- 15.3 The slight increase in turbine tip height to 149.9 m for eleven of the proposed turbines is not expected to result in any unacceptable impacts to low flying activities, therefore there is no change to the associated effect and **no significant effects** are predicted.
- 15.4 With respect to primary radar impacts, formal mitigation contracts have been put in place, and the mitigation solution will be implemented to the satisfaction of the civil aviation bodies, prior to operation of the development. Consultation with these bodies has confirmed that an increase in tip height to 149.9 m is acceptable, subject to documentation of any changes in the agreed mitigation contracts.
- 15.5 The proposed change in turbine dimensions and slight change to the position of one turbine are assessed as resulting in **no change** to the significance of effects on aviation, radar and telecommunications infrastructure. Mitigation measures as required will be implemented in full, and **no significant residual effects** are predicted.

16 Transport and Access

- 16.1 The full assessment of effects on traffic and transport is provided in Volume 1, Chapter 13 of the EIA Report.
- 16.2 Chapter 11 of the original ES provided an assessment of traffic and transportation effects resulting from the Proposed Development. The assessment concluded that, with appropriate mitigation, the identified access route is suitable for the delivery of abnormal loads, and that the effects of construction traffic on the public road network would be **insignificant**.
- 16.3 The proposed variation in turbine dimensions and minor site layout amendments result in **no change** to the significance of effects on traffic and transport. Mitigation measures remain as for the Consented Development, namely: completion of an Abnormal Load Route Assessment and trial run; implementation of a Traffic Management Plan; and various minor improvements and mitigation measures to be undertaken on the abnormal load delivery route. These mitigation measures will be fully implemented, and **no significant residual effects** are predicted.

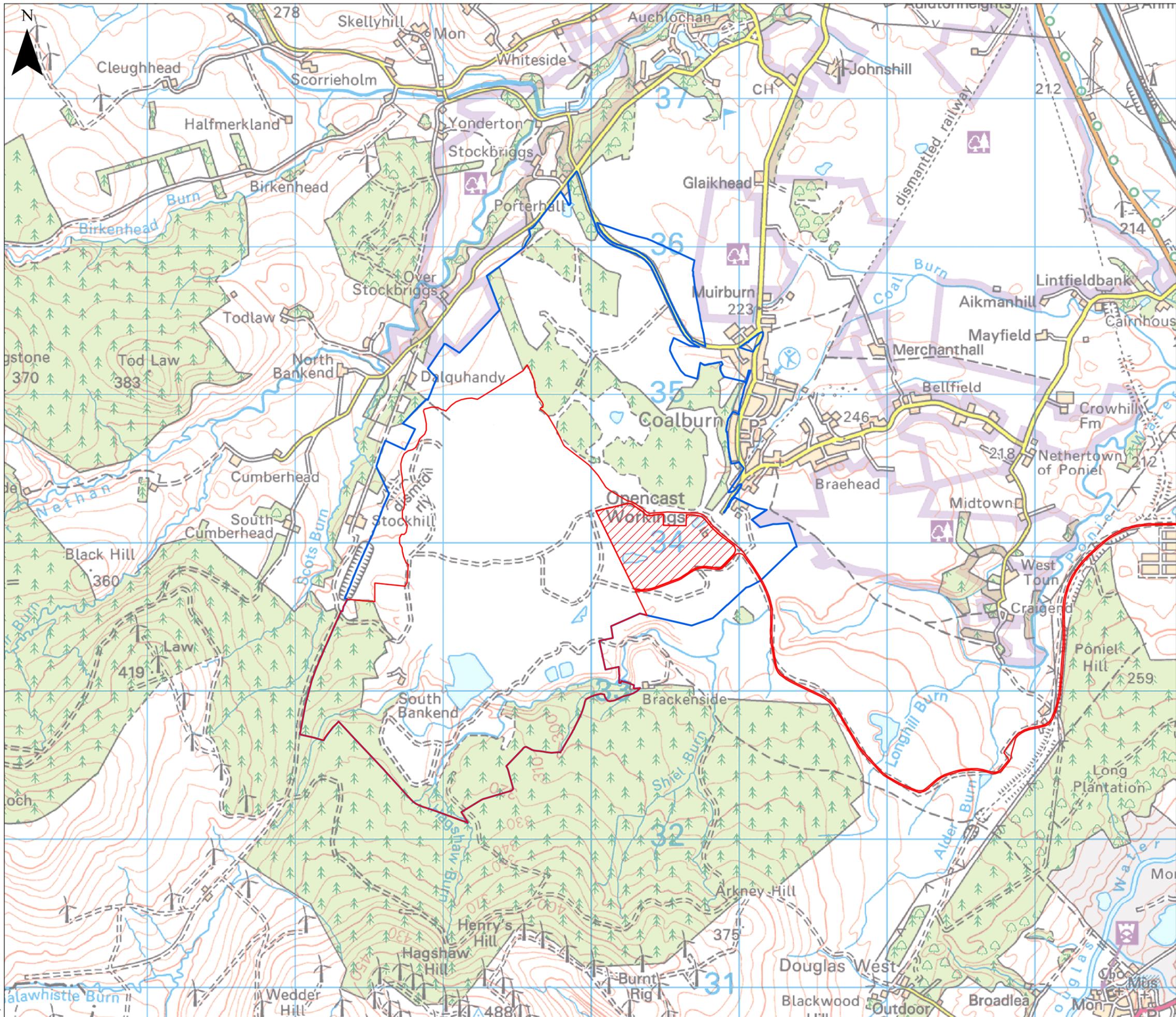
17 Geology, Hydrology and Hydrogeology

- 17.1 The full assessment of effects on geology, hydrology and hydrogeology is provided in Volume 1, Chapter 14 of the EIA Report.
- 17.2 The baseline conditions of the site area are largely as described in the original ES. An exception is that a coniferous woodland block in the south-west site area has been felled under licence.
- 17.3 The proposed variation in turbine dimensions and minor amendments to site layout result in no change to the significance of effects on geology, hydrology and hydrogeology resources, given that the turbine layout has remained largely as it was for the Consented Development.
- 17.4 Committed mitigation measures include the following: production and implementation of a CEMP; pre-construction ground investigation works including targeted investigations relating to peat in one localised area in the south of the site; monitoring of private water supplies during construction if considered necessary by SEPA and SLC (noting that no private water supplies were identified in close proximity to the site); adherence to relevant legislation and best practice; and agreement of detailed

water crossing designs with SEPA. These mitigation measures will be implemented in full and **no significant residual effects** are predicted.

18 Summary

- 18.1 This Non-Technical Summary of the EIA Report provides an overview of the EIA undertaken for the Proposed Development.
- 18.2 Within Volume 1, Chapter 15 of the EIA Report a schedule of mitigation can be found which details the environmental mitigation measures, summarised above, that the Applicant has committed to implement.
- 18.3 Volume 1, Chapter 16 of the EIA Report summarises the potential effects, the mitigation to be implemented and the resulting residual effects.
- 18.4 The additional significant residual effects (i.e. those remaining after mitigation has been applied) of the Proposed Development when compared to the Consented Development are limited to those associated with landscape and visual impacts, in the immediate vicinity of the site.



KEY

- Site Boundary
- Outwith Site Boundary
- Additional Land Controlled by the Applicant



Scale 1:24,794 @ A3

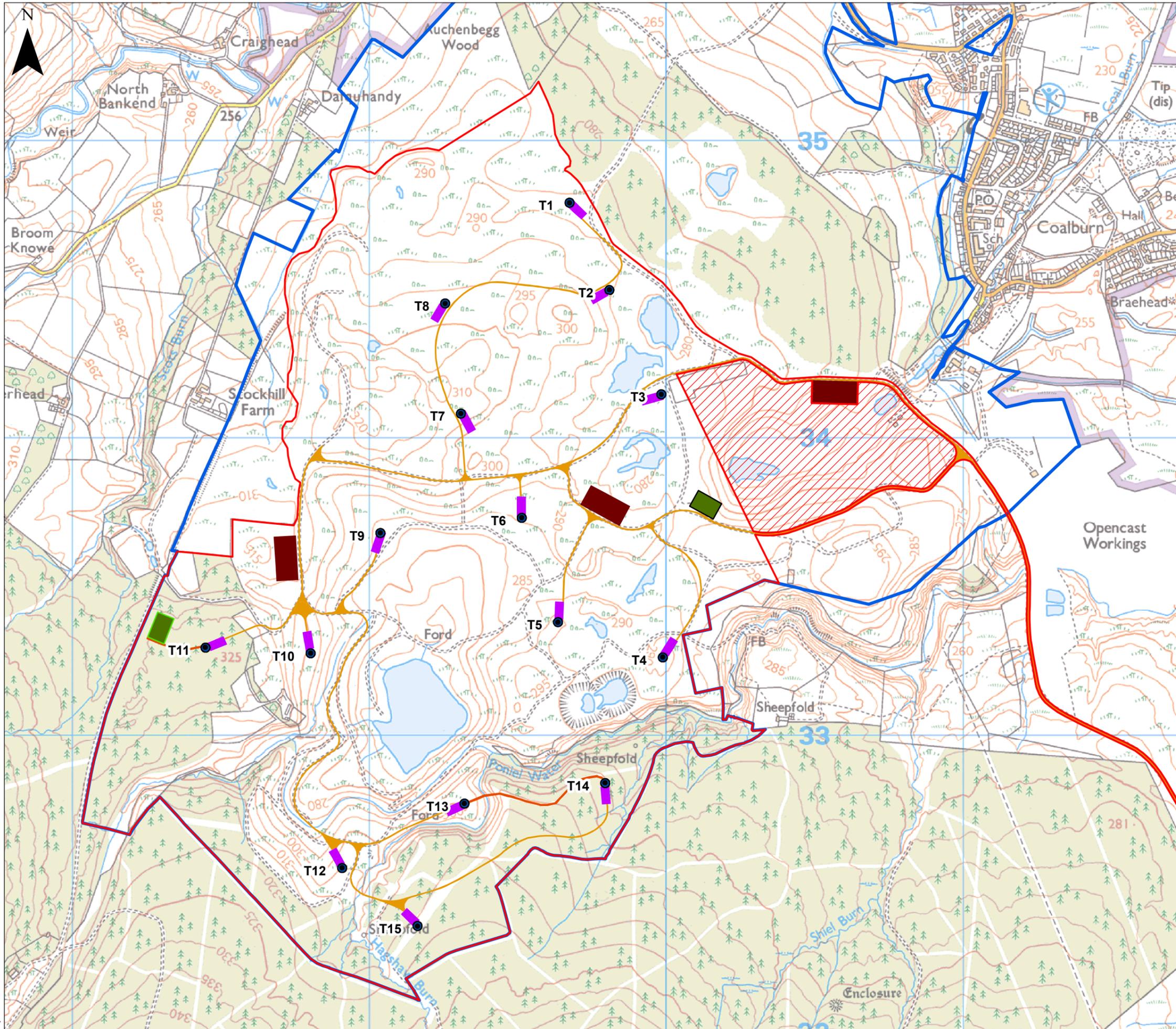


Dalquhandy 2018 Energy Project
EIA Report for Section 42 Application

Non-Technical Summary Figure 1
Site Location Plan

Date: 17/12/2018	Drawn by: JH	Checked by: AR	Version: Draft/V1
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Project Number: 10725



- KEY**
- Site Boundary
 - Outwith Site Boundary
 - Additional Land Controlled by the Applicant
 - T1 Proposed Turbine
 - Construction Compounds 150x75m
 - Crane Hardstanding 65x25m
 - Substation Compound 90x60m
 - Potential Alternative Substation Compound 90x60m
 - Indicative Access Road
 - Indicative Alternative Access Road

	X	Y	Tip Height
T1	279674	634793	131m
T2	279808	634499	131m
T3	279983	634148	131m
T4	279988	633262	149.9m
T5	279635	633381	149.9m
T6	279513	633732	149.9m
T7	279308	634083	149.9m
T8	279255	634454	131m
T9	279037	633681	149.9m
T10	278802	633276	149.9m
T11	278448	633295	149.9m
T12	278908	632553	149.9m
T13	279320	632770	149.9m
T14	279794	632839	149.9m
T15	279162	632358	149.9m



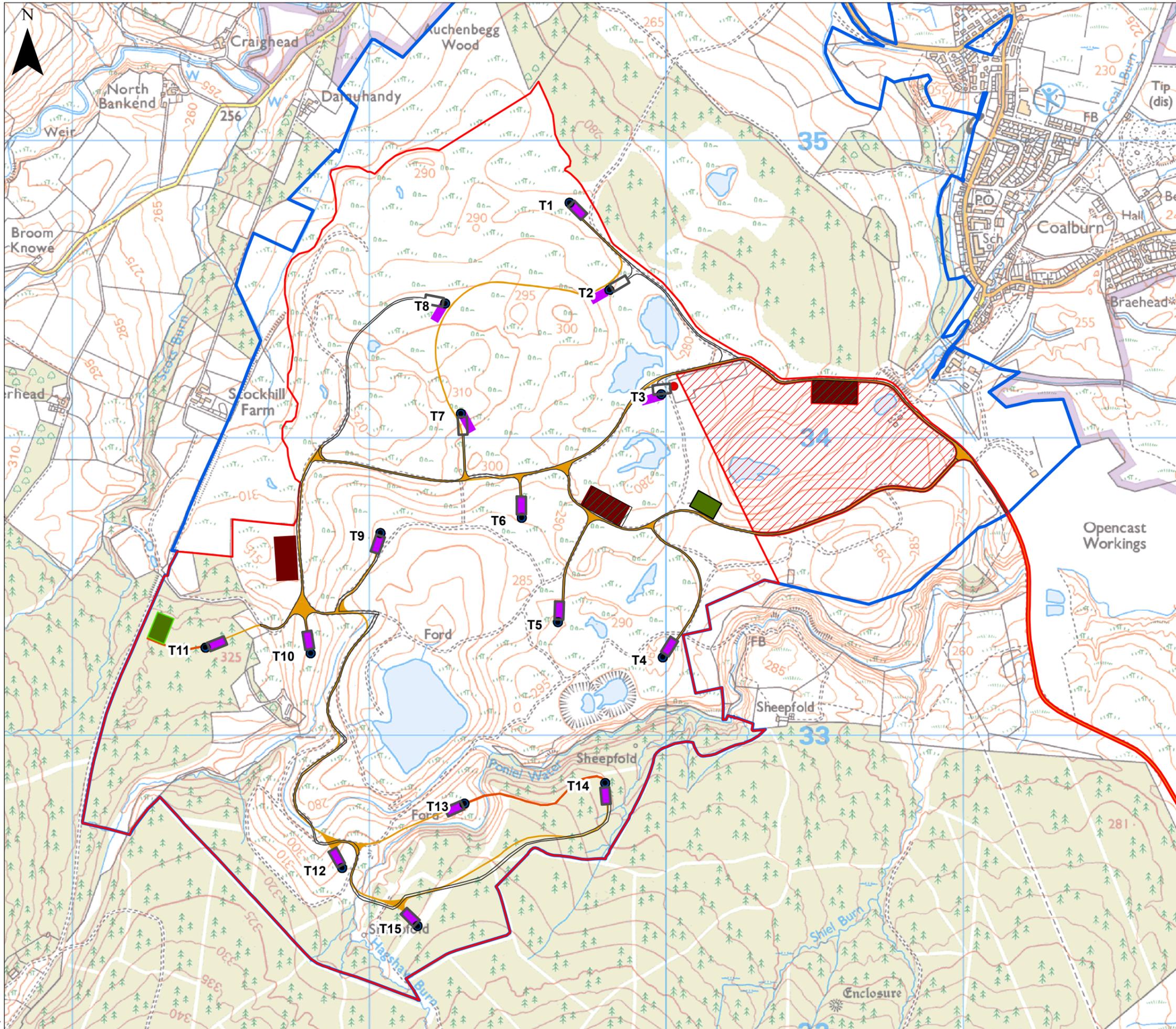
Scale 1:12,500 @ A3



Dalquhandy 2018 Energy Project
 EIA Report for
 Section 42 Application
Non-Technical Summary Figure 2
Site Layout Plan

Date: 17/12/2018 Drawn by: JH Checked by: AR Version: Draft/V1

Project Number: 10725



- KEY**
- Site Boundary
 - Outwith Site Boundary
 - Additional Land Controlled by the Applicant
 - T1

 Proposed Turbine
 - Construction Compounds
 - Crane Hardstanding
 - Substation Compound
 - Potential Alternative Substation Compound
 - Indicative Access Road
 - Indicative Alternative Access Road
- Consented Infrastructure Layout for Comparison
- Construction Compounds
 - Crane Hardstanding
 - Indicative Access Road
 - T3

 Consented T3 Location



Scale 1:12,500 @ A3



Dalquhandy 2018 Energy Project
EIA Report for Section 42 Application

Non-Technical Summary Figure 3
Site Layout Plan showing Consented
Layout for Comparison

Date: 17/12/2018	Drawn by: JH	Checked by: AR	Version: Draft/V1
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Project Number: 10725