CONTENTS

1. INTRODUCTION

1.1 Background & Purpose of Document

Consent for the Gordonbush Extension Wind Farm was granted in September 2017 for a 15 Turbine Wind Farm with an approximate generation capacity of 52.5 MW.

This document supports a s.36c application to vary the consent for the development, allowing for a reduction in turbine numbers from fifteen to eleven, whilst increasing the tip height of the remaining turbines to 149.9m, and the rotor diameter to up to 136m.The Proposed Varied Development application involves the following key alterations;

- reduction of the number of turbines from the consented layout from 15 to 11;
- increase in the height of the retained turbines from 130m up to a maximum blade tip height of 149.9m (with a maximum rotor diameter of up to 136m);
- reduction in length of access track given removal of four turbines;
- removal of the consented additional operations building;
- repositioning of temporary batching plant;
- amendment to indicative Borrow Pit (BP) extraction volumes;
- removal of the Permanent Operational Met Mast;
- repositioning and substitution of the Permanent Meteorological Mast to a LiDAR and associated 4x4 track; and
- retention of existing operational Gordonbush Wind Farm (GBWF) meteorological mast (southern).

The location of the site and the Proposed Varied Development layout are presented in Figure 1.

Based on the original and revised ecological impact assessments it has been identified that the development site is located approximately 85m from the Caithness and Sutherland Peatlands Special Area of Conservation (SAC), designated under the EC Habitats Directive (92/43/EEC). The location and proximity of the Caithness and Sutherland Peatlands SAC to the development site is shown in Figure 2.

Given the close proximity between the proposed development site and this SAC there is a potential for the activities associated with the development's construction and operation to result in adverse effects on the qualifying interests of the designated site. Consequently, a Habitat Regulations Appraisal (HRA) is considered to be necessary in order to identify the nature, extent and significance of any adverse effects and, if found, whether these are likely to impact the integrity of the designated site.

RPS have been commissioned by SSE to provide information to inform the HRA which will be undertaken by the Energy Consents Unit as competent authority for the consideration of the Proposed Varied Development application.

1.2 Caithness and Sutherland Peatlands SAC

The Caithness and Sutherland Peatlands SAC is an extensive area of open moorland and blanket bog habitat comprising numerous parcels of land across northern Scotland which cover a vast combined area of 143,561.47ha. The eastern boundary of one of these designated land parcels (that associated with Cnoc Coir' an Eion and Cnoc Eachain) is located approximately 85m from the western boundary of the Proposed Varied Development site (see Figure 2).

The Annex I habitats of the EC Habitats Directive that are a primary reason for site designation are:

- Blanket bogs (Priority feature);
- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*; and
- Natural dystrophic lakes and ponds.

Other Annex 1 habitats present as a qualifying feature but not a primary reason for designation are:

- Northern Atlantic wet heaths with *Erica tetralix*;
- Transition mires and quaking bogs; and
- Depressions on peat substrates of the *Rhynchosporion*.

Annex II species that are a primary reason for site designation are:

- Otter (*Lutra lutra*); and
- Marsh saxifrage (*Saxifraga hirculus*).

2. HABITAT REGULATIONS ASSESSMENT (HRA)

2.1 Legislative Background

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora ("The Habitats Directive"), provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species through the establishment and conservation of an EU-wide network of sites ("Natura 2000"). Natura 2000 is a European ecological network of special areas of importance for nature conservation, composed of sites hosting rare and vulnerable habitats and species. This network is designed to enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range.

The UK has designated a number of sites of nature conservation importance which form part of a network of Natura 2000 Sites. Natura 2000 Sites comprise Special Areas of Conservation (SACs) designated under the EC Habitats Directive and Special Protection Areas (SPAs) designated under the EC Wild Birds Directive. In addition, it is Government policy (Defra, 2006) that Wetlands of International Importance designated under the Ramsar Convention (Ramsar Sites) are also treated as fully designated European/Natura 2000 Sites when considering development proposals.

The procedures that must be followed when considering developments affecting Natura 2000 Sites are set out in Article 6 of the Habitats Directive. In Scotland, this process is implemented through the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) ("The Habitats Regulations").

Habitats Directive Article 6(3) set out the decision-making tests for plans and projects likely to have a significant effect on or to adversely affect the integrity of European sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

"Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

Both EU and national guidance exists in relation to Member States fulfilling their requirements under the EU Habitats Directive, with particular reference to Article 6(3) and 6(4) of that Directive. The methodology followed in this report to inform the Article 6 assessments has had regard to the following guidance and legislation:

2.2 Legislation

- Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (also known as the 'Habitats Directive');
- Council Directive 2009/147/EC on the conservation of wild birds, codified version, (also known as the 'Birds Directive'); and
- The European Communities (Birds and Natural Habitats) Regulations 2011 to 2015.

2.3 Overview of Appropriate Assessment Stages

An HRA is a process to determine Likely Significant Effect (LSE) through Stage 1 screening and (where such likely effects are identified) assess whether there are adverse impacts on the integrity of a Natura Site by means of an AA (Stage 2).

The threshold for a LSE is treated in the screening exercise as being above a de minimis level. A de minimis effect is a level of risk that is too small to be concerned with when considering ecological requirements of an Annex I habitat or a population of Annex I (bird) or Annex II (non-avian) species present on a European site necessary to ensure their favourable conservation status. If low level effects on habitats or individuals of species are judged to be in this order of magnitude and that judgment has been made in the absence of reasonable scientific doubt, then those effects are not considered to be likely significant effects.

Based on the outcome of the AA, the Competent Authority shall agree to a plan or project only after having ascertained that it will not adversely affect the integrity of the Natura 2000 site concerned.

The EC guidance document on Article 6(4) of the Habitats Directive (EC, 2007) explains that:

"Biological integrity can be defined as all those factors that contribute to the maintenance of the ecosystem including structural and functional assets. In the framework of the Habitats Directive, the biological integrity of a site is linked to the conservation objectives for which the site was designated as part of the Natura 2000 network."

The EC guidance "Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats' Directive 92/43/EEC" (EC, 2000) states that:

"The integrity of the site involves its ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the site's conservation objectives."

In carrying out an AA, mitigation measures aimed at minimising or avoiding the negative impact of a plan or project during or after its completion, may be considered as an integral part of the plan or project (EC, 2000). The recent judgement (May 2018) of Case C-323/17 ("People Over Wind") suggests the ecological mitigation measures cannot be considered during Stage 1.

Exceptionally, where an AA concludes there will be adverse effects on the integrity of a Natura 2000 Site, the relevant Competent Authority may only agree to a plan or project if:

- It is evidenced that there are no alternative solutions (Stage 3); and,
- There are Imperative Reasons of Overriding Public Interest (IROPI) for the advancement of the project (Stage 4).

3. DESCRIPTION OF PROPOSED PROJECT

3.1 Site Location and Receiving Environment

As stated above, Figures 1 and 2 present the Proposed Varied Development and its associated infrastructure and the proximity of the Caithness and Sutherland Peatlands SAC respectively.

A full description of the habitats within and surrounding the Proposed Varied Development are provided in the 2015 Environmental Statement (ES). Figure 8.3 of the 2015 submission provides the Phase 1 Habitat survey results. A summary of these botanical survey results is provided below for ease of reference:

- The majority of the survey area supports the blanket bog community M17 *Trichophorum-Eriophorum* mire, but with M15 *Trichophorum-Erica* wet heath, H10 *Calluna-Erica* heath and H12 *Calluna-Vaccinium* heath more prevalent to the south and west, where the slope increases and the peat becomes thinner;
- Acid M6 *Carex-Sphagnum* mire marks out flush lines, typically along the fringes of watercourses. Other communities include small areas of U4 *Festuca-Agrostis-Galium* grassland, bracken and U6 *Juncus-Festuca* grassland;
- The blanket bog has been subject to historic draining (with moorland grips present in much of the habitat), peat cutting and, more recently, burning. This has modified the floristic character in certain areas giving rise to a drier bog community largely dominated by deer grass and heather, particularly in the north-west of the Development site. In other, flatter areas, drainage has had a limited impact on floristic character with good levels of Sphagnum still present;
- Burning has created a hybrid wet/dry heath community with affinities to both the M15 *Trichophorum-Erica* wet heath and H10 *Calluna-Erica* dry heath;
- Species of interest include *Sphagnum fuscum* and great sundew (*Drosera anglica*), both of which are found in the M17 mire. *S.fuscum* occasionally occurs in the least disturbed areas with the deepest peats, while *D.anglica* is found relatively frequently across the community. *S.fuscum*, is a scarce plant of raised bogs in northern England and southern Scotland, but is more frequent in the Eastern and Northern Highlands, where it also occurs in flushes and blanket bogs above 400m (Hill *et al*., 1992 and Smith 2004). *D.anglica* is a scarce species in southern Scotland and England, but is more commonly found in the Central and Northern Highlands (Preston *et al*., 2002);
- No Nationally Rare or Scarce species (i.e. occurring in 15 or fewer 10km squares, and 16-100 10km squares respectively) were recorded on the Development site; and
- There is no hydrological continuum of habitat with the Coir' an Eoin SAC and SSSI to the west of the Development site.

In addition to the above, the Proposed Varied Development site is bounded by two main watercourses; the Allt a Mhuilinn on the western boundary and the Allt Smeorail on the eastern boundary. These watercourses flow from north to south draining the catchment in which the wind farm will be located into the River Brora and Loch Brora to the south. Other smaller watercourses are present within the Proposed Varied Development's site boundary which drain into the Allt a Mhuilinn and All Smeorail.

Surveys for protected species were completed for the 2015 ES and the Proposed Varied Development. Details of these surveys are provided in the relevant sections of the submissions.

4. APPROPRIATE ASSESSMENT SCREENING

4.1 Elements of the Proposed Project with the Potential for Likely Significant Effects

The potential effects of the development on the qualifying interest of the Caithness and Sutherland Peatlands SAC can be split into direct and indirect effects and include:

- Temporary or permanent habitat loss, change and fragmentation by site infrastructure;
- Noise and visual disturbance to otters during construction and operation;
- Accidental killing or injury of otters; and
- Contamination of freshwater habitats through sedimentation and/or pollution from surface runoff during construction with associated impacts on habitat condition and prey availability for otters.

4.2 Analysis of the Potential for Likely Significant Effects

Habitats and Marsh Saxifrage

As the development site does not overlap with the Caithness and Sutherland Peatlands SAC there is no potential for any loss or fragmentation of habitat associated with the SAC. Similarly, the development site is segregated from the SAC by the Allt a Mhuillinn and as such there is no connectivity between the two which could result in indirect effects of habitat change or deterioration within the designated site. Consequently, there is no potential for any significant adverse effects on the qualifying habitats associated with the SAC, or indeed its marsh saxifrage interest.

Otters

With regards to potential impacts on otters, surveys undertaken in 2013 and 2018 to inform the ecological impact assessments for the Consented and Proposed Varied Development respectively identified that the Allt a Mhuilinn watercourse which runs parallel to, but set back from the site's western boundary provides a well-used resource for the local otter population (see Figures 3 and 4). Indeed, both sets of surveys found that the majority of otter activity in proximity to the Proposed Varied Development site was associated with this watercourse. Signs of otter activity were also found along the main tributary to the Allt a Mhuilinn, the Allt nan Nathraichean, which drains the northern and western part of the site, although evidence did not extend a significant distance away from the confluence with the Allt a Mhuilinn. This is likely due to the Allt a Mhuilinn providing ample foraging opportunities and therefore wider foraging within smaller watercourses is not required or perhaps less favourable. During the latest 2018 surveys, one active holt and four couches were identified along the Allt a Mhuilinn and the Allt nan Nathraichean, along with a large number of spraints varying in age (Figure 4). The consistent use of the Allt a Mhuilinn suggests that it is important in a local context to the local otter population in providing a dependable food resource and an abundance of shelter opportunities. As such, it is likely to be important in supporting the otters associated with the adjacent SAC.

In contrast, the main watercourse which borders the eastern boundary of the Proposed Varied Development (the Allt Smeorail) provided little evidence of otter use either in the 2013 or 2018 surveys. Indeed, no evidence of otter activity was found on any of the smaller tributaries which drain the south eastern part of the site. The steep, narrow and gorge-like nature of the initial reaches of the Allt Smeorail moving upstream from its confluence with Loch Brora are likely to impede the passage of otters to the higher reaches close to the boundary of the Proposed Varied Development site. Consequently, these watercourses are considered to be of negligible value to

the local, and indeed SAC otter population and any activities in this part of the site are considered unlikely to have any effects on the species.

At its closest the Proposed Varied Development's footprint comes no closer than 315m from the Allt a Mhuilinn and 175m from the lower reaches of the Allt nan Nathraichean to which otter evidence was restricted. Moreover, the nearest confirmed otter resting site to the development footprint is the holt located along the Allt nan Nathraichean at a distance of approximately 175m. This feature is no closer than 250m from the nearest turbines (Turbines 7 and 8). Given the separation distances between the Proposed Varied Development's footprint and this resting site, and the watercourses where locally occurring otters are expected to concentrate their movement, the risk of individuals being disturbed by construction or operational activities is considered to be low. Even in the unlikely event that any individuals were temporarily displaced by disturbance they are likely to either habituate to it or return once the disturbance levels subside or cease.

Since otters are anticipated to concentrate their movements along the Allt a Mhuilinn and lower reaches of the Allt nan Nathraichean, they are not expected to readily enter the Proposed Varied Development's footprint and hence into contact with vehicles, machinery or other features (e.g. excavations) which may cause them injury or death. Consequently, the risk of individuals being killed or injured as a result of by construction or operational activities is also considered to be low. Even in the unlikely event of such an incident, individuals lost from the population are likely to be replaced relatively rapidly either through migration of other individuals into the area or from births within the population itself.

Otters may also potentially be affected by pollution related events associated with the construction phase of the Proposed Varied Development, such as sedimentation or fuel or oil spillages. If not controlled, pollutants have the potential to enter watercourses which will in turn affect the habitat and food resources on which the local otter population depends. While the likelihood of such incidents occurring is relatively high they are expected to be localised and small in scale. Given the separation distances between the Proposed Varied Development's footprint and the Allt a Mhuilinn and Allt nan Nathraichean the likelihood of any such incidents significantly affecting these watercourses is considered to be low.

The latest assessment of the otter population associated with the SAC completed in 2011 (Findlay et al, 2015 and SNH Site Link Website) found the qualifying feature to be in an unfavourable condition. The above assessment, which correlates with the EIA Report for the Proposed Varied Development, identifies several direct and indirect effects associated with the construction or operational phases of the Proposed Varied Development which have the potential to impact on the local population. However, it has been assessed that the likelihood of any of these effects resulting in adverse impacts on locally occurring otters would be low. Consequently, any impacts are unlikely to affect the conservation status of the otter population associated with the wider (143,561.47ha) SAC.

4.3 Screening Assessment Conclusions

The potential impacts during the construction and operation of the Proposed Varied Development have been considered in the context of Caithness and Sutherland Peatlands SAC and its qualifying interests. It is concluded that while the Proposed Varied Development is not directly connected with or necessary to the management of any Natura 2000 site it is not expected to have any likely significant effects on any of the qualifying interests associated with the SAC. Therefore, an Appropriate Assessment of the impacts of the Proposed Varied Development on the integrity of the SAC is not considered to be necessary.

While it has not been considered in drawing the above conclusions, it is worth noting that the EIA Report for the Proposed Varied Development commits to a number of mitigation measures designed to further minimise the risks to otters including:

- development of a Construction Environmental Management Plan (CEMP) which will incorporate;
  - species protection protocols, such as pre-works checks and avoidance of night-time working adjacent to watercourses;
  - maintenance of a 50m stand-off distance from all watercourses, except at crossing points; and
  - pollution prevention and response measures, including peat/soil and fuel/oil storage protocols and concrete washout procedures to prevent contamination of watercourses.
- employment of an Ecological Clerk of Works to oversee and monitoring compliance with ecological mitigation measures and best practice; and
- provision and implementation of an Otter Species Protection Plan for the duration of the construction period.

With the application of these measures, any effects on locally occurring otters and indeed the wider SAC population are expected to be reduced to a negligible level.

5. ASSESSMENT OF IN-COMBINATION EFFECTS WITH OTHER PLANS OR PROJECTS

5.1 Introduction

Article 6(3) of the Habitats Directive requires that in-combination effects with other plans or projects are considered. As stated in the 2015 ES (Chapter 8: Ecology), the only other project with the potential to contribute to the effects associated with the proposed extension is the original Gordonbush Wind Farm. Moreover, as otter is the only qualifying interest of the Caithness and Sutherland Peatlands SAC with the potential to be adversely affected by the development, this is the only feature for which cumulative effects need to be considered.

The EIA Report for the Proposed Varied Development (Chapter 8: Ecology) concludes that there were no predicted cumulative effects on otters from the development and the existing Gordonbush Wind Farm during either the construction or operational phases.

6. CONCLUSIONS

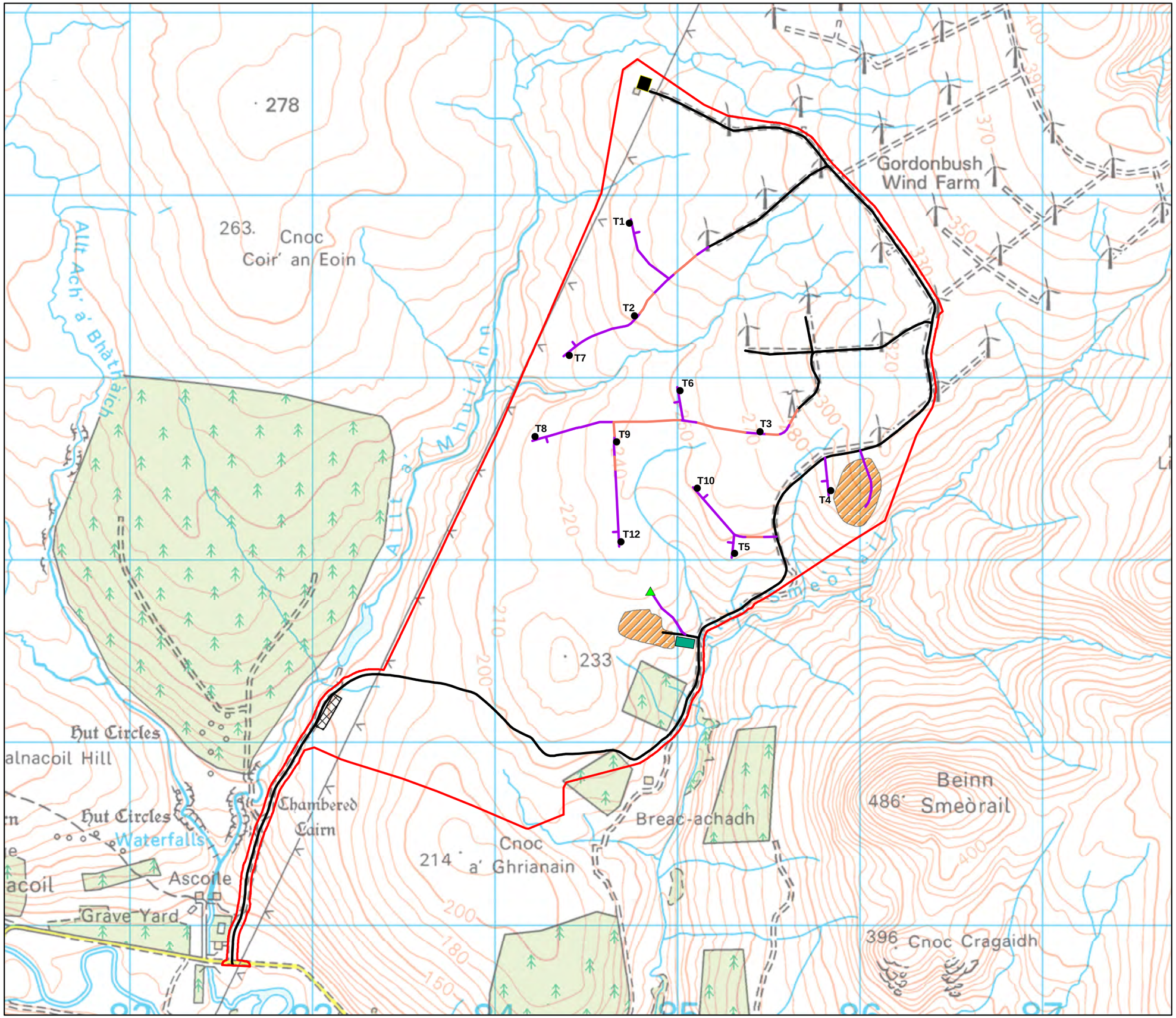
This document has considered the potential for significant impacts arising from the construction and operation of the Proposed Varied Development that would have the potential to adversely affect any Natura 2000 site with regard to their qualifying interests and conservation objectives. The only Natura Site which the Proposed Varied Development may affect is the Caithness and Sutherland Peatlands SAC which lies approximately 85m from the site boundary.

The potential for direct, indirect and cumulative impacts affecting the above designation has been assessed. Only otters were considered within the assessment as other qualifying interests were found to be separated from the Proposed Varied Development and unable to be impacted upon. In consideration of the potential impacts to otters, no likely significant effects were identified either through direct, indirect or cumulative impacts.

It is therefore concluded, beyond reasonable scientific doubt, that the proposed project will not give rise to significant impacts, either individually or in combination with other plans and projects, in a manner which adversely affects the integrity of any designated site within the Natura 2000 network.

7. REFERENCES

- Findlay, M., Alexander, L. & Macleod, C. 2015. Site condition monitoring for otters (*Lutra lutra*) in 2011-12. Scottish Natural Heritage Commissioned Report No. 521. Available at: https://www.nature.scot/sites/default/files/2017-07/Publication%202015%20-%20SNH%20Commissioned%20Report%20521%20-Site%20condition%20monitoring%20for%20otters%20%28Lutra%20lutra%29%20in%202011-12.pdf).
- SNH Site Link Website - https://www.environment.gov.scot/data/data-analysis/protected-nature-sites/?pagenumber=1&resetmap=true&siteid=8218 (accessed 23.01.19).



sse

rps

Key

- Site Boundary
- Turbine
- LiDAR

Access Track

- Existing
- Cut
- Float
- Operational Substation
- Batching Plant
- Borrow Pit Search Area
- Construction Compound

Scale 1:20,000 @ A3

0 0.5 1 Km

N

Figure 1
Site Location and Development Layout Plan

Gordonbush Extension Wind Farm
Habitat Regulations Appraisal

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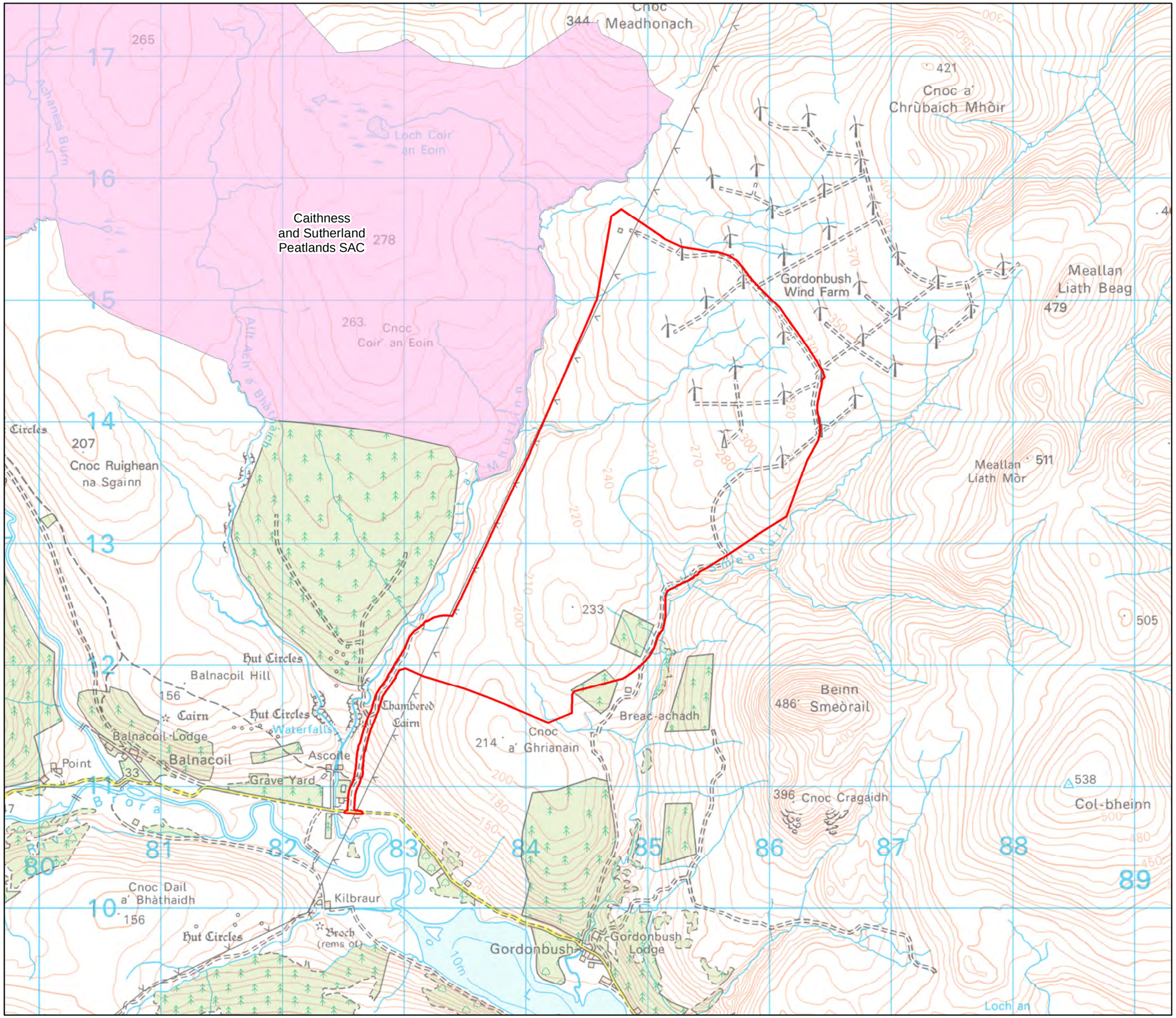

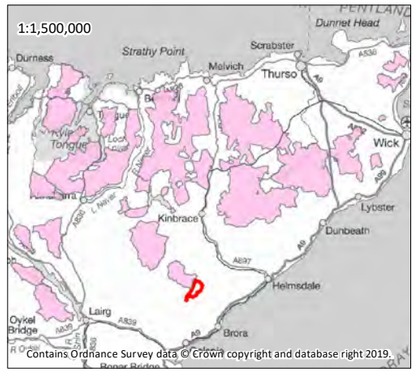

Scale 1:30,000 @ A3

0 0.5 1 km

N

Figure 2
Natura Sites in Proximity to the Development Site

Gordonbush Extension Wind Farm
Habitat Regulations Appraisal

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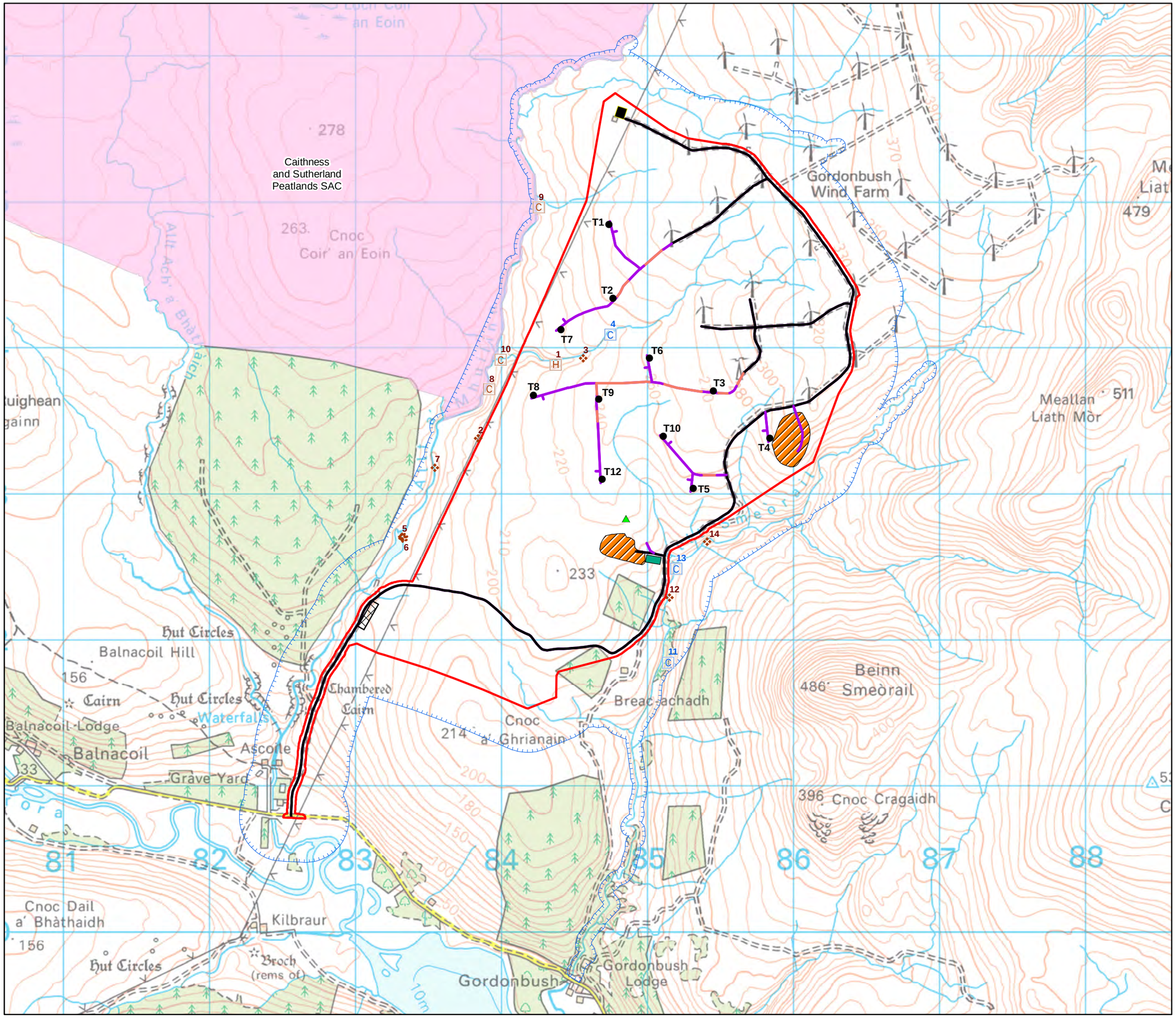

Site Boundary
Turbine
LiDAR
Access Track
Existing
Cut
Float
Operational Substation
Batching Plant
Borrow Pit Search Area
Construction Compound
Caithness and Sutherland Peatlands SAC
Survey boundary
Otter couch (3)
Otter holt (1)
Otter print (1)
Otter spraint (6)
Otter potential couch (3)

Scale 1:25,000 @ A3
0 0.5 1 Km
N

Figure 3
Otter Survey Results 2013

Gordonbush Extension Wind Farm
Habitat Regulations Appraisal

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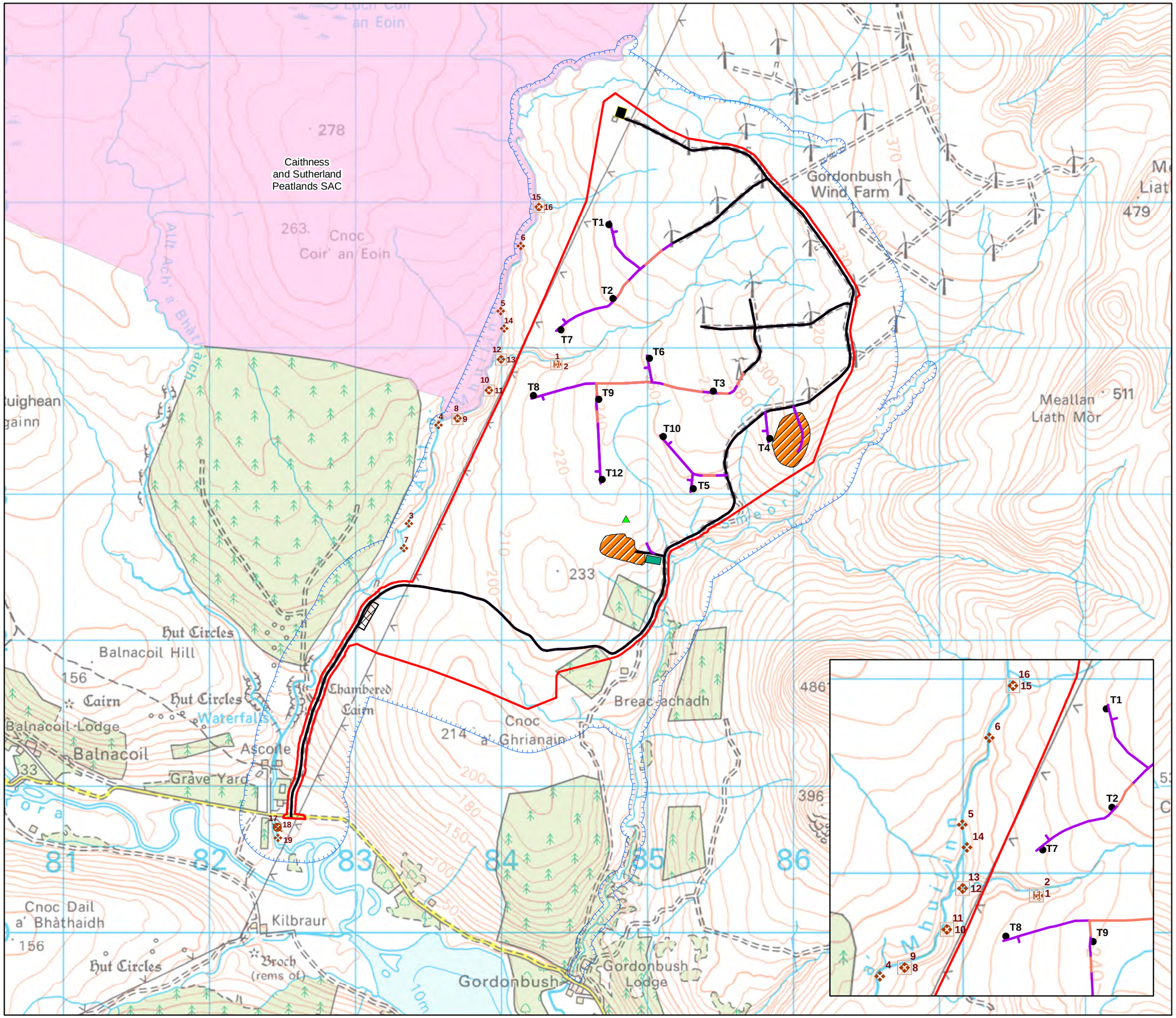

Site Boundary
Turbine
LiDAR
Access Track
Existing
Cut
Float
Operational Substation
Batching Plant
Borrow Pit Search Area
Construction Compound
Caithness and Sutherland Peatlands SAC
Survey boundary
Target notes
Otter couch (4)
Otter holt (1)
Otter slide or play area (1)
Otter spraint (13)

Scale 1:25,000 @ A3
0 0.5 1 Km
N

Figure 4
Otter Survey Results 2018

Gordonbush Extension Wind Farm
Habitat Regulations Appraisal

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