

NON-TECHNICAL SUMMARY

Uisenis Wind Farm

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1.0 Introduction

This Non-technical Summary (NTS) summarises the Environmental Impact Assessment (EIA) Report for the proposed Uisenis Wind Farm development.

Uisenis Power Limited (the applicant), (a wholly owned subsidiary of Eurowind Energy A/S), proposes to construct and operate a wind farm comprising 25 turbines with associated infrastructure (the proposed development) on land (the Site) approximately 20 kilometres (km) south west of Stornoway, on the Isle of Lewis, centred on National Grid Reference (NGR) NB 31366 12772. The area required for the proposed development is approximately 1,420 hectares (ha) and is located on land within the Eisein (Eishken) Estate. The location of the proposed development and application boundary are shown in **Figure 1** and **Figure 2**.

The proposed development represents a re-design of the consented 45-turbine Muaitheabhal Wind Farm(s). The proposed development would consist of up to 25 three-bladed horizontal wind turbines, with associated infrastructure. 22 of the proposed turbines would be 200 metres (m) to tip height, with the remaining three turbines being 180m to tip height. The proposed development would have a total installed capacity of approximately 165 Megawatts (MW).

The proposed development would produce an average of approximately 578,160 Mega Watt hours (MWh) of electricity annually (based on a site-derived capacity factor of 40%). This equates to the power consumed by approximately 164,764 average UK households¹, which would be well above the current energy requirements of the approximately 14,901 homes across the Western Isles².

The proposed development is being progressed with a shared ownership opportunity for communities in the local area, which are being offered the opportunity to acquire up to a 20% share of the proposed development. This would be explored in depth with Comhairle nan Eilean Siar (CnES) and the existing local development trusts should the proposed development receive consent.

Community Benefit is being offered on the basis of a payment per MW of installed capacity at the Scottish Government recommended rate which, at the present time, is £5,000 per MW.

The generating capacity of the proposed development would exceed 50MW and as such an application is being submitted for consent under Section 36 of the Electricity Act 1989³, with the applicant also seeking a direction that deemed planning permission is granted.

Environmental effects of the proposed development have been considered within the EIA. The EIA Report presents the findings of the EIA process by describing the proposed development, the current conditions at the Site and the likely effects and impacts (as well as their significance) which may result from the proposed development. Where appropriate, mitigation is proposed, and any residual impacts are reported. The results of the EIA are presented within the EIA Report and summarised in this NTS.

¹ Calculated using the most recent statistics from the Department of Business, Energy and Industrial Strategy (BEIS) showing that annual UK average domestic household consumption in 2022 was 3,509kWh

² <https://statistics.gov.scot/atlas/resource?uri=http%3A%2F%2Fstatistics.gov.scot%2Fid%2Fstatistical-geography%2FS08000028>

³ UK Government (1989). The Electricity Act 1989

2.0 The Proposed Development

2.1 Design Evolution (EIA Report Chapter 2)

A number of parameters and considerations informed the site selection and design of the proposed development, which are described in full in the separate **Design and Access Statement** and summarised in **Chapter 2: Site Description and Design Evolution** of the EIA Report.

The initial input to the design process for the wind farm was the bird and ecology data gathered during the extensive survey programme, to understand where turbines should be placed to minimise disturbance to protected species. Watercourse and peat information was incorporated into the design to further inform the position of turbines. In addition, key views towards the Site were identified and scrutinised to model the potential landscape and visual effects of the proposed development and to enable the turbine array to be refined and positioned to reduce such effects where possible. Appropriate spacing of turbines was implemented to ensure they operate as efficiently as possible, and project economics were carefully considered alongside all of the other factors to bring together the design options.

Feedback from discussions with the Energy Consents Unit (ECU), CnES and other consultees, through direct engagement and also via the formal EIA Scoping process was evaluated and fed into the evolution of the proposed layout.

Once turbine positions were selected, an access track layout and all other infrastructure necessary to build the wind farm was added to the design, taking account in particular of ground conditions and the natural screening provided by the landform. The final design seeks to balance all of these individual considerations together.

2.2 Proposed Infrastructure (EIA Report Chapter 3)

The proposed development is described in detail in **Chapter 3: Description of Development** of the EIA Report. An outline Construction and Environmental Management Plan (CEMP) is contained in the EIA Report as **Technical Appendix 3.1**. The layout of the proposed development is contained in **Figure 3**. In summary the proposed development would comprise:

- 25 wind turbines including internal transformers, three with blade tip heights of 180m and 22 with blade tip heights of 200m;
- 25 turbine foundations (approximately 22.8m diameter) and associated crane hardstandings ((50m x 20m x 1m) with an area for additional temporary crane pad areas;
- approximately 12.1km of upgraded access tracks (Eishken Road widened to 5m), and approximately 16.5km of new access tracks with a typical running width of 6m (wider at bends and junctions) and associated drainage. 2.2km of the new track is anticipated to be floating track where consistent (50m distance or more) peat depths of over 0.5m or greater are identified along with shallow topography (below 5%) ;
- approximately 19.16km underground cabling along access tracks to connect the turbine locations, the onsite electrical substation; and
- one onsite substation which would accommodate 33kV Switchgear to collect electricity from different parts of the Site. The substation compound would have an area of 75m x 100m and would include a control and metering building (approximately 16m x 30m and 8m high); and
- two permanent meteorological (met) masts up to 122.5m in height. Each met mast would have a main foundation area of 3m x 3m, as well as four anchor points for supporting guy wires.

In addition to the above operational components of the proposed development, construction of the proposed development will also require:

- two temporary construction compounds (1.43ha and 1.20ha respectively); and
- up to five borrow pits (covering approximately 6.82ha);

The grid connection option does not form part of this application and, as is standard, a separate application under Section 37 of the Electricity Act 1989 will be required in relation to the grid connection point and cabling route.

2.3 Habitat Management Plan

An outline Habitat Management Plan (HMP) is provided as **Technical Appendix 8.5** of the EIA Report. It is anticipated that the document would be further developed, following the granting of consent, in discussion with CnES, Scottish Environment Protection Agency (SEPA) and NatureScot. The aim of the outline HMP is to establish the key objectives and principles by which parts of the Site would be improved and managed for the benefit of biodiversity, which would then form the basis for the more detailed HMP.

3.0 Benefits of the Development

3.1 Contribution Towards Government Targets

The proposed development would:

- make a meaningful contribution of at least 165MW towards meeting the renewable energy generation targets set out by the Scottish Government, such as the goal for Scotland to have an overall installed onshore wind capacity of 20GW by 2030;
- contribute towards the Scottish Governments goal for Scotland to have a fully decarbonised energy system by 2045;
- make a valuable contribution towards UK generation targets and the reduction in emissions of greenhouse gases, principally carbon dioxide, in becoming carbon neutral in approximately 1.5yrs (20.18 months) as demonstrated by the carbon calculator (**Technical Appendix 16.1** of the EIA Report); and
- make Scotland, and therefore the UK, less reliant on imported and price-volatile fossil fuels by generating the equivalent energy to supply the approximate domestic needs of 164,764 average UK households¹.

3.2 Community Shared Ownership

3.3 Community Benefit Fund

Should the proposed development gain consent, a Community Benefit Fund would be made available to the community of interest illustrated within the **Pre-Application Consultation (PAC) Report**. This is offered on the basis of a payment per MW of installed capacity at the Scottish Government recommended rate at the time of commissioning the proposed wind farm. At present, the recommended rate is £5,000 per MW. It is estimated that, depending on the type of investment selected, the community benefit fund alone would accrue benefits to the local economy of approximately £24.75 million over the 30 year life of the wind farm.

3.4 Other Economic Benefits

The applicant is also proposing to offer various other community benefit schemes, including a footpath improvement fund, paid apprenticeship schemes and an Eagle conservation programme. These community benefits are considered in more detail within **Chapter 14: Socio-economics, Tourism, Recreation and Land Use** of the EIA Report, in addition to the **PAC Report**.

4.0 Environmental Impact

4.1 Landscape and Visual Amenity (EIA Report Chapter 7)

EIA Report **Chapter 7: Landscape and Visual Amenity**, assesses the landscape and visual effects of the proposed development. The Landscape and Visual Impact Assessment (LVIA) was undertaken by experienced Landscape Architects from Land Use Consultants (LUC), following the Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3) produced by the Landscape Institute and Institute of Environmental Management and Assessment (2013). Following GLVIA3, landscape effects and visual effects were assessed separately.

Landscape effects relate to the potential changes to the physical aspects of an area, the landscape character, and how that landscape is experienced. Visual effects chiefly concern the potential for changes to the views experienced by people ('known as visual receptors').

The LVIA focused upon likely significant effects in addition to the baseline conditions (including existing operational wind farms). The cumulative assessment focused on the effects of the proposed development in addition to the baseline conditions (as above) in conjunction with future (i.e. consented and proposed) wind developments within the 45km Landscape and Visual Impact Assessment (LVIA) study area.

Mitigation of potential landscape and visual effects of the proposed development was an integral part of the design development process. This included assessment of different wind turbine layouts and sizes. Based on this assessment, the following key design mitigation measures were embedded:

- consideration of the appearance and proximity of the proposed development in views from South Lewis, Harris and North Uist National Scenic Area (NSA) and Eisein Wild Land Area (WLA) 31; and
- consideration of potential views from local communities and the wider landscape, including from VP16: Calanais Standing Stones – in particular, the visibility of turbine nacelles, some of which would require visible aviation lighting as detailed in **Technical Appendix 15.1: Aviation Lighting Report** of the EIA Report.

The design of the proposed development aims to achieve coherent and balanced turbine layout, in line with NatureScot guidance⁴. The objective in designing the wind farm was to develop a layout that responds to its setting in terms of landform and pattern, and which presents a simple visual image, avoiding the clustering of turbines and the isolation of outlying turbines in views from key locations and views from routes seen by a range of different receptors (people) of varying sensitivity, on balance with other environmental and technical constraints.

4.1.1 Predicted Landscape Effects

Seven Landscape Character Types (LCTs) and one Coastal Character Type (CCT) have been identified and assessed for potential landscape effects due to the proposed development. LCTs which were beyond 15km from the Site, and those with limited actual visibility within 15km of the Site, were not considered further within the assessment. Those character types assessed included:

- Prominent Hills and Mountains (LCT 326);
- Rocky Moorland – Outer Hebrides (LCT 323);
- Boggy Moorland – Outer Hebrides (LCT 322);

⁴ SNH (2017) Siting and designing wind farms in the landscape – version 3a

- Dispersed Crofting (LCT 319);
- Linear Crofting (LCT 318);
- Cnoc and Lochan (LCT 324);
- Gently Sloping Crofting (LCT 317); and
- Low Rocky Island Coasts (CCT 13)

The LVIA identifies that the proposed development would be visible from all eight of the LCT/CCTs detailed above, to a greater or lesser degree. The level of effect differs primarily due to: the level of intervening landform screening; their variable sensitivity to wind farm development; and the existing influence of operational wind farms. No significant adverse effects, as a result of the proposed development were predicted for any of the landscape character types (whereby each was assessed as a whole), however significant landscape effects are predicted for localised extents of five of the LCTs (LCTs 326, 323, 322, 319, 318) and the Low Rocky Island Coasts CCT.

4.1.2 Predicted Visual Effects

As identified by the ZTVs (EIA Report **Figures 7.2a-7.2c**), visibility of the proposed development would primarily be limited to the west and south by intervening landform within the study area. Within 5km of the Site, visibility of the proposed development would be relatively widespread. Within 10-15km, visibility would be relatively widespread to the north, east and south of the Site, although localised landform limits some views. Beyond 15km of the Site, visibility becomes more intermittent given screening by localised landform. Occasional theoretical visibility is indicated from north Lewis, including from the Calanais Standing Stones, elevated landform along the western edge of Stornoway, and from more distant communities on An Rubha (the Eye Peninsula). Visibility from the sea to the east, north east and south east of the Site is relatively widespread.

Of the 18 viewpoints assessed in **Chapter 7: Landscape and Visual Amenity** of the EIA Report, significant effects are identified at twelve viewpoints within the 45km study area for the operational phase:

- Viewpoint 1: Orasaigh (Orinsay);
- Viewpoint 2: B8060, east of the Site;
- Viewpoint 3: Beinn Mhòr ;
- Viewpoint 4: Taobh a' Ghlinne (Glenside);
- Viewpoint 5: B8060 near Tabost (Habost) Church;
- Viewpoint 7: Uisinis;
- Viewpoint 9 A859 near Lacasaigh (Laxay) Cemetery;
- Viewpoint 10: Todun ;
- Viewpoint 11: Liurbost;
- Viewpoint 13: A859 near Liurbost;
- Viewpoint 14: Acha Mor (Achamore); and
- Viewpoint 15: An Cliseam.

Not significant visual effects have been predicted for the remaining six representative viewpoints.

In views from the locations noted above, the proposed turbines would appear as evident features, sometimes seen against the skyline. Turbines would appear most evident in views from elevated locations within approximately 5km of the Site (VP3, VP7), and from relatively elevated extents of the minor road to the east of the site (VP2) within 5km of the Site. Intervening landform would partially screen turbines from lower-lying locations within approximately 5km of the Site, though the hubs and blades of turbines would form evident features against the skyline in views from these locations (VP1, VP4, VP5). From other lower-lying (VP9, VP11, VP13, VP14) and elevated (VP10, VP15) locations within 15km, turbines form evident features, albeit in more distant views.

4.1.3 Predicted Effects on Designated Landscapes

The proposed development is not sited within a designated landscape. The following nationally designated landscapes were identified within the 45km Landscape and Visual Impact (LVIA) study area:

- South Lewis, Harris and North Uist National Scenic Area (NSA);
- Trotternish NSA; and
- Wester Ross NSA.

Effects on the Special Landscape Qualities (SLQs) of the South Lewis, Harris and North Uist NSA were assessed in accordance with draft NatureScot guidance, as detailed within **Technical Appendix 7.3: Assessment of Effects on Special Landscape Qualities** of the EIA Report. One of the SLQs considered in the assessment was judged to experience significant effects within localised extents of the NSA. However, extensive areas of the NSA within which this SLQ is strongly expressed will not be significantly affected by the proposed development. The proposed development would not compromise the objective of designation and the overall integrity of the South Lewis, Harris and North Uist NSA.

There are no locally designated landscapes found across the Western Isles, whilst the closest locally designated Special Landscape Area (SLA) within the Highland region is approximately 27km from the site and was not included in the assessment.

One identified Garden and Designed Landscape (GDL) was identified within the 45km study area – located at Lews Castle and Lady Lever Park in Stornoway approximately 20km north east. Given the intervening distance and the presence of woodland which limits outward views towards the Site, potential effects on the GDL were not considered within the assessment.

4.1.4 Predicted Effects on Wild Land

There are no Wild Land Areas (WLA) within the site. Although not designated, WLA 31: Eisgein directly abuts the south western site boundary; and was assessed in accordance with NatureScot guidance⁵, as detailed within **Technical Appendix 7.4: Wild Land Impact Assessment** of the EIA Report. Two of the wild land qualities considered in the assessment were judged to experience significant effects within relatively localised extents of the WLA, within approximately 5km of the nearest turbine of the proposed development. However, these wild land qualities would not be affected in their entirety across the WLA. The proposed development would not affect the overall integrity of the WLA and is judged not to undermine the objectives for its protection.

4.1.5 Cumulative Effects

The LVIA also considers the potential for cumulative landscape and visual effects with other proposed wind farms (consented or the subject of a valid planning application); single turbines; a replacement overhead electricity

⁵ NatureScot (2020) Assessing impacts on Wild Land Areas - technical guidance

transmission line (at planning stage); alongside all other existing operational wind farms, wind turbines and the Eitshal TV transmitter mast.

4.1.6 Predicted Effects of Aviation Lighting

The LVIA considers the potential for landscape and visual effects to arise from the introduction of visible aviation lighting positioned on the nacelle of some of the proposed turbines. **Technical Appendix 7.5: Aviation Lighting Impact Assessment** of the EIA Report, sets out the assessment of effects for both landscape and visual receptors and is accompanied by representative photomontage visualisations from four assessment viewpoints (Viewpoints 2, 5, 11 and 15).

Technical Appendix 7.5 considers that due to the reduced lighting scheme proposed, which includes medium intensity 'steady' red (2,000 candela) lights on the nacelles of seven turbines only, significant landscape and visual effects associated with aviation lighting would be limited. However, significant visual effects are predicted to result from the introduction of 2,000 candela visible aviation lighting for three of the four assessed representative viewpoints (Viewpoints 2, 5 and 11).

4.2 Ecology (EIA Report Chapter 8)

EIA Report **Chapter 8: Ecology** evaluates the potential effects of the proposed development on habitats and non-avian species during construction and operation have been assessed.

A minimum radius of 2km was applied for records of protected or otherwise notable species (extended to 10km for bats) and non-statutory designated sites for nature conservation (extended to 15km for statutory designated sites).

4.2.1 Baseline Surveys

Baseline surveys were undertaken between June and October 2022 and in November 2022. Surveys undertaken included for UK Habitat Classification (UKHab); National Vegetation Classification (NVC); Protected and Notable Species (including bat and a range of terrestrial mammal species); and fish habitat assessment. All surveys were undertaken in accordance with relevant good practice guidelines.

There are no ecologically designated sites within the Site boundary. There are two statutory designated sites with non-avian qualifying features within 10km of the site boundary, including the Inner Hebrides and Minches Special Area of Conservation (SAC, designated for harbour porpoise) adjacent to the south boundary of the site; and Lewis Peatlands (RAMSAR, designated for blanket bog, lochs, lochans and wet heath).

The site was found to be predominantly characterised by:

- grassland (upland grassland, neutral grassland);
- woodland (mixed, broadleaved, coniferous);
- heathland and Scrub (upland dry heath, upland wet heath, gorse scrub, rhododendron scrub);
- wetland (blanket bog, degraded blanket bog);
- fen, marsh and swamps (purple moor grass, rush pasture, upland flushes, fens and swamps);
- rivers and lakes (acid peat-stained lakes and ponds, rivers); and
- urban (buildings and built linear features).

Several habitats within 250m of proposed infrastructure were identified as being potentially groundwater dependent, but a detailed assessment presented in **Chapter 10: Hydrology, Hydrogeology and Geology** of the EIA Report, confirmed that the distribution of these is not consistent with habitats sustained by groundwater,

but rather habitats predominantly sustained by the high average annual rainfall, surface water runoff and surface water ponding.

Brown Trout, juvenile Atlantic Salmon and European eel were recorded during surveys carried out to inform previous ESs (2004). Primary watercourses were assessed as being of value to salmonids and European eel.

Fish survey locations on, or discharging into, the Allt Cheothadail, which bisects the Site and flows into Loch an Eilein Liatha, were ranked as either High or Moderate fish habitat quality with spawning habitat potential. Survey locations on Abhain Scrihascro, found further north in the Site and discharging into Loch Eishken were ranked as Moderate for fish habitat suitability and sub-optimal for spawning habitat. Similarly, the survey locations on Abhainn Clearn Airighean Dhomhnail, situated slightly outside of the southern boundary of the Site but with the potential to be impacted by works, was ranked as having suitability for fish, but classed as not suitable in terms of spawning habitat. Overall, the Site does contain some habitat suitability to support fish and fish spawning, with the highest quality habitat situated on or around the Allt Cheothadail.

Common pipistrelle is the only species of bat known to be present on the Isle of Lewis, previously known to only occur around Stornoway (CnES Website). Although presence was confirmed on the Site (around the Eishken Lodge area) during the transect survey conducted in July 2022, the only potential roosting habitat was recorded in the woodland and buildings at the Eishken Lodge, which is within the Eishken Lodge works exclusion area, therefore well outwith 200m plus rotor radius of the turbine locations. However, given the limited number of confirmed colonies on Lewis, the Site is considered to be of some value for bats.

Otter activity was recorded during the July 2022 surveys, confirming otter presence within the Site. The larger watercourses within the Site (Allt Cheothadail and Abhainn Clearn Aighean Dhomhnail) and the banks of Loch Sealg and Loch Eishken provide suitable shelter opportunities, commuting and foraging habitat. The other watercourses on Site (Abhain Glas and Abhain Scihascro) and smaller lochs and lochans on Site provide some habitat suitable for commuting and foraging but with limited opportunity for shelter creation. The Site is of value to otter, however there is an abundance of good quality habitat in the surrounding area.

The Site lies within the Eishken Estate which is used for deer stalking, therefore deer are known to be present both within Site and in the wider area. Given the importance of deer to the estate, the Site is assessed as being of value for deer.

No amphibian species were noted incidentally during the protected mammal surveys. The habitat within the Site is not to be considered to be of particular importance for amphibians and no amphibians are known to be present on Lewis.

The slow worm is the only species of reptile recorded on Lewis. Slow worm was recorded incidentally in three locations during the protected mammal surveys in July 2022. These sightings took place within long grassland on the north bank of Loch Eishken and on the northern bankside of the Abhainn Cheothadail.

There are no historical records of water vole, red squirrel, badger or pine marten on Lewis and it is considered that they are absent from the island, therefore impacts were scoped out of the assessment.

4.2.2 Predicted Effects

The proposed development is not predicted to have any significant effects on the two designated sites within a 10km radius of the application boundary.

The proposed development has been designed to avoid flush habitats, watercourses and lochans, and areas of deepest peat as far as possible. However, some loss of bog habitat is unavoidable and the proposals would result in the total loss of up to 88.22ha of blanket bog, and wet and dry heath habitat. The loss would be compensated for through measures to restore and manage approximately 587ha of blanket bog and wet heath habitat – by means of fencing, ditch blocking and ground smoothing which would be delivered via the Habitat Management

Plan. The proposed development is not predicted to have any significant effects on Blanket Bog and Wet Heath habitats, once mitigation (through restoration) is applied.

It is clear from the survey that the majority of the watercourses within the Site offer good to high quality fish habitat. During construction design it will be important to ensure that suitable water crossings are put in place which follow current best practice and do not impede fish passage. It will also be important to ensure that Pollution Prevention Guidelines (PPGs) and the replacement Guidance for Pollution Prevention (GPPs) are followed and measures undertaken to minimise pollution of the aquatic environment. In order to ensure that the aquatic environment is safeguarded, it is recommended that a water quality monitoring plan is put in place encompassing electrofishing, macro-invertebrate sampling and chemical monitoring of the main watercourses within the Site, prior to, during and post-construction, and that this is agreed with the Outer Hebrides Fisheries Trust (OHFT) and Western Isles District Salmon Fisheries Board (WIDSFB).

In most cases, a minimum 50m buffer has been ensured between all proposed infrastructure and the watercourses (other than watercourse crossings). No works (other than watercourse crossings) are proposed on the banks of a watercourse. With the implementation of good practice pollution prevention measures (**Chapter 10: Hydrology, Hydrogeology and Geology** of the EIA Report) the likelihood of a pollution event affecting fish within downstream watercourses is considered to be low. Therefore, no significant effect on salmonids or other fish species of conservation concern is considered likely.

To ensure compliance with the Wildlife and Countryside Act 1981, mitigation will be required to reduce the chances of inadvertently killing or injuring individual reptiles during construction works. Given the large spatial scale of the works, fencing and translocation are not considered appropriate. Proposed mitigation therefore involves habitat management through the identification of suitable sheltered and protected habitats.

Construction activities have some potential to cause temporary disturbance to otters which may use some of the watercourses and waterbodies on and around the Site for foraging and commuting. This disturbance would likely be via noise and human presence. However, there is in most cases, a 50m minimum stand off to infrastructure to watercourses and the Site lies within the Eishken Estate which is utilised for game shooting, fishing and deer stalking. Otters have large home ranges and are able to adapt to a certain level of human disturbance (Chanin, 2003) and as such, the likelihood of potential disturbance to otter is low, and no significant effects are considered likely.

No evidence of water vole, red squirrel, badger or pine marten were recorded, and therefore no significant effects upon these species are likely. A pre-construction update survey would be undertaken for these species to check for subsequent colonisation of the Site and mitigation measures would be developed, if required, if protected mammal species are found to have colonised the Site.

The estimated density of red deer on the wider Eishken Estate is 10.8 deer/km². Deer welfare is unlikely to be significantly affected by construction activities, as the surrounding areas will continue to offer places for food and shelter such as the moorland areas within the Site away from the construction footprint. Good practice measures put in place for deer during construction, specifically safe storage of materials and covering of excavations/providing a means of escape would also protect deer from harm during construction. It is also considered unlikely that construction activities would cause increased road traffic collisions. This is because the majority of the Site is distant from any public roads, and because the number of deer potentially displaced would be low. The existing Eishken Road joins the A859 to the north, however there is a large area of suitable habitat between the proposed turbines (and other infrastructure) and the A859, such that deer would be unlikely to be displaced onto the road. There would also be an increased presence of construction vehicles on the existing Eishken Road, however a Site speed limit of 15mph would be implemented, which would minimise the likelihood of deer traffic collisions within the Site.

Further detail on proposed management of deer and grazing regime to counter grazing pressure are set out within **Technical Appendix 8.5: outline HMP**.

No significant effects are predicted for any other protected or notable animal species, and no potential significant cumulative effects were identified.

Peat restoration is proposed for some degraded peat habitat within the wider Site, and for habitats disturbed during construction. This will comprise the restoration of borrow pits and reinstatement of wet heat in accordance with **Technical Appendix 10.2: Peat Management Plan**. Blanket bog will be restored through 'ditch-blocking' of five blanket bog areas on the Site, ensuring the exclusion of deer and other grazers from high, steep ground in the south and west of the Site between October and March.

For the sensitive areas where peat restoration is proposed, hydrological monitoring will be undertaken pre-construction (to provide a baseline) and at regular intervals post-construction to monitor water table height to monitor the effectiveness of habitat restoration measures outlined within the **Technical Appendix 8.5: outline HMP** and will inform the requirement for any further remedial measures.

4.3 Ornithology (EIA Report Chapter 9)

EIA Report **Chapter 9: Ornithology** of the EIA Report evaluates the effects of the proposed development on Ornithological Receptors. The bird interests of the Site have been assessed using current NatureScot and Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines. Additional consultation was undertaken with NatureScot through direct engagement as well as via the formal Scoping process.

4.3.1 Baseline Studies

Baseline studies and surveys took the following into account:

- sites designated for their bird interest - i.e. Lewis Peatlands Special Protection Area (SPA), Shiant Isles SPA; North Harris Mountains SPA and West Coast of the Outer Hebrides marine SPA; and
- target bird species potentially affected by the project, such as species of European conservation importance (as listed on Annex I of the Birds Directive) and species listed in Schedule 1 of the Wildlife & Countryside Act, and species considered to be of principal importance for biodiversity in Scotland.

The following field surveys were undertaken:

- flight activity (vantage point) surveys – undertaken from September 2017 to March 2019 and March 2022 to March 2023;
- breeding wader surveys – undertaken from April to June 2018 and April to July 2022; and
- breeding raptor and diver surveys – undertaken from February to July 2018 and March to August 2022.

4.3.2 Evaluation

Based on the results of field surveys and other available data, construction and operational impacts on the following Important Ornithological Features were assessed:

- Black-throated diver;
- Golden eagle;
- White-tailed eagle;
- Merlin;
- Greenshank;
- Golden Plover; and

- Dunlin.

All designated sites were scoped out of the assessment based on an identified lack of connectivity of qualifying features with the Site.

4.3.3 Predicted Effects

Black-throated Diver

Black-throated divers were recorded breeding within the ornithology study area. The assessment concluded that the unmitigated effect on the breeding black-throated diver population as a result of operational displacement (including substation lighting) would be significant.

Mitigation in the form of introducing artificial nesting rafts for black-throated diver has been recommended to address displacement effects by increasing breeding success and productivity for the species. A minimum of two artificial rafts will be installed on suitable lochs on or adjacent to the Site and will be monitored and maintained throughout the operational period. Restrictions would be placed on the substation lighting to reduce the risk of displacement of breeding birds. The success of these management interventions would reduce the level of effects to not significant.

Golden Eagle

The Site is likely to overlap with at least two golden eagle breeding territories, and effective loss of habitat is likely to result due to the presence of operational turbines. A risk of collisions also exists. The assessment concluded that unmitigated construction and operational effects on the golden eagle population would however not be significant, primarily due to the continued favourable conservation status of the Outer Hebrides population.

White-tailed eagle

White-tailed eagle activity has increased in the local area in recent years, and it is considered that there are currently five territories within 6km of the Site. Satellite tag data and flight activity survey results have shown that most of the Site is likely to be of relatively lower importance for foraging compared to some areas outwith the Site. Much activity is concentrated around higher slopes, lochs, and in particular around the Loch Sealg sea loch to the south of the Site.

Collision risk modelling for the proposed development predicted an unmitigated annual collision rate that reached significance at a population level.

Two operational mitigation measures are proposed which would aim to reduce the risk of white-tailed eagle collisions (and also likely golden eagle collisions). These are:

- removal of deer and livestock carcasses from the vicinity of operational turbines; and
- painting black single blades of seven selected turbines in order to increase visibility to birds in flight.

Discussions with NatureScot will continue to progress on the topic of the proposed painted blade mitigation together with landscape balance considerations, which are detailed in full within **Chapter 9: Ornithology** and **Chapter 7: Landscape and Visual Assessment** of the EIA Report and associated technical appendices.

An Eagle Conservation Programme will also be set up prior to the commencement of construction – the scope of which will be confirmed via consultation with relevant conservation organisations and eagle experts.

Unmitigated effects on all other Important Ornithological Features assessed (merlin, greenshank, golden plover and dunlin) were predicted to be not significant. The proposed Habitat Management Plan would however likely benefit these and other species.

4.4 Hydrology, Hydrogeology, and Geology (EIA Report Chapter 10)

Chapter 10: Hydrology, Hydrogeology and Geology of the EIA Report evaluates the effects of the proposed development in relation to the potential effects on hydrology and hydrogeology (i.e. the water environment), geology (including peat), and soils during construction, operation, and decommissioning.

The primary access to the Site is from the Eishken Road via the primary A859 spine road connecting Lewis and Harris. The proposed development has sought to utilise existing tracks and access where possible, however 21 new permanent watercourse crossings will be required for the proposed tracks to the proposed turbines within the application boundary. 33 existing watercourse crossings will be upgraded and used.

New permanent bridges over Abhainn Cheothadail (WX48) and the Seaforth River (WX11) will be required to reinforce the access route for potential Abnormal Indivisible Loads (AIL) should the A859 route from Arnish Port at Stornoway be utilised for delivery of turbine components.

Information on the study area was compiled using baseline information from previous assessments, and a desk study to ensure a contemporary assessment was prepared. The desk study was then verified by an extensive programme of field work prior to completion of the assessment. The assessment was undertaken considering the sensitivity of identified receptors and also considering mitigation measures incorporated as part of the site design (embedded mitigation). A number of peat probing campaigns have been completed and these have been used to inform the Site design. The proposed turbines have been located in areas of shallow peat, avoiding siting any turbines on peat depth greater than 1m wherever possible.

A hazard impact assessment concluded that, subject to the employment of appropriate mitigation measures, the presence of peat and potential peat slide instability are not development constraints.

The proposed development has subsequently undergone design iterations and evolution in response to the geological, hydrological and hydrogeological constraints identified as part of the baseline studies and field studies so to avoid and/or minimise likely effects on receptors where possible. This has included areas of deep peat or potential peat instability, watercourse/feature locations and buffers to these, areas of potential flooding, Private Water Supplies (PWS) and Ground Water Dependent Terrestrial Ecosystems (GWDTE).

A site specific Peat Landslide Hazard Risk Assessment (PLHRA) concluded that, subject to the employment of appropriate mitigation measures, the presence of peat and potential peat slide instability are not development constraints. A Peat Management Plan (PMP) has been prepared which shows that the policy aims of NPF4 are met and that deposits of peat can be safeguarded and used in restoration of the Site.

With regard to hydrology, hydrogeology and geology (including peat), no significant effects were identified.

4.5 Cultural Heritage and Archaeology (EIA Report Chapter 11)

Chapter 11: Cultural Heritage and Archaeology evaluates the potential direct and indirect impacts of the proposed development on Cultural Heritage assets. The assessment has been undertaken in accordance with national legislation, national and local government policies and guidance documents of the Chartered Institute of Archaeologists (CIfA). To complete the assessment, Historic Environment Scotland (HES) and the CnES Historic Environment Team (CnESHET) (including the Western Isles Archaeological Service) were consulted regarding heritage assets within their respective remits.

4.5.1 Study Areas

A baseline study was conducted, with a study area comprising the Site and a 10km buffer from the turbine locations. The 10km Study Area has ensured that the potential for the proposed development to have a significant effect upon any designated assets of national/regional importance within the vicinity of the Site has been considered. Further specific assets, outwith the study area, have been included for assessment following

consultation with HES, at which point a refined list of nationally important assets to be included within the assessment was agreed.

The EIA Report includes a consideration of the operation effects upon the four nationally important heritage assets agreed upon by HES and CnESHET. Designated assets that were assessed included:

- Calanais or Callanish Standing Stones complex;
 - Scheduled Monument (SM90054) 21km north west of T3. Mor Mhonadh, Guineamol and Sidhean an Airgid the ‘Sleeping Beauty’ mountain range, set approximately 4.2km to the west of Turbine 12;
- Sideval Stone Circle;
 - Scheduled Monument (SM5351) 4km north west of T3;
- St Columb’s Church, Eilean Chaluim Chille;
 - Scheduled Monument (SM5345) 8.9km north east of T2;
- Dun Cromor, broch, Loch Cromore; and
 - Scheduled Monument (SM1670) 9.6km north east of T7.

There are no designated heritage assets within the Site or within 1km of the Site. There are three heritage assets of national importance within the 10km Study Area and one heritage asset of regional importance within 5km of the Site. Not all of these assets have been carried forward for further assessment, with potential effects scoped out in agreement with consultees.

4.5.2 Predicted Effects

Of the four assets scoped into the assessment, the assessment identified that the only asset setting of which would be affected would be the Calanais Complex (SM90054). This is due to a very minor intrusion of the proposed turbines which would be present within the distant skyline of the asset’s setting to the southeast, to the east of the mountain ridge complex known as the ‘Sleeping Beauty’ or ‘Old Lady of the Moors’. The inclusion of the turbines within the backdrop of the setting would be not significant in EIA terms.

Overall, the proposed development would be compliant with relevant policy and guidance, including the NPF4, Historic Environment Policy for Scotland (HEPS) and the CnES Outer Hebrides Local Development Plan (2018).

Mitigation in relation to the heritage assets within the Study Area has largely been embedded into the design of the proposed infrastructure, to reduce the risk of direct impacts wherever possible.

With regard to further mitigation to be implemented as a condition to consent, the undertaking of an archaeological watching brief during construction phase will ascertain the absence/presence of unknown assets in the vicinity that may relate specifically to the construction of the access tracks on assets including SLR179 (unknown potential archaeological remains related to the Mackenzie Clan); SLR114 and 135 (field systems); SLR136 and 138 (blackhouses); SLR139 and 158 (field boundaries, wall and dyke); SLR159 and 55 (road bridges); SLR11 and 22 (sheilings); and SLR102 linear stones.

This includes a watching brief where the access road shall be widened within the region of Seaforth Headland. This area is of archaeological interest for settlement activity related to the Clan Mackenzie during the 17th century, and is of interest to local people and the Kinloch Historical Society. The precise scope of the mitigation works would be negotiated with the Western Isles Archaeological Officer and an agreed mitigation program would be documented in an approved Written Scheme of Investigation (WSI).

No assets met the criteria to be assessed for cumulative effects. Potential cumulative effects were therefore not considered with regard to wind farm developments, with the assessment concluding that the proposed

development would not form any significant effects in EIA terms and would therefore not contribute to any significant cumulative effects (the only asset concluded to have potential effects was the setting of Calanais Standing Stones – on distant skyline to the south east, assessed to be not significant).

Post-operational effects were considered, and no significant effects were predicted, assuming the decommissioning process would not cause any additional ground disturbance and the land within the Site would return to its pre-development state.

The EIA Report concluded that there are no effects on cultural heritage assets from the proposed development that would be significant in EIA terms.

4.6 Site Access, Traffic and Transport (EIA Report Chapter 12)

Chapter 12: Site Access, Traffic and Transport of the EIA Report examines the transport and access issues associated with the proposed development and considers the likely significant effects on transport and access associated with the construction, operation, and decommissioning phases.

4.6.1 Baseline

The study area for the focus of the assessment includes the local road network that is likely to experience increased traffic flows resulting from the proposed development during the construction phase. The study area for the assessment has therefore been assumed to be:

- the A859 between Tarbert and Stornoway; and
- the Eishken Road from its junction with the A859 to Eishken Lodge.

Access to the proposed development from the A859 would be taken from the unclassified Eishken Road (also adopted road) just to the south west of the A859/B8060 junction.

The A859 is the main road which connects Stornoway, in the north-east, to Rodel, in the south. The A859 is a single carriageway road which is generally subject to the national speed limit, however, this reduces through towns and villages and is maintained by the CnES. There are no trunk roads on the island.

Eishken Road is an unclassified single-track road, running from its junction with the A859 to Eishken Lodge, intersecting the Site. The road is approximately 12km in length and has passing places throughout its length. In the vicinity of the junction with the A859, the road is signposted as having an 8-tonne maximum gross weight limit in place for vehicles.

Arnish Point Access Road (potential to be used for Abnormal Indivisible Loads (AIL)) routes between the Arnish Point Dock, which includes the Arnish Fabrication Facility and the A859. The road is a two-way single track road measuring approximately 3.3m – 3.8m in width, with passing places located along its length.

In order to assess the impact of construction traffic on the study area, Annual Average Daily Traffic (AADT) flows were obtained from the Department for Transport (DfT) traffic database. DfT traffic data allow the traffic flows to be split in vehicle classes. The data was summarised into Cars/Light Goods Vehicles (LGVs) and Heavy Goods Vehicles (HGV) - goods vehicles >3.5tonnes gross maximum weight.

The traffic count sites used were as follows:

- A859 at Loch Sanndahat (Count Site Reference 91285);
- A859 east of Kinloch (Count Site Reference 80413);
- A859 at Loch Seaforth (Count Site Reference 30948); and
- A859 at Tarbert (Count Site Reference 10948).

These sites were identified as being areas where sensitive receptors on the access routes would be located. **Table 4-1** below summarises the traffic count data for the identified sites:

Table 4-1: 24-hour Average Traffic Data (2021)

Receptor	Cars / LGV	HGV	Total	% HGVs
A859 at Loch Sanndahat	2,999	108	3,107	3.48%
A859 east of Kinloch	1,626	255	1,881	13.56%
A859 at Loch Seaforth	673	55	728	7.55%
A859 at Tarbert	891	314	1,205	26.06%

Please note that variances may occur due to rounding.

4.6.2 Road Safety

A total of 19 Personal Injury Accidents (PIAs) were recorded within the study area within the last five-year period. Of those 19 accidents, 12 were “Slight” (63%), 6 were “Serious” (32%) and 1 was “Fatal” (5%).

It was established that there are no specific road safety issues within the immediate vicinity of the proposed development that currently require to be addressed or would be exacerbated by the construction of the proposed development.

4.6.3 Sensitive Receptors

A review of sensitive receptors was undertaken within the study area based on the review of baseline conditions – and sensitivity for each was identified for use within the assessment. In traffic and transport terms, examples of sensitive receptors would be road users within the study area (including identified locations through which identified roads pass).

Based on the indicators stated within the IEMA Guidelines, the following locations are identified as sensitive receptors in this assessment due to the presence of schools, churches or medical practices, as well as paths:

- Stornoway;
- A859 at Leurboist;
- Tarbert; and
- Core Path / Public Right of Way Users.

4.6.4 Cumulative

No consented developments within the vicinity of the proposed development were considered to potentially generate significant traffic as to be considered as part of any cumulative assessment. Those consented included Balallan-Stornoway 132kV Overhead Line Replacement; Stornoway Deep Water Port Development, Ardvourlie Mountain Bike Trails (Scaladale, Harris); nor Marybank Quarry Extension.

4.6.5 Assessment

An indicative 36-month construction programme has been prepared and is set out within a construction timeline in **Chapter 3: Description of Development** of the EIA Report. Trip generation across the indicative construction period was calculated concluding that month 23 is the peak for construction activities. The activities are

anticipated to generate an average of 200 movements per day (100 trips in and 100 trips out), of which 108 two-way trips would be made by light vehicles (Site staff, etc.) and 92 two-way trips made by HGV.

Table 4-2: Peak Construction Month Daily Traffic Data

Receptor	Cars / LGV	HGV	Total	% HGVs
A859 at Loch Sanndahat	76	58	134	43.28%
A859 east of Kinloch	76	58	134	43.28%
A859 at Loch Seaforth	32	36	68	52.94%
A859 at Tarbert	32	-	32	0.00%

The peak month traffic data was combined with the future year (2027) traffic data to allow a comparison between the baseline results to be made. The increase in traffic volumes is presented in percentage increases for each class of vehicle and is illustrated in **Table 4-3**. Please note there may be minor rounding errors quoted in the tables.

Table 4-3: 2027 Peak Month Daily Traffic Data

Receptor	Cars / LGV	HGV	Total	Cars & LGV % Increase	HGV % Increase	Total Traffic % Increase
A859 at Loch Sanndahat	3,171	169	3,340	2.46%	52.04%	4.18%
A859 east of Kinloch	1,754	321	2,075	4.53%	22.04%	6.90%
A859 at Loch Seaforth	727	93	819	4.61%	63.42%	9.05%
A859 at Tarbert	952	324	1,276	3.48%	0.00%	2.57%

The total traffic movements are not predicted to increase by more than 10% on all of the study network, with the highest being on the A859 at Loch Seaforth, with an increase of 9.05%.

The highest total HGV traffic movements increase will be on the A859 at Loch Seaforth, with an increase of 63.42%. Whilst this increase could be considered high, it is generally caused by the relatively low HGV flows on the A859 at this location. The increase would see an additional 58 HGV journeys per day (29 inbound and 29 outbound). Over the course of a typical 12-hour day on Site, this would equate to approximately five movements per hour, which is not considered significant.

All HGV traffic accessing the Site will be required to use the unclassified (adopted road) Eishken Road. This would result in approximately 92 HGV journeys per day (46 inbound and 46 outbound), which would equate to approximately eight movements per hour over the course of a typical 12-hour day on Site. It should be noted however, that the peak of construction is short-lived and transitory in nature and occurs over a short time frame when taking account of the whole construction programme.

4.6.6 Statement of Significance

The proposed development will lead to a temporary increase in traffic volumes on the study area during the construction phase. Traffic volumes will fall considerably outside the peak period of construction.

No capacity issues are expected on any of the roads within the study area from additional construction traffic movements associated with the proposed development, as background traffic movements are low, the links are of a reasonably good standard and appropriate mitigation is proposed. The effects of construction traffic are temporary in nature and are transitory.

A review of the road network has been undertaken to assess the feasibility of transporting turbines to the Site and no significant issues have been noted.

Traffic levels during the operational phase of the proposed development will be one or two vehicles per week for maintenance purposes. Traffic levels during the decommissioning of the proposed development are expected to be lower than during the construction phase as some elements may be left in situ and others broken up onsite.

With the implementation of recommended mitigation in the form of a Construction Traffic Management Plan (CTMP); general road maintenance; improvement works on the Eishken Road; AIL route improvements; an Abnormal Load Transport Management Plan; an onsite Path Management Plan; and a Site Travel Plan - all construction phase effects are therefore considered to be not significant.

4.7 Noise (EIA Report Chapter 13)

Chapter 13: Noise of the EIA Report evaluates the effects of noise due to the proposed development. The construction, operation and decommissioning of wind energy schemes can have an impact on nearby noise-sensitive receptors (i.e. properties which are potentially sensitive to noise and, as such, may require protection from nearby noise sources). However, disruption due to construction is a localised phenomenon and is temporary and intermittent in nature. Predictions have shown there would be minimal impact during this phase of the development.

Onshore wind turbine developments generally occur in rural location where background noise levels can be low, and therefore wind turbines can be audible. Noise limits are set in accordance with the guidance document ETSU-R-97 to protect the amenity of residents living close to the turbines.

THE ETSU-R-97 guidance establishes noise limits in relation to existing background noise levels. ETSU-R-97 guidance allows for a higher noise limit at properties which are financially involved with a proposed development.

Predictions for a candidate wind turbine have been undertaken in accordance with the calculation methodology in ISO9613-2. The methodology is considered to provide realistic predictions of wind turbine noise based on suitable input parameters as outlined in the Institute of Acoustics Good Practice Guide.

In the case of the proposed development, Keepers Cottage (NSR06) is the nearest receptor which does not have financial involvement. There are large separation distances between the turbines and this residential receptor, such that the noise levels will fulfil the simplified criterion of a fixed limit of 35 dB L_{A90} at this and more distant locations.

The dwellings situated within the Eishken Estate Lodge Exclusion Zone, represented by Loch Shell House (NSR01) to Glenburn Cottage (NSR05), are financially involved with the proposed development and therefore have a minimum noise limit of 45 dB L_{A90} .

Therefore, fixed noise limits were applied at NSR06 of 35 dB L_{A90} , in accordance with the ETSU-R-97 simplified methodology; and at NSR01 to NSR05 of 45 dB L_{A90} , as the minimum limit applicable to financially involved properties. This approach was raised in the consultation letter to CnES dated 19 December 2022 and subsequently agreed after the provision of further information regarding the financial status of the dwellings within Eishken.

The noise assessment provided in **Chapter 13: Noise** of the EIA Report concludes that operational wind turbine noise levels from the proposed development would not exceed the ETSU-R-97 noise limit at any receptor. For any given wind speed and would therefore be not significant.

For the proposed development, the effect of construction and decommissioning noise, including construction traffic, is predicted to be not significant and no specific mitigation measures are considered necessary. The cumulative noise from the other consented or proposed wind turbines in proximity to the proposed development would not cause an increase to the operational or construction noise levels predicted through the assessment, and therefore would not lead to significant effects. The operational and construction noise from the proposed development would not add cumulatively to noise from other wind developments.

4.8 Socio-Economics, Tourism, Recreation and Land Use (EIA Report Chapter 14)

Chapter 14: Socio-Economics, Tourism, Recreation and Land Use of the EIA Report evaluates the likely socio-economic effects, including recreation, tourism and land use effects, associate with the proposed development.

The assessment has been broken down into two phases, construction (approximately 36 months) and an operational period of 30 years.

4.8.1 Study Area

For the purposes of the assessment, the 'socio-economic' and the 'tourism, recreation and land use' issues are separated to better reflect the differing geographic areas that each would be most felt. For the socio-economic aspect, a Wider Study Area (WSA) has been set at the area of the Western Isles Council administrative area but referencing Scotland as a whole where relevant. These impacts are those related to an increase of investment through the spending related to the proposed development, as well as the increase in jobs related to its construction and operation.

When assessing the impacts on tourism, recreational and land use receptors, the study area is more refined to reflect a local scale represented by Local Area of Influence (LAI) to reflect the geographic area of these receptors over a 15km radius, encompassing a number of settlements along the A859, taking into account potential disruption to routes and venues used by tourists. Examples of tourism, recreation and land use receptors impacted by the proposed development could include tourism attractions (i.e. historical sites), recreational assets (i.e. footpaths or cycle routes), and land use receptors, which considers the current usage of land.

Competition for accommodation was identified as an existing issue in the Western Isles. The LAI would not offer enough accommodation for the construction workers to be reliably housed, so Stornoway (20km to the north east) was chosen as a third study area related entirely to accommodation venues. This is considered to give a better representation of where the construction workers would be accommodated during the construction period, however, this study area would not include recreational or tourist receptors, such as activity centres or distillery, as these would not be impacted at this distance from the construction or operation of the proposed development.

4.8.2 Economy

Expenditure during the pre-development, construction and commissioning phase of the proposed development was estimated to be approximately £165 million, from which businesses within the local area and Scotland as a whole would benefit directly and indirectly through expenditure on materials and services, and spending by employees.

The economic and employment impacts were assessed in terms of their effects on the local and national labour markets to allow for an understanding locally, and at a national scale. The proposed development is expected to generate a net total of £2.54 million Gross Value Added (GVA) in the local WSA economy over the 3-year

construction period. On a national scale, the Scottish economy would be expected to benefit by a net additional £24.57 million GVA produced over the 3-year construction.

4.8.3 Employment

Over the 3-year construction and installation phase, a gross total of 49.7 person-years of gross temporary employment is predicted to be generated in the local WSA, amounting to an average of 16.6 workforce jobs per annum.

During the operational phase, it is likely that 5 – 9 permanent direct jobs would be needed to operate and maintain the proposed development. In addition, between 20 and 25 overall indirect jobs are anticipated to be created through supply chain effects within the WSA. Using mid-point estimates of 7 direct and 23 indirect operational jobs, a total of 30 permanent jobs within the local WSA is estimated to be created.

Supply chain businesses that could benefit in the local and Scottish economy includes for waste management, aggregates supply, forestry services, equipment hiring, fencing and catering. The applicant would employ good practice measures with regard to maximising local procurement, including the implementation of a Local Contractor Policy, where weight is given in tendering to primary contractors that show a clear commitment to increasing local content in their supply chains.

4.8.4 Accommodation

A number of published studies indicate that the presence of the proposed development would not have a deterrent effect on people visiting the area (or demand for accommodation) once the wind farm is operational.

However, as housing is scarce in Lewis, adverse effects related to competition for accommodation between construction workers and tourists may occur, resulting in a lower housing availability for tourists during the peak summer season. The implementation of an Accommodation Strategy (which could include the delivery of temporary homes for construction workers) has been considered for mitigating the impacts - which, if adhered to, would result in no significant effect.

4.8.5 Tourism and Recreation

Bird watching was highlighted through consultation feedback as a major draw for draw for tourism visitors to the islands, in the form of paid, guided tours or informally by self-exploring the islands. No bird watching activity pertaining to the Site itself was found from desk-based research and it is considered that the Western Isles have ample alternative facilities and sites for bird-watching which are already popular with tourists, resulting in no significant effect.

The A859 is considered to be a tourism asset as a scenic road used by tourists – the National Cycle Route and the Hebridean Way and Birds of Prey Trail footpaths also route along the A859. No significant effects are expected as a result of the construction, subject to appropriate good practice management of construction traffic along access roads to and within the Site – which will be achieved by the implementation of a Construction Traffic Management Plan (CTMP). Beneficial effects in the local area (also not significant) may be experienced by accommodation businesses and shops supplying goods and services to construction workers.

The visual amenity of the A859 tourist route and the associated NCN Route, Hebridean Way and Birds of Prey Trail, as well as the Stiomrabhaigh Heritage Path could be impacted during the operational phase and as such, assessment relied upon the results of the Landscape and Visual Amenity Chapter of the EIA Report. The brief intermittent nature of views in respect of the entirety of the route are not thought to result in a loss of recreational value nor be of a scale to deter tourists and constitutes a non-significant effect. The Stiomrabhaigh Heritage Path is located close to the Site, however, visual impacts do not necessarily mean socio-economic impacts - studies undertaken in respect of other wind farm projects showed their presence resulted in no

difference in the attitude of walkers or other visitors in relation to their willingness to revisit and a non-significant effect.

4.8.6 Land Use

The recreational utility of Eishken Lodge would be impacted during the construction phase for guests, and access leading to the Lodge would be heavily restricted during the construction. However, as the landowner is directly involved with the proposed development and would be benefiting from its construction, coupled with the construction being a temporary impact, this is deemed a not significant result.

The operational phase may result in a loss of amenity or usage due to the presence of the turbines on the land, however, as the landowner is directly with the proposed development it is deemed that this is a not significant effect.

4.9 Aviation (EIA Chapter 15)

An assessment has been carried out to understand the potential impact of the proposed development on aviation related infrastructure in **Chapter 15: Aviation** of the EIA Report.

The assessment of potential effects on aviation and radar considers the potential for technical impacts and the operational acceptability of any such impacts. Rather than following an EIA process of assessing the significance of effects, the primary consideration is the actual or likely position of the specific aviation stakeholders. The assessment of effects on these receptors is therefore one of technical analysis and consultation and seeks to identify if any identified effects are likely to be 'acceptable' or 'not acceptable' to the asset owner, and if not acceptable establish any potential technical mitigation solutions.

4.9.1 Baseline

The Site lies under an area of uncontrolled airspace, approximately 22km south west of Stornoway Airport. It is remote from all lower airspace airways and within a low priority military low flying zone. The Site is beyond the limits of the obstacle limitation surfaces associated with the nearest airport at Stornoway, but it is within the safeguarding zone for Stornoway Airport instrument flight procedures.

4.9.2 Study Area

The consultation process has considered all military and civil aerodromes in the wider area out to circa 60 km, all radar installations out to the limit of their range, all navigational aids, air-ground-air communications stations and low flying activities.

4.9.3 Consultation

Consultation was undertaken with the following aviation stakeholders, within the scoping and EIA process:

- The Ministry of Defence (MOD), through the auspices of the Defence Infrastructure Organisation (DIO);
- Edinburgh Airport;
- Glasgow Airport;
- Glasgow Prestwick Airport;
- Aberdeen Airport;
- Highlands and Islands Airports Limited (HIAL);
- Met Office; and

- NATS Safeguarding.

Aberdeen Airport, Edinburgh Airport, Glasgow Airport, Glasgow Prestwick Airport and the Met Office Stated that the proposal is located outwith their consultation zones. As such they had no objection or comment to make. NATS stated that it had no objection to the proposed development.

Highlands and Islands Airports (HIAL)

HIAL responded to the ECU in July 2022 requesting the undertaking of an Aviation Impact Feasibility Study (AIFS) to understand any impact on the infrastructure and operation of Stornoway Airport – including assessment of Instrument Flight Procedures (IFPs); and Aviation Lighting requirements.

An IFP Safeguarding assessment reported in December 2022, found that the proposed wind farm would have no impact on Stornoway Airports Instrument Flight Procedures (IFPs).

Ministry of Defence (MoD)

The MoD responded to the ECU in August 2022 requesting that aviation safety lighting be fitted, in accordance with the Air Navigation Order 2016, due to the Site being located within Low Flying Area (LFA 14) – where aircraft are permitted to fly down to 250 feet above ground level obstacles.

Aviation Lighting

An aviation lighting design compliant with the MOD and CAA requirements, was issued to key aviation consultees for comments and approval in June 2023.

The Aviation Lighting Study concluded that a cardinal lighting scheme was most effective in balancing the visual impacts of lighting with aviation safety. This will result in 7 of the peripheral turbines being lit from dusk until dawn, subject to agreement with the UK Civil Aviation Authority (CAA). Aviation Lighting was also assessed as part of **Chapter 7: Landscape and Visual Impact Assessment**.

4.10 Other Issues (EIA Report Chapter 16)

Chapter 16: Other Issues of the EIA Report evaluates the effects of the proposed development on Other Issues, including:

- Shadow Flicker;
- Climate Change and Carbon Balance;
- Telecommunications;
- Television Reception; and
- Risk of Accidents or Disasters.

4.10.1 Shadow Flicker

Shadow flicker may occur under certain combinations of geographical position and time of day, when the sun passes behind the rotors of a wind turbine and casts a shadow over neighbouring properties. As the blade rotate, the shadow flicks on and off, an effect known as shadow flicker. The effect can only occur inside buildings, where the flicker appears through a window opening.

Seven properties sit within the shadow study area and were assessed for shadow flicker effects. The shadow flicker study area is defined as 10 rotor diameters (plus 75m micro-siting), which equates to 1,625m, and 130 degrees either side of north. The properties within the shadow flicker study area are:

- Loch Shell House ;
- The Cottage;

- Residential Dwelling;
- Burnside Cottage;
- Residential Dwelling;
- Eishken Lodge; and
- Glenburn Cottage.

All of these properties are financially involved with the proposed development and are located within the wider Eishken Estate land ownership.

Based on professional judgement and taking guidance from legislation found in other countries, the shadow flicker assessment has adopted a criterion of 30 hours of shadow flicker in one year as a significant threshold⁶. Where less than 30 hours of shadow flicker is predicted to occur in one year at a particular property, this is considered to be not significant.

The shadow flicker assessment set out in **Chapter 16: Other Issues** of the EIA Report, shows that all properties assessed could potentially experience over 30 hours of shadow flicker per annum. Based on the assessment criteria, the effects on these properties would be significant without mitigation. It is however more likely in practice that actual hours of shadow flicker would be considerably less than this due to the wind not always blowing and the sun not always shining at the assessed locations on the Isle Of Lewis. Given adjustments for likely sunshine hours (outlined within **Table 16-3** within **Chapter 16: Other Issues**), annual hours of shadow flicker anticipated at all properties is calculated significantly under 30 hours.

The applicant is committed to promptly investigating any complaints of shadow flicker and taking appropriate action as required. This would comprise an investigation which considers the weather conditions at the time of the alleged shadow flicker, to determine which turbines were, or were not, creating the effect and the extent of the shadow flicker created. If the investigation confirms a loss of residential amenity at any location, the technical mitigation measures built into relevant turbines would be activated. The shadow flicker control module consists of bespoke software, a clock, a timer, a switch, a wind direction sensor and a light sensor. The module can control a specific turbine (or turbines) which would be programmed to shut down on specific dates at specific times when the sun is bright enough, there is sufficient wind to rotate the blades and the wind direction is such that nuisance shadow flicker could occur. Following implementation of this mitigation, no significant effects would result for shadow flicker.

4.10.2 Climate Change and Carbon Balance

Onshore wind farms by their very nature tackle the issue of climate change. It is estimated that the proposed development would displace approximately 7.49 million tonnes of carbon dioxide (CO₂) in its lifetime when compared to the amount of CO₂ that fossil fuels would have produced to generate the same amount of electricity.

The proposed development would produce on average of approximately 578,160 MWh of electricity annually (based on a site-derived capacity factor of 40%). This equates to the power consumed by approximately 164,764 average UK households⁷, which would be well above the energy requirements of the 14,901 homes across the Western Isles⁸. This equates to an annual reduction in CO₂ emissions of approximately 249,765 tonnes, when compared to the amount of CO₂ emitted by fossil fuels to produce the same amount of electricity.

⁶ There is no guidance in Scotland or the UK that specifies this as a limit. Northern Ireland sets the 30hr limit which we use as a suggested level here.

⁷ Calculated using the most recent statistics from the Department of Business, Energy and Industrial Strategy (BEIS) showing that annual UK average domestic household consumption in 2022 was 3,509kWh

⁸ <https://statistics.gov.scot/atlas/resource?uri=http%3A%2F%2Fstatistics.gov.scot%2Fid%2Fstatistical-geography%2FS08000028>

In terms of carbon footprint, the 'Carbon Calculator' is the Scottish Government's tool provided to support the process of determining the carbon impact of wind farm developments in Scotland, which in turn establishes any effect on climate.

The calculations of total carbon dioxide emission savings and payback time for the proposed development indicates the overall payback period of a wind farm with 25 turbines with an average installed capacity of 6.6MW each would be approximately 1.5 years (18 months) years, when compared to the fossil fuel mix of electricity generation.

The proposed development is expected to take around 1.5 years (18 months) to repay the carbon exchange to the atmosphere (the CO₂ debt) through the construction of a wind farm; the Site would in effect be in a net gain situation following this time period and can then claim to contribute to national objectives (for the remaining 28.5 years of operation).

Overall, a positive significant effect on climate change and carbon balance is anticipated over the operational lifetime of the wind farm.

4.10.3 Telecommunications

Wind turbines can potentially cause interference to telecommunication links through reflection and shadowing to electro-magnetically propagated signals including terrestrial fixed microwave links managed by telecommunications operators.

Early constraints mapping (pre EIA Scoping) identified the presence of one fixed link running north – south through the Site. BT, the link operator, were consulted directly in order to understand any requirement for stand-off distances between the proposed turbines and the fixed link path. The operator advised that the minimum acceptable separation distance from turbine location to link path would be the turbine rotor radius, a further 25m clearance and finally the 2nd Fresnel zone clearance (variable). As a result, a 120m buffer was applied around the fixed link during the iterative design process, to ensure that turbines were located an adequate separation distance from the fixed link.

The closest turbine to the BT fixed link is T8, at approximately 150m to the east. No impacts upon fixed links are anticipated from the proposed development.

4.10.4 Television Reception

Wind turbines have the potential to adversely affect analogue television reception through either physical blocking of the transmitted signal or, more commonly, by introducing multi-path interference where some of the signal is reflected through different routes.

The proposed development is located in an area which is now served by a digital transmitter and, therefore, television reception is unlikely to be affected by the proposed development as digital signals are rarely affected. In the unlikely event that television signals are affected by the proposed development, reasonable mitigation measures would be considered by the applicant.

4.10.5 Risk of Accidents or Disasters

The vulnerability of the proposed development to major accidents and natural disasters, such as flooding, sea level rise, or earthquakes, is considered to be low due to its geographical location and the fact that its purpose is to ameliorate some of these issues.

Despite the risk of major accidents and natural disasters being considered as low, the vegetation and openness of the Site does present a potential, albeit remote, fire risk. The Outline CEMP (**Technical Appendix 3.1** of the EIA Report) contains measures for reducing the risk of fires occurring during the construction of the proposed development and these are considered to be appropriate to the level of potential risk.

The nature of the proposals and remoteness of the Site means there would be negligible risks of accidents and disasters to population and human health; biodiversity; land, soil, water, air and climate; and material assets, cultural heritage and the landscape.

With regard to risks of accidents during the construction phase, the construction works for the proposed development would be undertaken in accordance with primary health and safety legislation, including the Health and Safety at Work Act 1974 and the Construction (Design and Management) (CDM) Regulations 2015 which would include a requirement to produce emergency procedures in a Construction Phase (Health & Safety) Plan in accordance with the Regulations.

5.0 Summary of Significant Effects

The following table (**Table 5-1**) summarises the significant effects predicted as a result of the proposed development.

Table 5-1: Summary of Significant Effects

Topic	Mitigation	Residual Significant Effects
Landscape and Visual Amenity	Design	<p>Significant Effects predicted during both construction and operational phase.</p> <p>Significant effects predicted, during operational phase, on:</p> <ul style="list-style-type: none"> • Five Landscape Character Types (and one Coastal Character Type); • 12 assessed viewpoints; • Five settlements; • Four roads / routes; and • One designated landscape.
Ecology	Design, Pre-Construction Surveys, Construction Environmental Management Plan, Habitat Management Plan	None.
Ornithology	Design, Pre-Construction Surveys, Construction Environmental Management Plan, Habitat Management Plan	None.
Hydrology, Hydrogeology and Geology	Other than good practice measures that the developer would implement as standard, no specific mitigation is required.	None.
Cultural Heritage and Archaeology	Design and preservation of the assets within the digital record through a pre-commencement condition and/or a watching brief.	None.

Topic	Mitigation	Residual Significant Effects
Site Access, Traffic and Transport	<p>Traffic Management Plan for the movement of abnormal loads.</p> <p>Framework Construction Traffic Management Plan (CTMP) provided.</p> <p>Trial run for abnormal loads prior to commencement of construction.</p> <p>Provision of information to local residents and users of amenities, to involve the community in the safe operation of the Traffic Management Plan and to alleviate stress and anxiety.</p> <p>Good construction practices including wheel wash and careful loading.</p>	None.
Noise	Design, Construction Environmental Management Plan	None.
Socio-economics and Land Use	Design	None.
Aviation	Design and aviation lighting (visible)	None.
Other Issues	Design	Positive significant effect on climate change and carbon balance over the operational lifetime of the proposed development are predicted.

6.0 Next Steps and Further Information

The ECU will consider the Section 36 application and the findings of the EIA. Before making a decision on the application, the ECU will consult a number of consultees including CnES, NatureScot and SEPA, and will consider all representations received from other parties including members of the public.

A copy of the NTS will be made available for download from the applicant website at:

<https://eurowindenergy.com/uk/our-projects/uisenis-wind-farm> .

Hard copies of this NTS are available free of charge from:

SLR Consulting Limited
Office 4.04,
Clockwise Offices,
Savoy Tower,
77 Renfrew Street,
Glasgow
G2 3BZ
Tel: 07718 482 283

Paper copies of the EIA Report may be purchased by arrangement from the above address for £1,400 per copy, or £15 per USB memory stick copy. The price of the paper copy reflects the cost of producing all of the Landscape and Visual photographs at the recommended size. As such, a USB memory stick is recommended.

Hard copies of the EIA Report can be viewed at the following locations during their opening hours:

- CnES Council building, Sandwick Road, Stornoway, Isle of Lewis, HS1 2BW;
- Ravenspoint Community Centre, Kershader, South Lochs, Isle of Lewis, HS2 9QA;
- Kinloch Historical Society, Community Hub, Balallan, Isle of Lewis, HS2 9PN; and
- North Lochs Community Association, Leurbost, Isle of Lewis, HS2 9NU.

FIGURES

120000

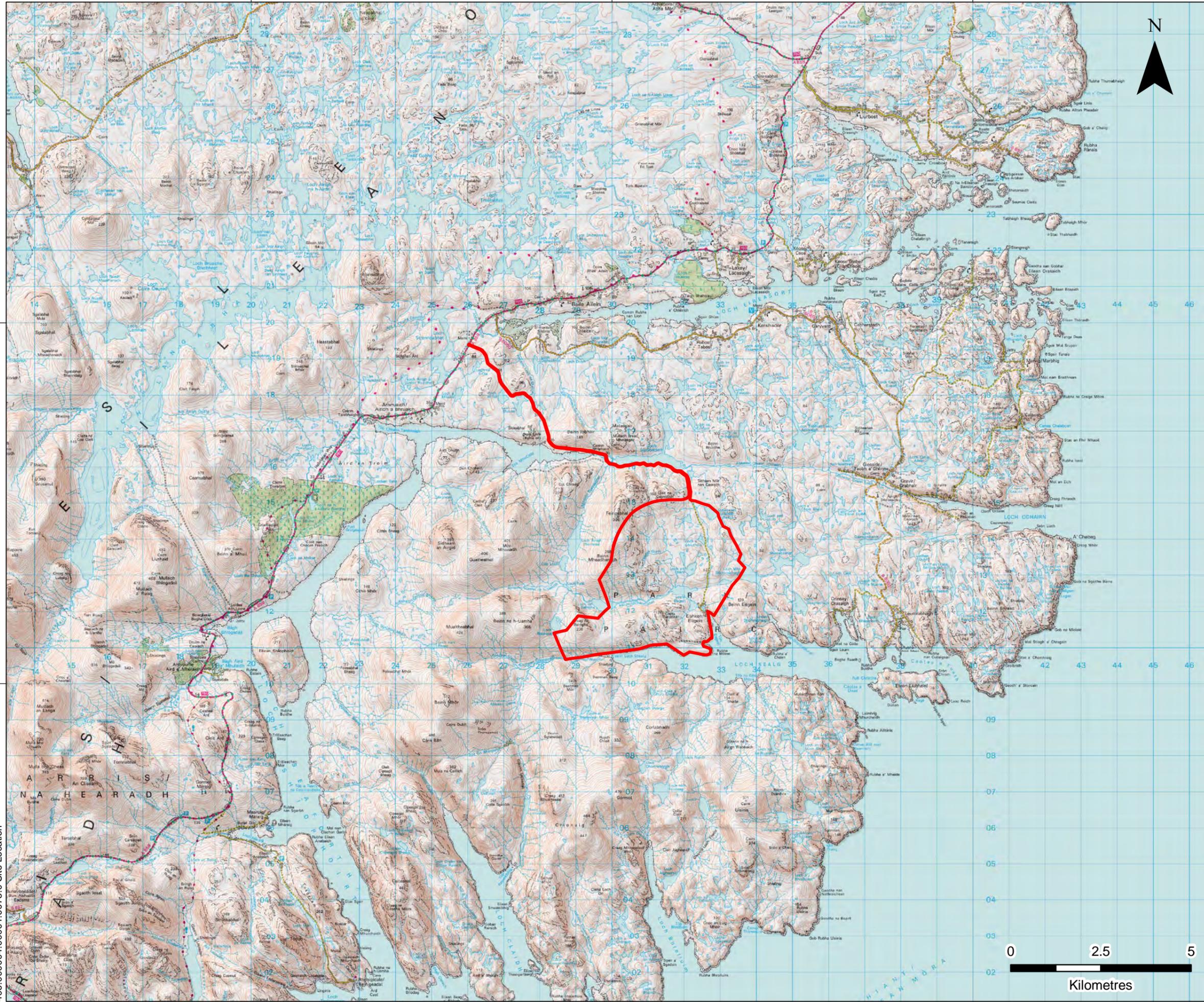
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406.00004.00001.0075.0 Site Location



LEGEND



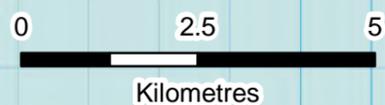
Eurowind Energy



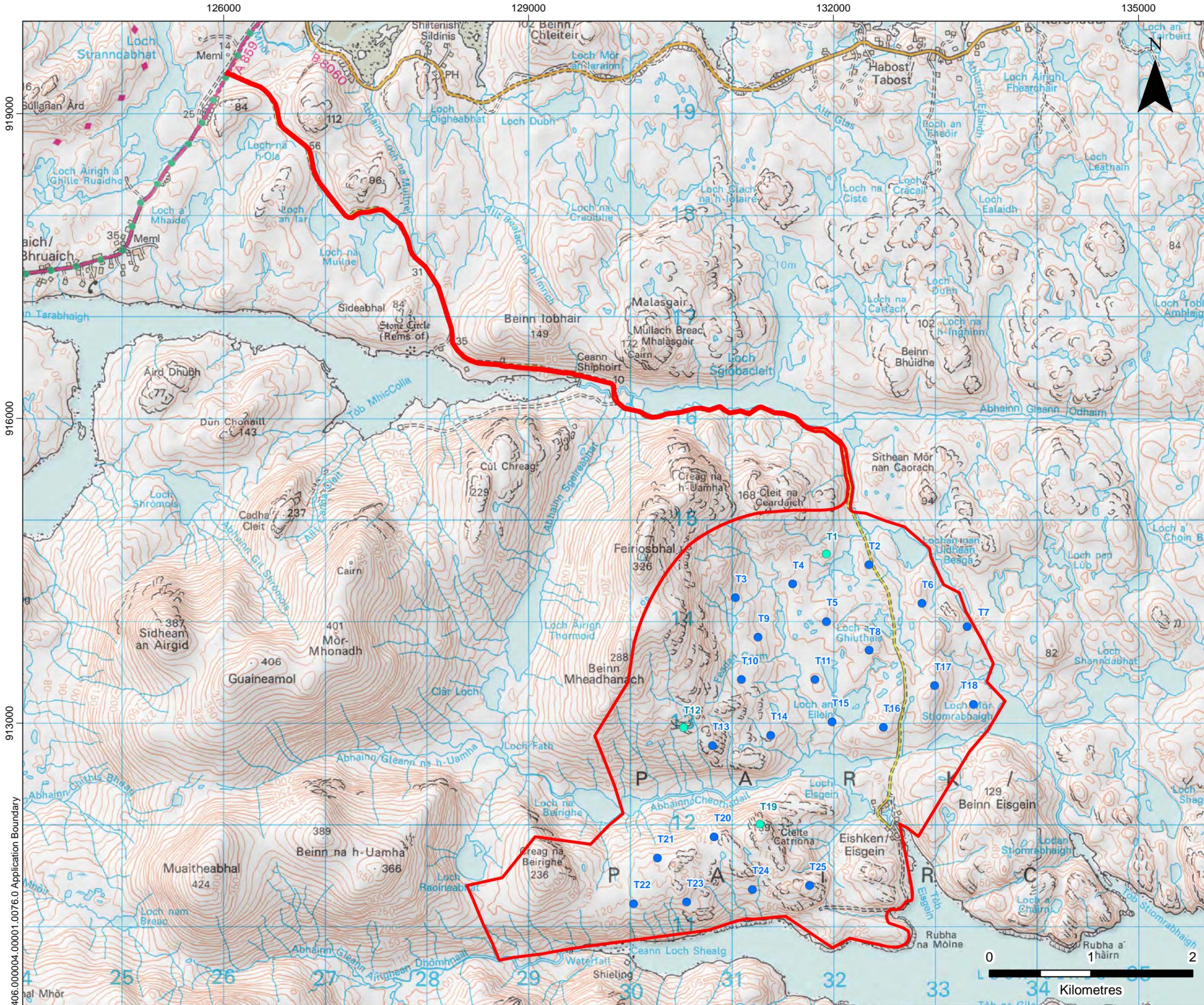
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UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY
SITE LOCATION

FIGURE 1



Scale 1:100,000 @ A3 Date AUGUST 2023



LEGEND

- Application Boundary
- Proposed Turbine Location (180 m Blade Tip Height)
- Proposed Turbine Location (200 m Blade Tip Height)

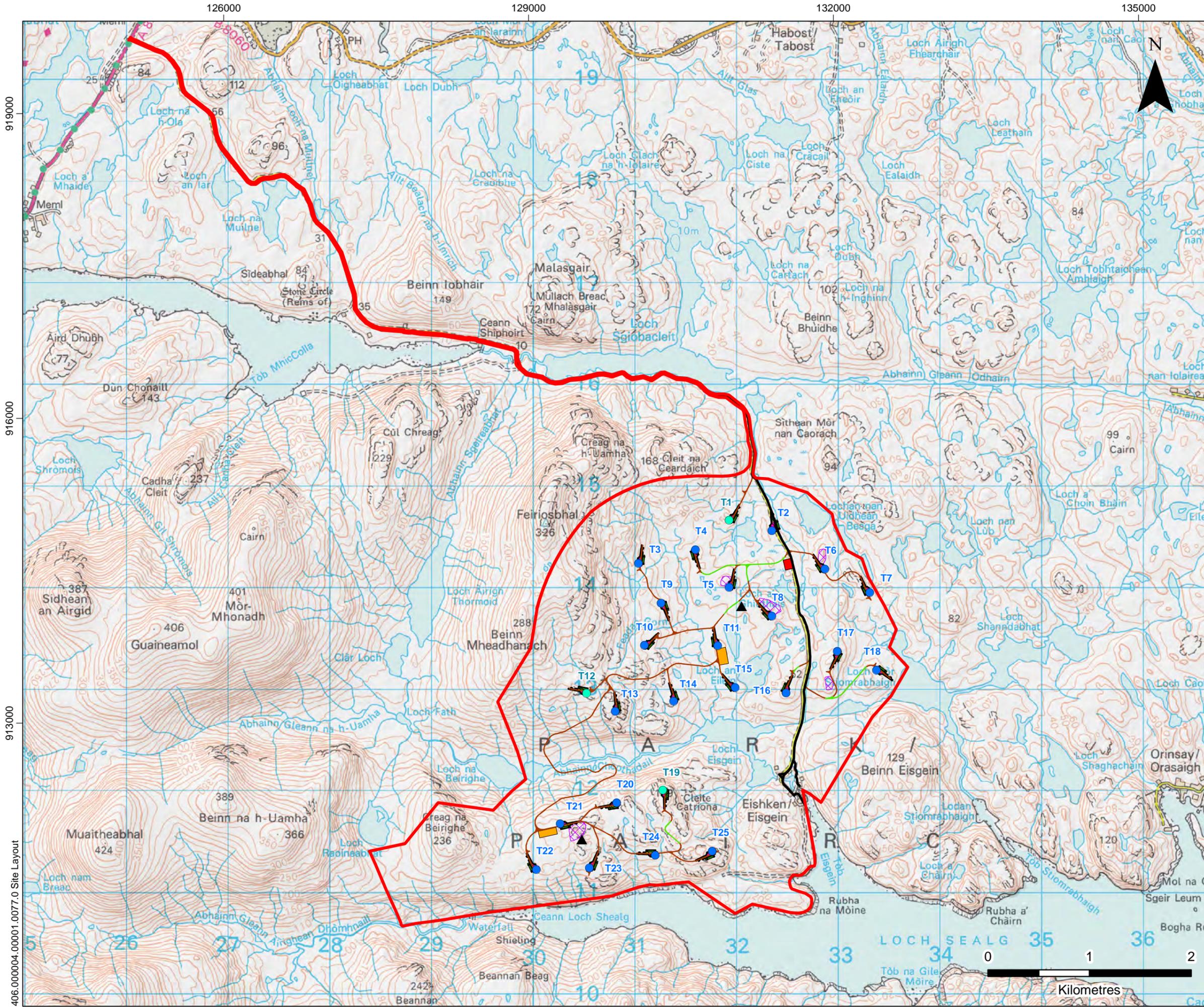


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UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY
APPLICATION BOUNDARY

FIGURE 2
Scale 1:35,000 @ A3 Date AUGUST 2023



LEGEND

- Application Boundary
- Proposed Turbine Location (180 m Blade Tip Height)
- Proposed Turbine Location (200 m Blade Tip Height)
- ▲ Proposed Permanent Met Mast
- Proposed Bespoke Hardstanding Envelope
- Proposed Permanent Substation
- Proposed Permanent Hardstanding
- Proposed Temporary Hardstanding
- Proposed Temporary Bridge Alignment
- Proposed Temporary Construction Compound
- Proposed Clearance Area
- Potential Borrow Pit
- Proposed Access Track / Turning Head
- Proposed Floating Access Track
- Existing Road (To Be Upgraded)



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UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY
SITE LAYOUT

FIGURE 3a

Scale 1:35,000 @ A3 Date AUGUST 2023

125600

126000

126400

126800

920000

919600

919200

406.000004.00001.0077.0 Site Layout

Cnoc Mór nan Annscothan

A859

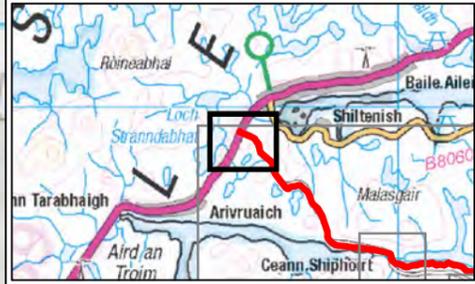
Loch na h-Ola

Allt Goidamóil



LEGEND

-  Application
-  Existing Road (To Be Upgraded)



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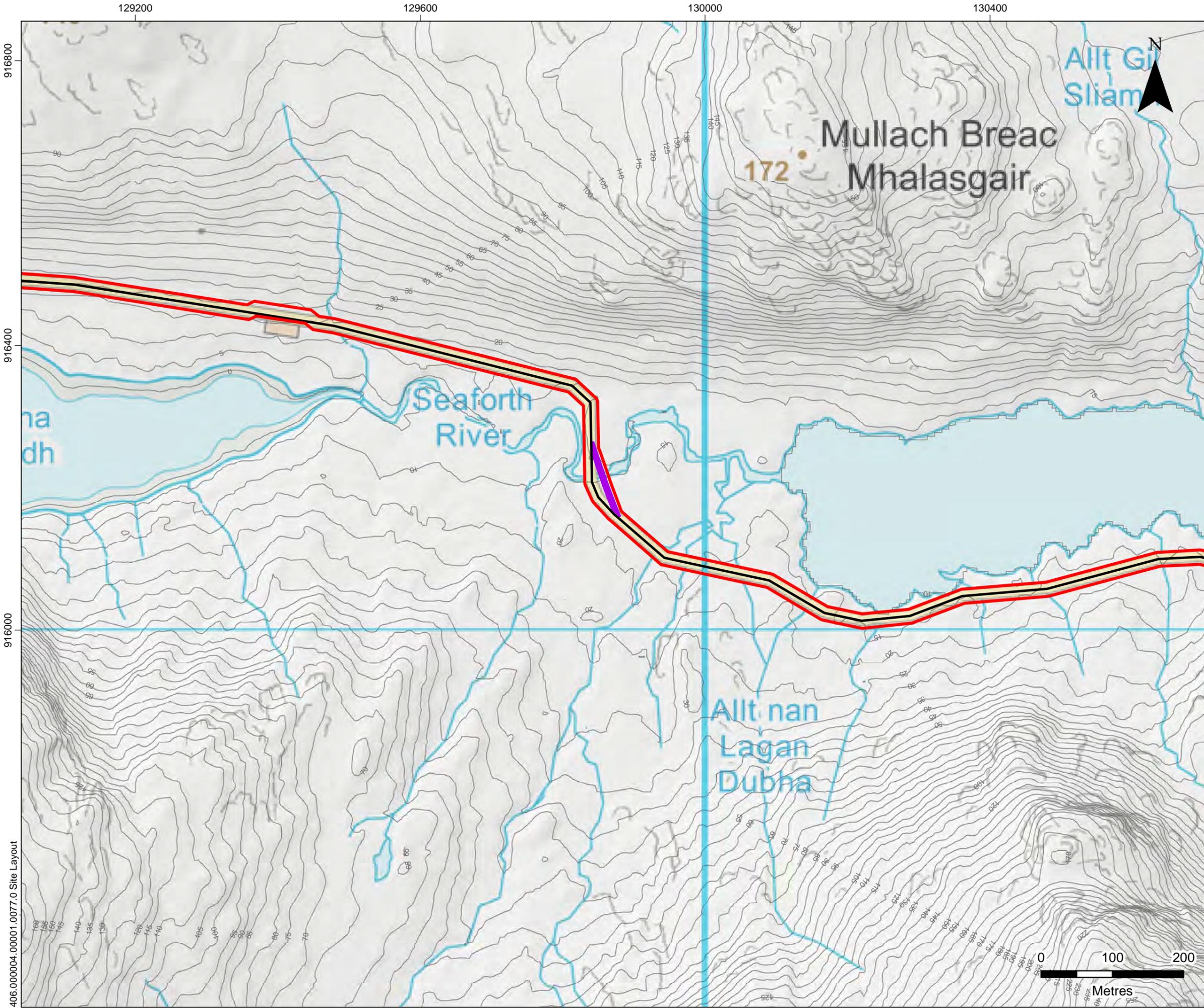
UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY

SITE LAYOUT

FIGURE 3b

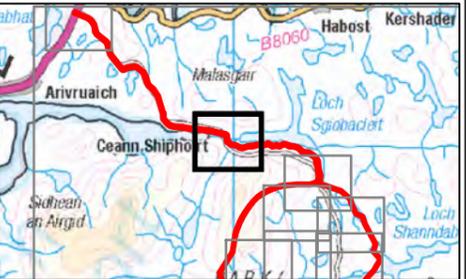


Scale 1:5,000 @ A3 Date AUGUST 2023



LEGEND

- Application Boundary
- Proposed Temporary Bridge Alignment
- Existing Road (To Be Upgraded)



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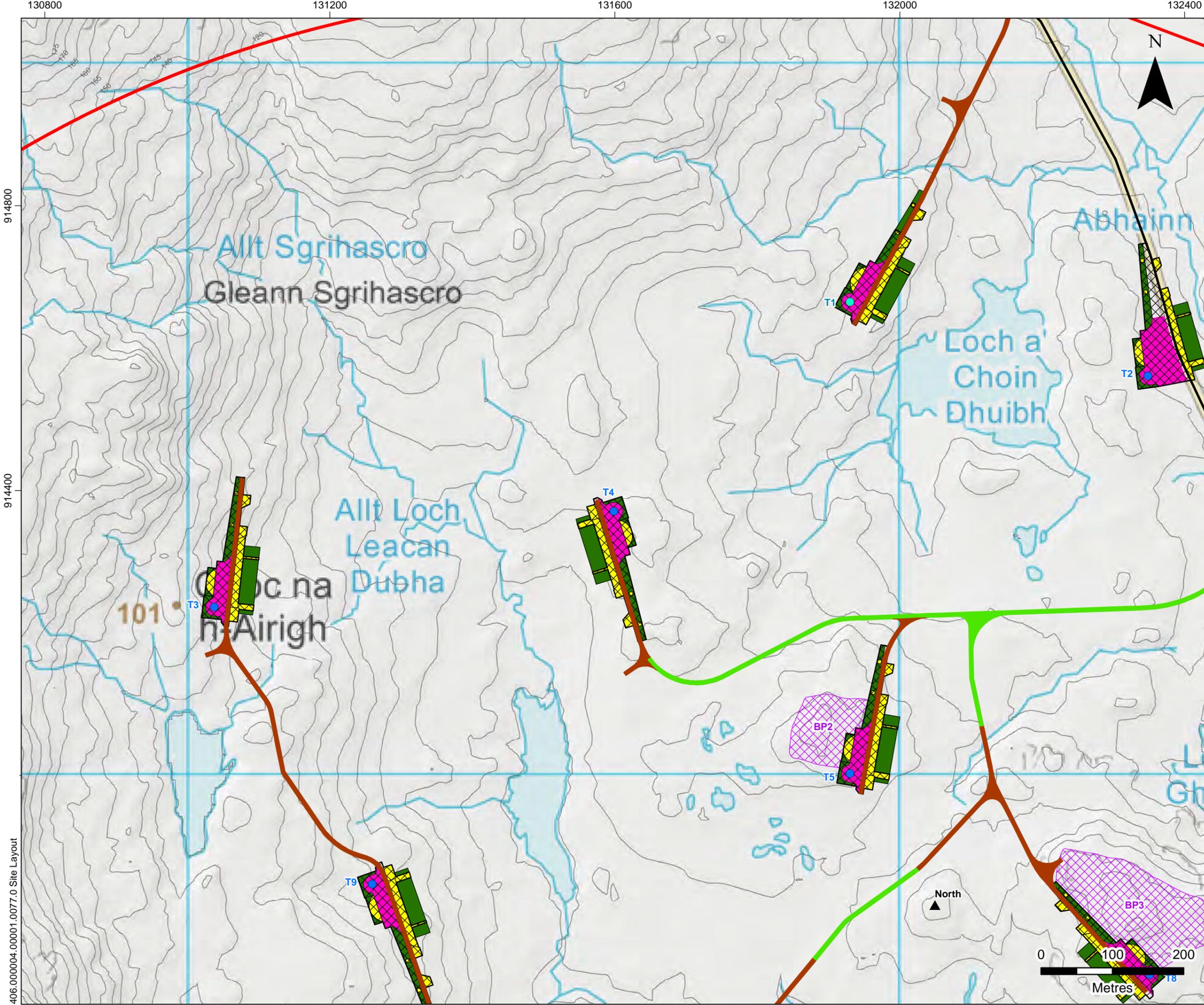
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UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY
SITE LAYOUT

FIGURE 3c

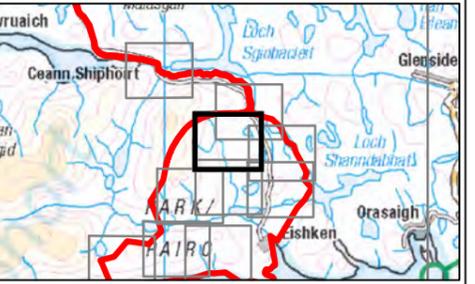
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406.00004.00001.0077.0 Site Layout



LEGEND

- Application Boundary
- Proposed Turbine Location (180 m Blade Tip Height)
- Proposed Turbine Location (200 m Blade Tip Height)
- ▲ Proposed Permanent Met Mast
- Proposed Bespoke Hardstanding Envelope
- Proposed Permanent Hardstanding
- Proposed Temporary Hardstanding
- Proposed Clearance Area
- Potential Borrow Pit
- Proposed Access Track / Turning Head
- Proposed Floating Access Track
- Existing Road (To Be Upgraded)



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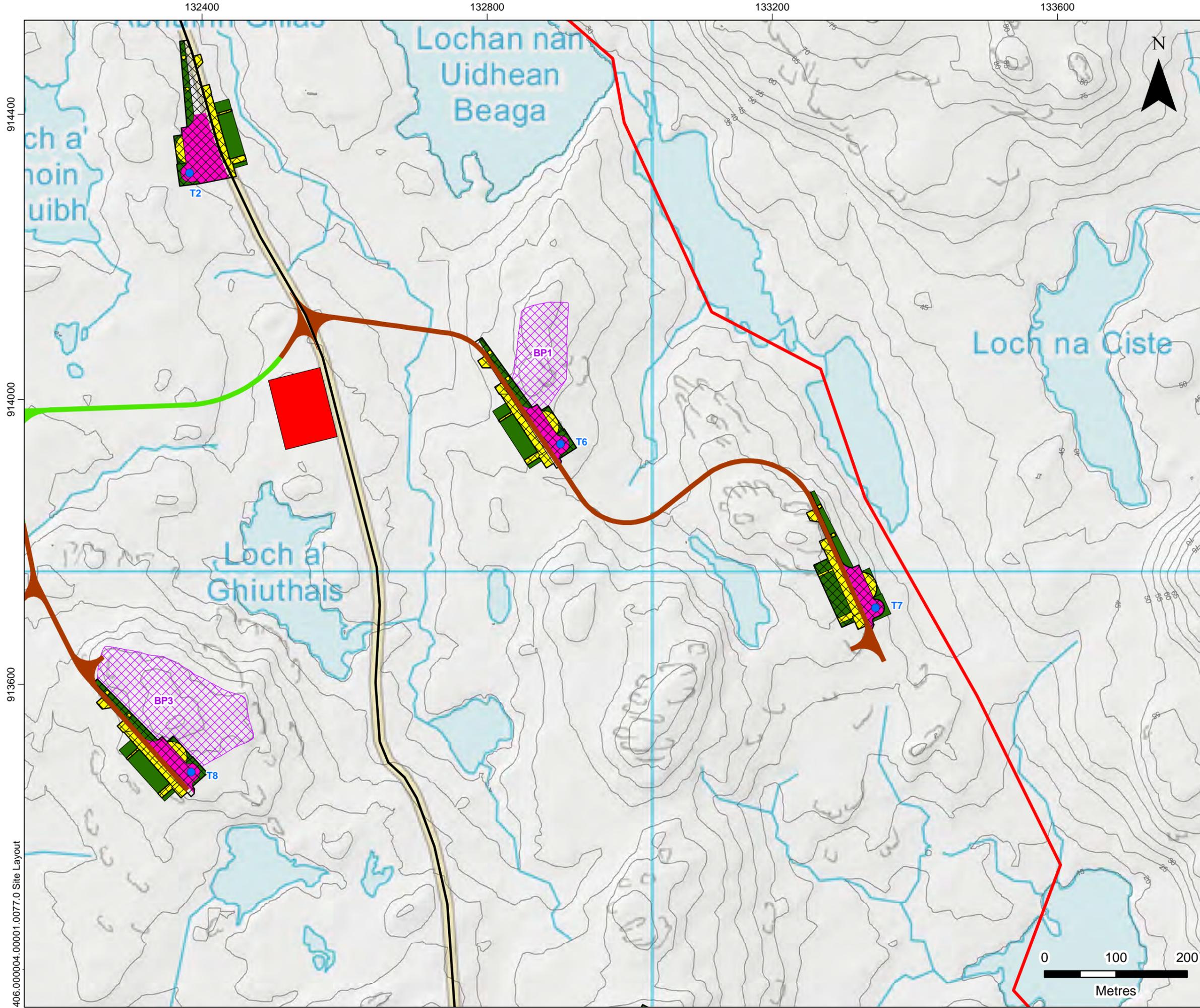
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**UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY
SITE LAYOUT**

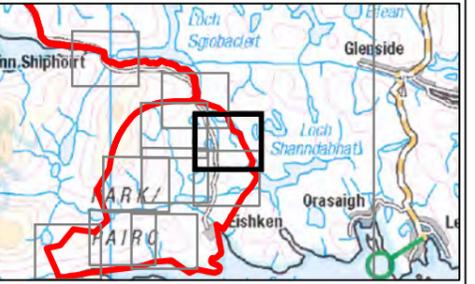
FIGURE 3e

Scale 1:5,000 @ A3 Date AUGUST 2023

406.000004.00001.0077.0 Site Layout



- LEGEND**
- Application Boundary
 - Proposed Turbine Location (200 m Blade Tip Height)
 - Proposed Bespoke Hardstanding Envelope
 - Proposed Permanent Substation
 - Proposed Permanent Hardstanding
 - Proposed Temporary Hardstanding
 - Proposed Clearance Area
 - Potential Borrow Pit
 - Proposed Access Track / Turning Head
 - Proposed Floating Access Track
 - Existing Road (To Be Upgraded)



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UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY
SITE LAYOUT

FIGURE 3f

Scale 1:5,000 @ A3	Date AUGUST 2023
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406.00004.00001.0077.0 Site Layout

91400

91400

913600

130800

131200

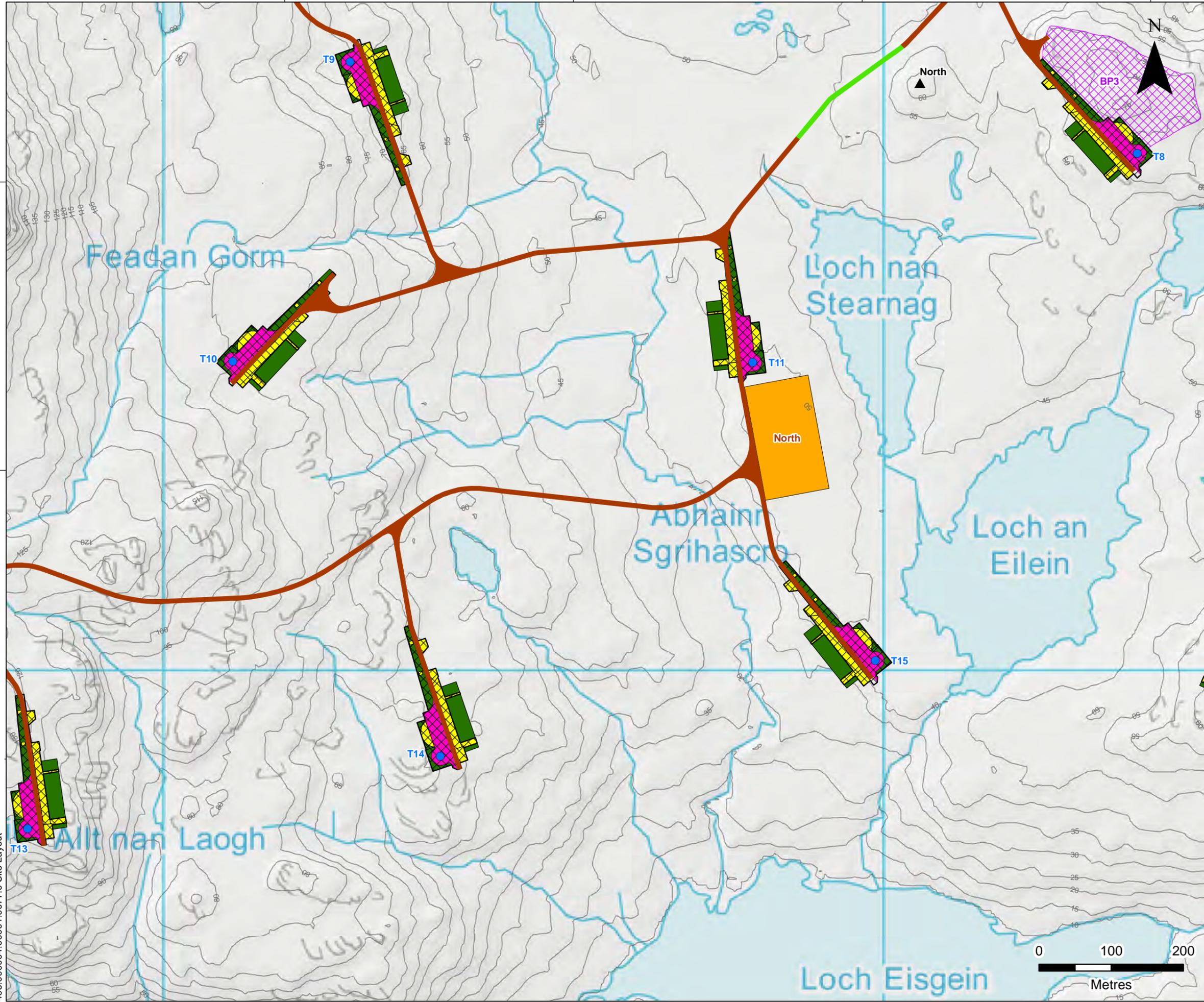
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132000

913600

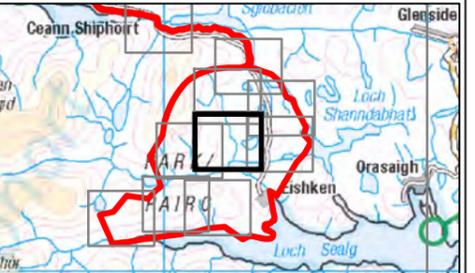
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406.00004.00001.0077.0 Site Layout



LEGEND

- Application Boundary
- Proposed Turbine Location (200 m Blade Tip Height)
- ▲ Proposed Permanent Met Mast
- Proposed Bespoke Hardstanding Envelope
- Proposed Permanent Hardstanding
- Proposed Temporary Hardstanding
- Proposed Temporary Construction Compound
- Proposed Clearance Area
- Potential Borrow Pit
- Proposed Access Track / Turning Head
- Proposed Floating Access Track



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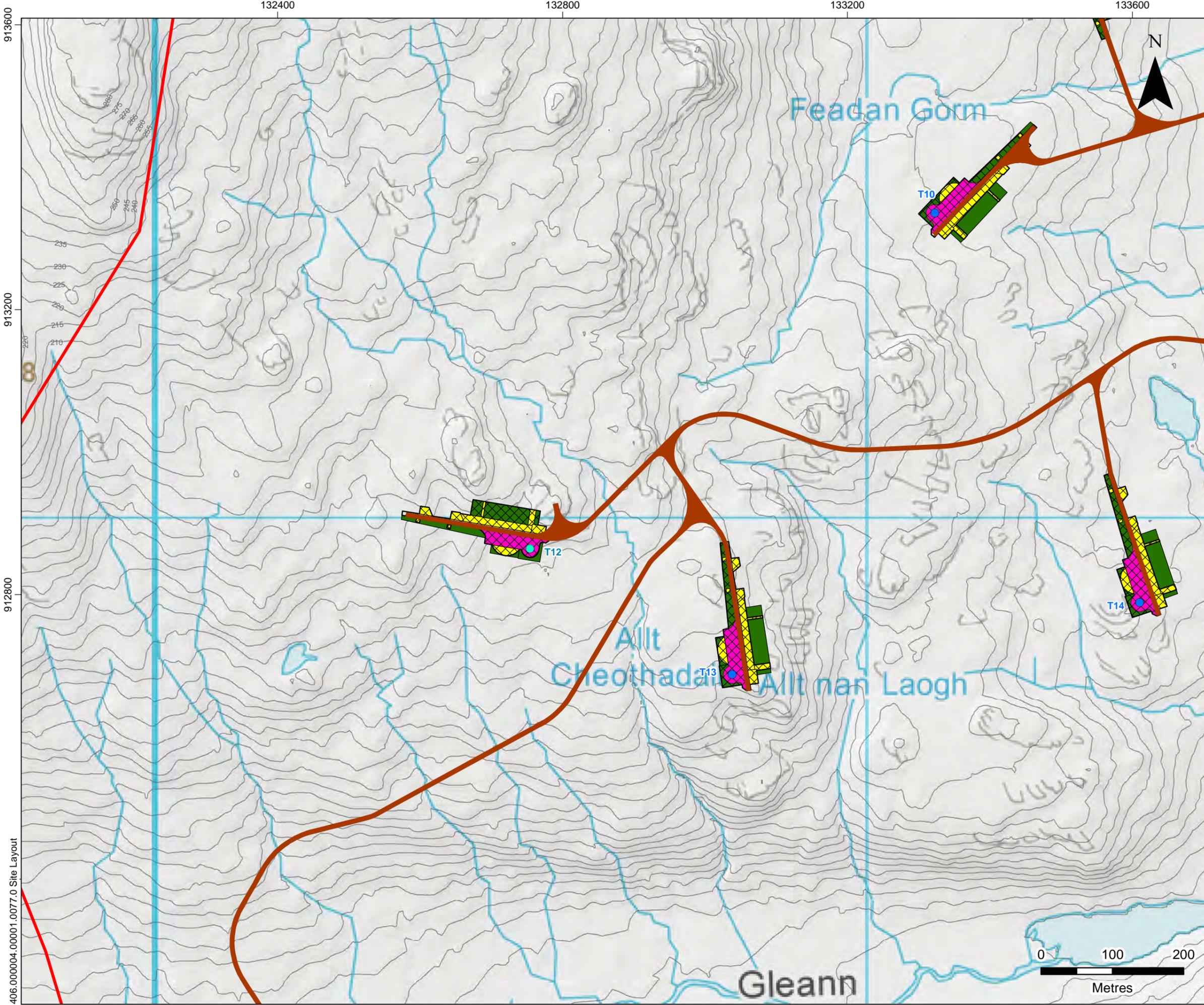
UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY
SITE LAYOUT

FIGURE 3g

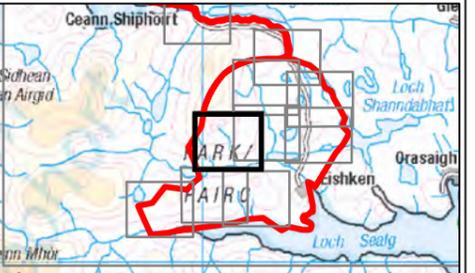
Scale 1:5,000 @ A3

Date AUGUST 2023





- LEGEND**
- Application Boundary
 - Proposed Turbine Location (180 m Blade Tip Height)
 - Proposed Turbine Location (200 m Blade Tip Height)
 - Proposed Bespoke Hardstanding Envelope
 - Proposed Permanent Hardstanding
 - Proposed Temporary Hardstanding
 - Proposed Clearance Area
 - Proposed Access Track / Turning Head



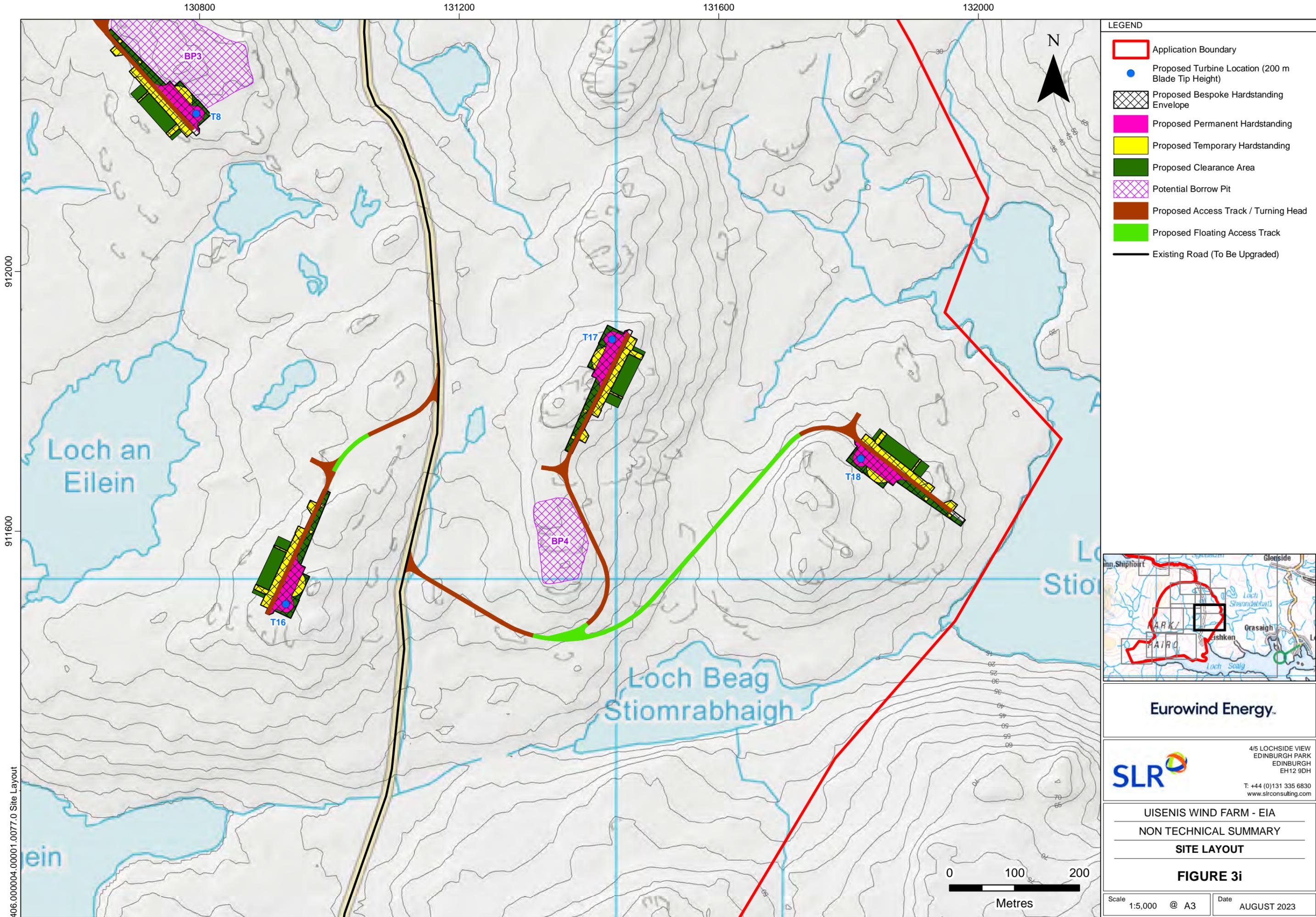
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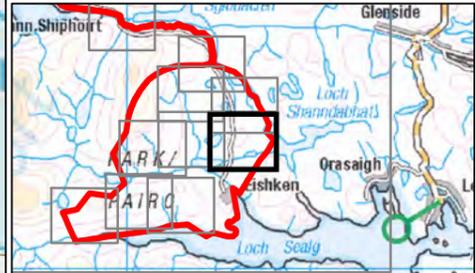
UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY
SITE LAYOUT
FIGURE 3h

Scale 1:5,000 @ A3 Date AUGUST 2023



LEGEND

- Application Boundary
- Proposed Turbine Location (200 m Blade Tip Height)
- Proposed Bespoke Hardstanding Envelope
- Proposed Permanent Hardstanding
- Proposed Temporary Hardstanding
- Proposed Clearance Area
- Potential Borrow Pit
- Proposed Access Track / Turning Head
- Proposed Floating Access Track
- Existing Road (To Be Upgraded)



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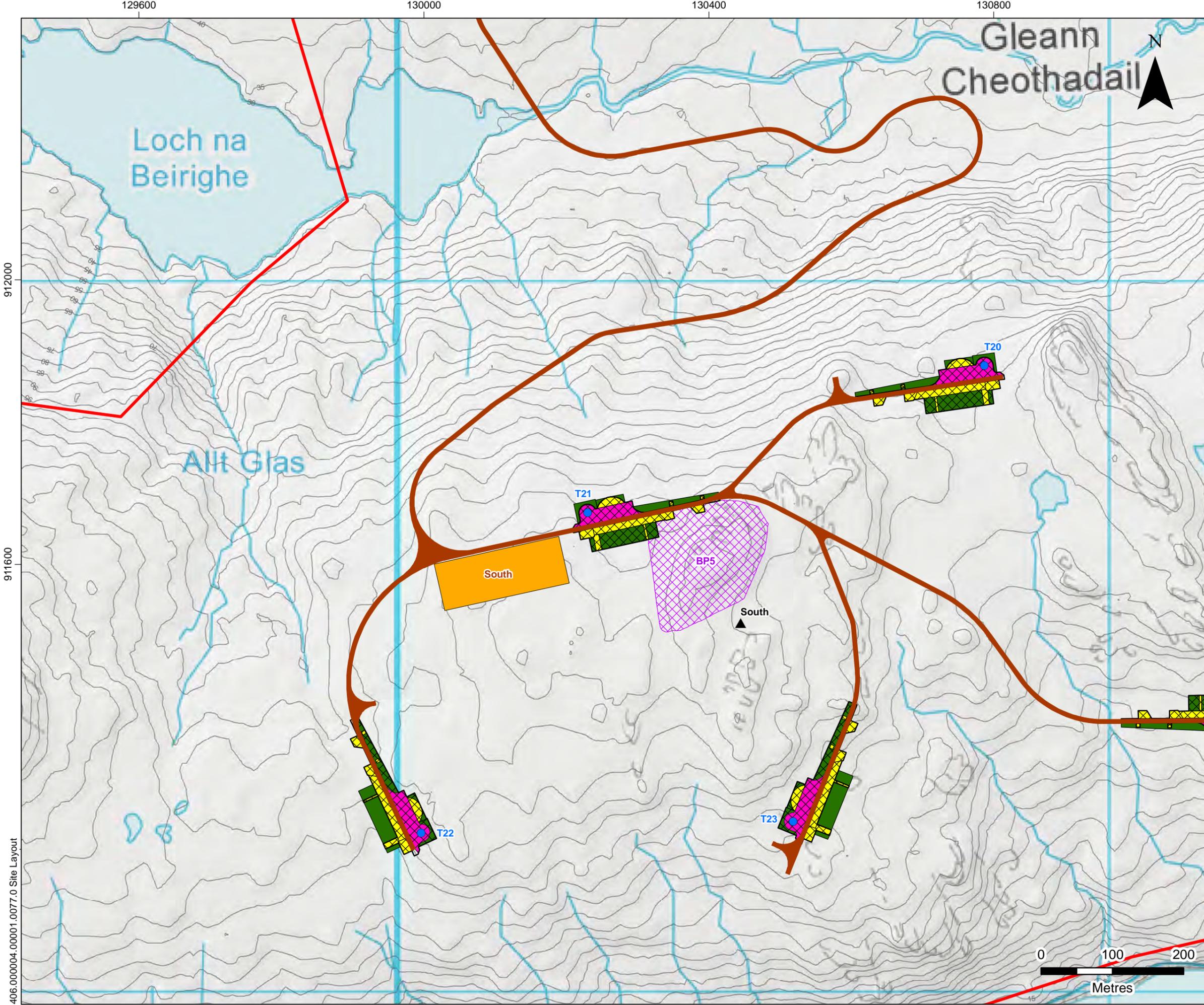
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UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY
SITE LAYOUT

FIGURE 3i

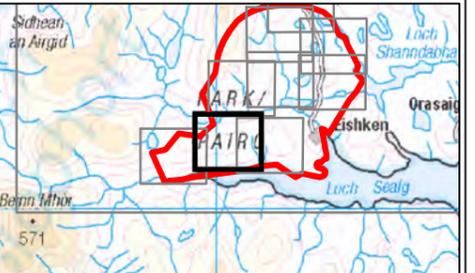
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406.000004.00001.0077.0 Site Layout



LEGEND

- Application Boundary
- Proposed Turbine Location (200 m Blade Tip Height)
- ▲ Proposed Permanent Met Mast
- Proposed Bespoke Hardstanding Envelope
- Proposed Permanent Hardstanding
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- Proposed Access Track / Turning Head



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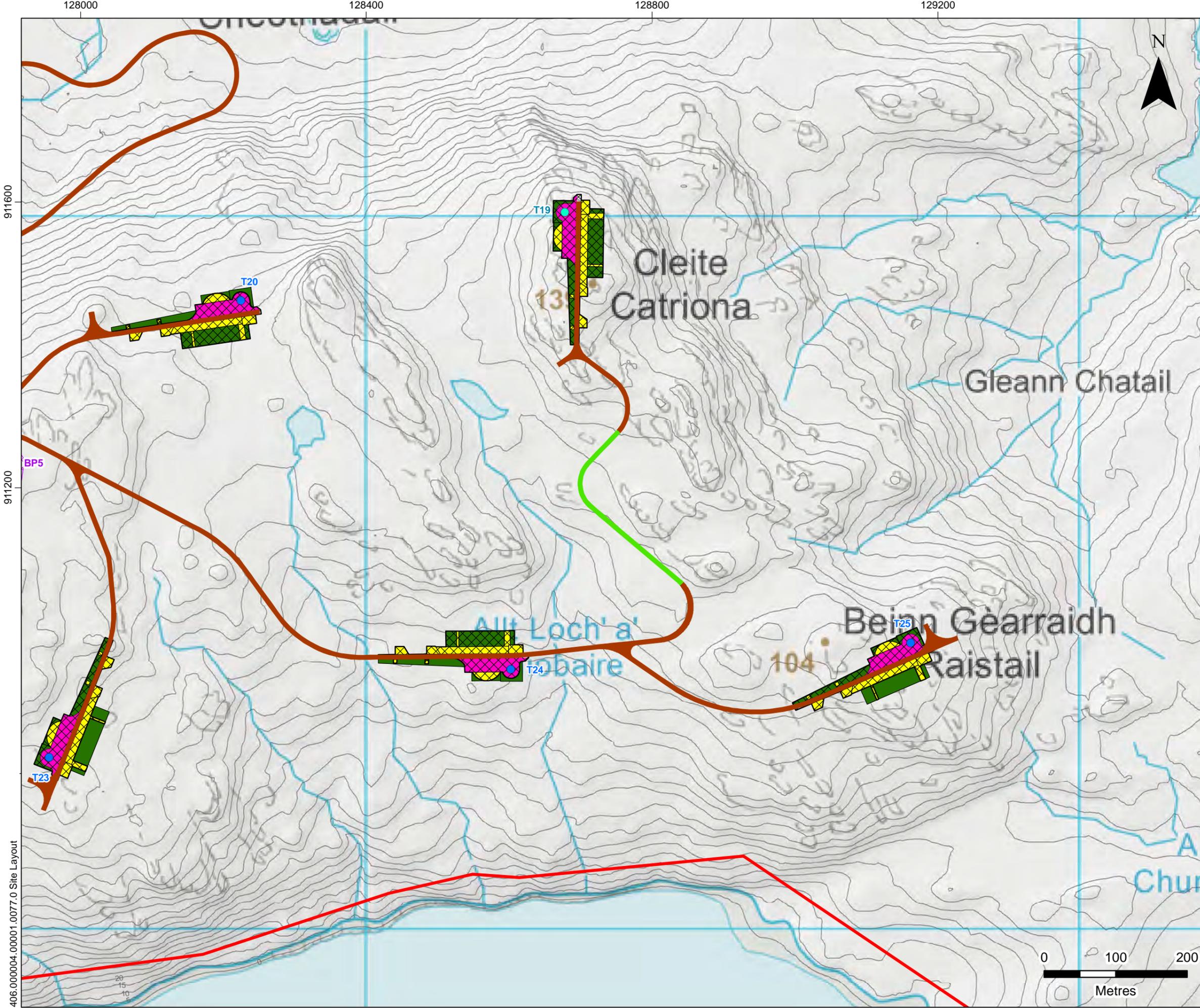
UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY
SITE LAYOUT

FIGURE 3j

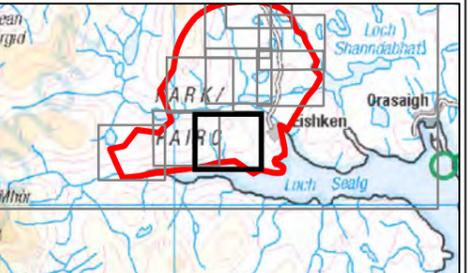
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406.00004.00001.0077.0 Site Layout



- LEGEND**
- Application Boundary
 - Proposed Turbine Location (180 m Blade Tip Height)
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UISENIS WIND FARM - EIA
NON TECHNICAL SUMMARY
SITE LAYOUT
FIGURE 3k

Scale 1:5,000 @ A3 Date AUGUST 2023

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