

Watchman Energy Park

Supporting Documents

Design Statement

February 2026



Intended for
Watchman Energy Park Limited

Date
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Project Number
1620016964

WATCHMAN ENERGY PARK DESIGN STATEMENT

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1. INTRODUCTION

1.1 Background

- 1.1.1 Watchman Energy Park Limited ('the Applicant') proposes to construct and operate a wind farm (Watchman Energy Park) with a generation capacity of greater than (>) 50 MW. An application for Section 36 consent is being made under Section 36 of the Electricity Act 1989¹ to the Scottish Ministers.
- 1.1.2 The Proposed Development would be located on a 1,089 hectare (ha) Site located approximately 10 km south of Crawford and 12 km west of Moffat, in South Lanarkshire. It would comprise of up to 13 wind turbines with maximum blade tip height of up to 240 m above ground level (agl) and a battery energy storage system (BESS) of an approximate 50 MW capacity.
- 1.1.3 The Proposed Development is being promoted by the Applicant in support of the Scottish Government's targets for reduction in greenhouse gas emissions to net-zero by 2045² and energy generation via renewable sources to an equivalent of 50% by 2030³.
- 1.1.4 The expected carbon payback time of the Proposed Development is 0.9 years. This is the period of time for which a wind farm needs to be in operation before it has avoided as much carbon dioxide as was released in its lifecycle (i.e., accounting for construction, operation and decommissioning) as determined through the use of the Scottish Government Carbon Calculator⁴.
- 1.1.5 The Design Statement does not form part of the Environmental Impact Assessment (EIA) Report (EIAR) however it should be read in the context of the EIAR.

1.2 Purpose of this Document

- 1.2.1 The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013⁵ require applications for 'major' development to be supported by a Design Statement. Though there is no statutory requirement for applications for consent under Section 36 of the Electricity Act 1989 to be supported by a Design Statement, the Applicant has opted to produce one as a good practice measure.
- 1.2.2 The purpose of the Design Statement is to set out the design principles and concepts which have been applied as part of the iterative design process undertaken in relation to the Proposed Development.
- 1.2.3 Consideration has been given to Planning Advice Note (PAN) 68: Design Statements⁶ which outlines the key principles and concepts to be considered within a Design Statement.
- 1.2.4 It is noted that on 8 December 2025 a number of PANs were withdrawn by the Scottish Government⁷, which included PAN68. However, this is still noted as relevant guidance for this Design Statement as it was a published guidance note at the time of the preparation of the Design Statement.

¹ Electricity generation projects of 50 MW and below are authorised under the Town and Country Planning (Scotland) Act, 1997. Those over 50 MW are authorised under Section 36 of the Electricity Act, 1989.

² <https://www.gov.scot/policies/climate-change/>

³ <https://www.gov.scot/policies/renewable-and-low-carbon-energy/>

⁴ Available at: <https://www.gov.scot/publications/carbon-calculator-for-wind-farms-on-scottish-peatlands-factsheet/>. Further details on the Carbon Balance Assessment are provided in **Chapter 2: Description of Proposed Development (EIAR Volume 2)**.

⁵ Available at: <https://www.legislation.gov.uk/ssi/2013/155/contents>

⁶ Available at: <https://www.gov.scot/publications/planning-advice-note-68-design-statements/>

⁷ <https://blogs.gov.scot/planning-architecture/2025/12/08/publications-declutter/>

2. POLICY CONSIDERATIONS

2.1.1 This section sets out the policy and guidance documents that have been considered for the design process for the Proposed Development.

2.2 National Planning Framework 4 (NPF4)

2.2.1 National Planning Framework 4 (NPF4)⁸ is the national spatial strategy for Scotland, setting out the spatial principles, regional priorities, national developments and national planning policy.

2.2.2 A dominant theme within NPF4 is addressing the global climate emergency through the need to reduce greenhouse gas emissions and adapt to the impacts of climate change. NPF4 sets out a spatial strategy to ensure a net zero society and a nature positive country.

2.2.3 NPF4 has introduced centralised development management policies which are to be applied Scotland wide, and also continues the approach set out in NPF3 of identifying national developments. National Development 3 (ND3), entitled 'Strategic Renewable Electricity Generation and Transmission Infrastructure', includes onshore electricity generation from renewables of over 50 MW in capacity; therefore, the Proposed Development has national development status. The Proposed Development will make a contribution to the attainment of renewable energy and electricity targets and emissions reduction at both the Scottish and UK levels.

2.2.4 Policy 11 of NPF4, the principal policy used in the assessment of wind energy developments, intends to "To encourage, promote and facilitate all forms of renewable energy development onshore and offshore. This includes energy generation, storage, new and replacement transmission and distribution infrastructure and emerging low-carbon and zero emissions technologies including hydrogen and carbon capture utilisation and storage (CCUS)".

2.2.5 Policy 11e of NPF4 states that project design and mitigation should demonstrate how the following impacts are addressed:

- *"impacts on communities and individual dwellings, including, residential amenity, visual impact, noise and shadow flicker;*
- *significant landscape and visual impacts, recognising that such impacts are to be expected for some forms of renewable energy. Where impacts are localised and/or appropriate design mitigation has been applied, they will generally be considered to be acceptable;*
- *public access, including impact on long distance walking and cycling routes and scenic routes;*
- *impacts on aviation and defence interests including seismological recording;*
- *impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised;*
- *impacts on road traffic and on adjacent trunk roads, including during construction;*
- *impacts on historic environment;*
- *effects on hydrology, the water environment and flood risk;*
- *biodiversity including impacts on birds;*
- *impacts on trees, woods and forests;*
- *proposals for the decommissioning of developments, including ancillary infrastructure, and site restoration;*
- *the quality of site restoration plans including the measures in place to safeguard or guarantee availability of finances to effectively implement those plans; and*
- *cumulative impacts".*

⁸ Scottish Government (2023) National Planning Framework 4. Available at: <https://www.gov.scot/publications/national-planning-framework-4/documents/>

2.2.6 The design and mitigation considerations within NPF4 Policy 11e have informed the iterative design process and the identification of the topics included as part of the design guidance set out within **Appendix 2**. The Planning Statement that supports the Section 36 application sets out how the project design and mitigation of the Proposed Development has addressed the impacts as set out in NPF4 Policy 11e.

2.3 South Lanarkshire Local Development Plan 2 (LDP2)

2.3.1 South Lanarkshire Local Development Plan 2 (LDP2)⁹ (adopted in April 2021) forms part of the relevant statutory Development Plan for the area where the Proposed Development is located.

2.3.2 The SLC LDP was prepared and adopted prior to NPF4 coming into force and reflects the provisions of the former Scottish Planning Policy (SPP), now superseded. Where incompatibilities exist between the LDP and NPF4, or where the LDP is silent, the policies of NPF4 prevail.

2.3.3 LDP2 has an overall strategic vision “to promote the continued growth and regeneration of South Lanarkshire by seeking sustainable economic and social development within a low carbon economy whilst protecting and enhancing the environment”.

2.3.4 LDP2 is presented in two volumes with Volume 1 containing the overall strategy and core policies and Volume 2 containing additional development management policies.

2.3.5 Policy 5: Development Management and Placemaking (Volume 1) sets out design considerations and notes that developments should not present an unacceptable impact on the natural or historic environment, including the water environment, nor on the amenity of residential properties.

2.3.6 Policy 18: Renewable Energy (Volume 1) supports in principle renewable energy developments subject to an assessment against principles set out in Scottish Planning Policy (SPP). The SPP criteria to be considered in determining a proposal for a wind farm have now been superseded by those set out in NPF4 Policy 11 (refer to above).

2.3.7 Whilst the requirement to produce a spatial framework has been superseded by NPF4, it is noted that the Proposed Development is located mainly¹⁰ within a Group 3 Area where wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria. The policy further notes that “All renewable energy proposals shall be assessed against the relevant criteria and requirements set out in the Assessment Checklist for Renewable Energy Proposals contained in Volume 2”.

2.3.8 Other documents which have been considered throughout the design development process include:

- Landscape Capacity Study for Wind Energy (2016)¹¹; and
- Tall Wind Turbines: Landscape Capacity, Siting and Design Guidance¹² (2019).

2.4 Other Guidance

Siting and Designing Windfarms in the Landscape (NatureScot, 2017)

2.4.1 NatureScot’s (formally Scottish Natural Heritage (SNH)) ‘Siting and Designing Windfarms in the Landscape’¹³ guidance states that wind farms should be sited and designed so that adverse effects on landscape and visual amenity are minimised and allow landscapes that are highly valued to be protected.

⁹ Available at: <https://www.southlanarkshire.gov.uk/developmentplan2>

¹⁰ Some localised areas of the Site are identified to include carbon rich soil/peatland Class 1 and 2 which would be classed as Group 2: Areas of significant protection.

¹¹ South Lanarkshire Council (2016) Landscape Capacity Study for Wind Energy 2016. Available at: https://www.southlanarkshire.gov.uk/downloads/file/10363/part_7_sl_landscape_capacity_study_for_wind_turbines_february_2016

¹² South Lanarkshire Council (2019) Tall Wind Turbines: Landscape Capacity, Siting and Design Guidance Available at: <https://www.dpea.scotland.gov.uk/LibraryDocument.aspx?id=2402>

¹³ SNH (2017) Siting and Designing Windfarms in the Landscape. Available at:

<https://www.nature.scot/sites/default/files/2017-11/Siting%20and%20designing%20windfarms%20in%20the%20landscape%20-%20version%203a.pdf>

2.4.2 The guidance note focuses on wind turbine design and layout, wind farm siting and design and designing in landscapes with multiple wind farms. In Section 2 it includes design principles which covers consideration of turbine form, size, scale and layout of the turbine array and as well guidance on associated infrastructure. Section 3 details how the design principles can be applied to landscape and visual effects noting that the application of these principles will reduce the overall landscape and visual effects of a wind farm. Section 4 reviews the principles of wind farm design when designing in landscapes with multiple wind farms.

Onshore Wind Policy Statement 2022

2.4.3 The Scottish Government's 'Onshore Wind: Policy Statement 2022' (OWPS '22)¹⁴ was published in December 2022. The OWPS notes that "*The only areas where wind energy is not supported are National Parks and National Scenic Areas. Outside of these areas, the criteria for assessing proposals have been updated, including stronger weight being afforded to the contribution of the development to the climate emergency, as well as community benefits*".

2.4.4 Furthermore, in relation to the design of wind farms the OWPS notes that the following will be a vital part of any wind farm design:

- Identification of the condition of existing peatland;
- Minimising impacts on woodland and integrating enhancement measures where relevant;
- Appropriate siting of wind farms within the landscape; and
- Designing wind farms to make a positive contribution to biodiversity, with the overarching aim to enable the protection and restoration of local biodiversity and ensuring that wind energy can be deployed in harmony with, rather than at detriment to, our natural environment.

¹⁴ Scottish Government (2022) Onshore Wind: Policy Statement 2022. Available at: <https://www.gov.scot/publications/onshore-wind-policy-statement-2022/>

3. SITE SELECTION CONSIDERATIONS

3.1 Current Land Use and Site Context

- 3.1.1 The Site covers an area of approximately 1,089 ha and is located approximately 10 km south of Crawford and 12 km west of Moffat, in South Lanarkshire (approximate OS Grid Reference for Site centre: NS 94567 06768). The Site location is shown in **Figure 1: Site Location (Appendix 1)**.
- 3.1.2 The Site predominantly comprises upland moorland used for livestock grazing with areas of commercial forestry in the northwest and smaller areas of broadleaf woodland in the northeast. The Site is intersected by a section of the Southern Upland Way (SUW), approximately 2 km in length. The landscape is typical of the wider location, undulating and includes a series of rounded hills characteristic of the Southern Uplands including Comb Hill, Watchman's Brae and Rodger Law.
- 3.1.3 The immediate vicinity of the Site is sparsely populated, with scattered dwellings within the valleys. There are a number of villages within 15 km of the Site. There is one uninhabited residential property located within the Site, with a number of residential properties also located within approximately 2.5 km of the Site including properties along the A702 road, and the minor road leading to the Daer Reservoir.
- 3.1.4 There is one Scheduled Monument within the Site: Smithwood, Bastle House (SM 5647), with a further 34 Scheduled Monuments located within 10 km of the Site. Other designated assets including Inventory Garden and Designed Landscapes (GDL), A, B and C Listed Buildings and Conservation Areas are located within 10 km of the Site, with one Category A-Listed Building (Drumlanrig Castle) located just beyond 10 km from the Site. Further to designated assets there are a number of non-designated assets that are located within 10 km that are considered to be of national importance¹⁵.
- 3.1.5 There are 30 non-designated heritage assets are located within the Site, all considered to be of local or regional importance. The non-designated heritage assets comprise of prehistoric, roman, medieval and modern sites and features.
- 3.1.6 A number of watercourses run through the Site. The south of the Site is within the catchment of Daer Water, upstream of Daer Reservoir which is located a short distance east of the Site. The central area of the Site drains to Kirkhope Cleuch which in turn flows to Daer Reservoir with the west of the central catchment draining directly to Daer Reservoir. The north of the Site (approximately 15% of the total Site area) drains via Meikle and Calf Burn to Daer Water downstream of the reservoir. A very small area (<5% of the total Site area) drains in a north westerly direction to Potrail Water.
- 3.1.7 Immediately to the south of the Site is the Shiel Dod Site of Special Scientific Interest (SSSI), which is designated for blanket bog. Whilst no construction activities or development would occur within the SSSI, certain areas may be used for some measures for biodiversity management and enhancement.
- 3.1.8 There is extensive wind energy development within this part of southern Scotland and there are several windfarms within the surrounding landscape of the Site including Clyde and Clyde Extension (operational) to the northeast, Daer and Rivox Wind Farms (both at application stage) to the east, and Harestanes and Minnygap (operational) to the southeast¹⁶.
- 3.1.9 Existing operational wind farms within 25 km of the Site range in turbine tip height from 62 m to 180 m.

¹⁵ Non-designated assets can be of national importance, although they don't hold statutory protection. They are considered to have heritage significance meriting consideration in planning decisions but have not yet been formally designated (e.g., listed or scheduled).

¹⁶ Status of cumulative developments is of 18 December 2025.

3.2 Site Selection and Feasibility

3.2.1 In 2022, the Applicant identified the Site and the wider area which encompasses the nearby sites of M74 West, Ravengill, and Clyde South projects, as suitable for renewable energy development.

3.2.2 If developed for renewable energy generation, this would add to the established characteristic of wind farms as part of the landscape in the surrounding area. The general area has been attractive for wind farm development proposals due to its large-scale landscape character, anticipated high wind resource, potential for connections into the existing road and transmission network. Clustering of development allows the efficient use of existing infrastructure, including the 400 kV interconnector between Scotland and England, limiting the costs for consumers and helping reduce pressure on more sensitive environments elsewhere.

3.2.3 The Site of the Proposed Development benefits from a number of other strategic advantages for renewable energy development, including:

- The Site is situated amongst a cluster of operational, proposed, and consented wind farms, including the operational Clyde Wind Farm to the northeast, all located in the Southern Uplands Character type (or in one of its sub-types) and which share characteristic features in terms of scale, topography and land use demonstrating the general suitability of the area for wind farm development;
- The Site can accommodate a renewable energy development whilst avoiding significant direct effects on areas designated for nature conservation whilst allowing for the creation of opportunities for biodiversity enhancement;
- There is scope to deliver suitable access to the Site for both construction traffic and abnormal indivisible loads (AIL) whilst avoiding potential for impacts on local road users;
- The Site has consistently high anticipated wind speeds, which would deliver excellent wind energy yields; and
- The Site has good access to the electricity transmission network and it is expected that a grid connection can be achieved in a reasonable timeframe¹⁷.

3.2.4 Overall, the Site has potential to accommodate a renewable energy park that would make a significant contribution to meeting national energy policy and climate emergency policy related goals of achieving net-zero emissions by 2045.

¹⁷ At the time of writing the Proposed Development has a grid connection offer for 2036 to connect to the Elvanfoot Substation (NGR), approximately 8.5 km north from the on-site substation.

4. CONSULTATION ACTIVITIES

4.1 EIA Scoping

4.1.1 The Applicant submitted a request for a Scoping Opinion to Scottish Ministers (via the Energy Consents Unit (ECU) in November 2024. This request was accompanied by a Scoping Report, prepared by the Applicant, which set out a summary of the proposals; identified the likely significant environmental effects, and summarised the proposed scope of the EIA.

4.1.2 A Scoping Opinion was received from ECU on 13 March 2025. The contents of this and other consultation responses received are summarised in **Technical Appendix 1.2: Consultation Register (EIAR Volume 4)**, along with a list of all bodies consulted during the scoping exercise.

4.1.3 Within the Scoping Opinion, information and advice was provided relevant to the design of the Proposed Development. This included, but is not limited to, the following key factors:

- SEPA highlighted the requirement for watercourse crossings to be designed to accommodate the 1 in 200-year event plus climate change and that other infrastructure should be located away from watercourses – all watercourse crossing would be designed as stipulated by SEPA and a 50 m buffer was applied to all watercourses within the Site to be taken into consideration for the placement of infrastructure.
- SEPA reiterated the importance of following the mitigation hierarchy in relation to peat to avoid by design and then minimise any potential effects through best practice, with restoration and offsetting opportunities considered thereafter. SEPA also stated that all proposed excavations should be in areas with peat depths less than 1 m - the mitigation hierarchy has been taken into account in the design process with a focus on avoiding siting turbines and infrastructure on areas with peat depths greater than 1 m.
- SEPA noted that forestry is present on the Site and that the layout should be designed to avoid large scale felling, as this can result in large amounts of waste material and a peak in release of nutrients which can affect local water quality – areas of felling are restricted to the Eastern and Western Access routes into the main area of the Site and consideration has been given to minimising the amount of felling required and utilising the existing track network where possible.
- Scottish Ministers considered that where there was a demonstrable requirement for a peat landslide hazard and risk assessment (PLHRA) – peat slide risk has been taken into account in the design with infrastructure located away from areas of risk, where practicable.
- Historic Environment Scotland (HES) – advised that due to the presence of the Smithwood, bastle house Scheduled Monument, located in the north of the Site, it may be difficult to incorporate any development in this area without directly impacting the monument. They note that they expect a commitment to prevent any damage to this asset and to ensure it is not subject to adverse effects through construction activity – this Scheduled Monument has been considered in detail through the design of the alignment of the Eastern Access track, taking into consideration avoidance of the scheduled area of the monument and the feasibility of developing this track incorporating appropriate mitigation to reduce any direct or indirect effects such as implementation of a stand-off buffer with protective fencing around the monument.
- ScotWays highlighted that although there is very little guidance regarding the siting of turbines in relation to established paths and rights of way, they recommend a minimum distance, equivalent to the height of the blade tip, from the edge of any public highway (road or other public right of way) – this buffer has been applied to the siting of the turbines in relation to the existing tracks, PRoW and core paths within the Site.

4.2 Public Exhibitions

- 4.2.1 In addition to seeking a Scoping Opinion, the Applicant conducted two public exhibitions to seek the views of the local community. A public exhibition was held across two venues in Crawford in December 2024, and a second public exhibition was held in Crawford Hall, Crawford, ML12 6TW on the 12 May 2025.
- 4.2.2 A summary of the representations received during the public exhibitions is provided in the Pre-Application Consultation Report (PACR) which accompanies the Section 36 application.
- 4.2.3 The PACR also provides details of the issues raised and the responses provided. As all the issues raised were to be addressed within the Section 36 application and/or EIAR they did not prompt a change to the design of the Proposed Development.

4.3 Consultation with Local Community Councils

- 4.3.1 Throughout the consultation period, the Applicant engaged with local community councils, noting that the host community council (Crawford Elvanfoot and Daer Community Council) was dissolved in February 2025. The Applicant wrote on more than one occasion to the following community councils and local elected representatives:
- Clydesdale East Ward Councillors;
 - Annandale North Ward Councillors;
 - Mid and Upper Nithsdale Ward Councillors;
 - Clydesdale Constituency MSP;
 - Dumfriesshire Constituency MSP;
 - South Scotland Regional MSPs;
 - Dumfriesshire, Clydesdale and Tweeddale MSP; and
 - Community Councils:
 - Crawford, Elvanfoot and Daer;
 - Thornhill
 - Closeburn
 - Kirkpatrick Juxta
 - Moffat and District
 - Leadhills
 - Duneaton
 - Carronbridge
- 4.3.2 As part of the Applicant's ongoing engagement with the local community regarding their proposed developments in the area, a Community Liaison Group (CLG) was established in February 2025 as a dedicated platform for open dialogue and information exchange. Regular meetings were held with the group, providing an avenue for project updates, information exchange and targeted talks on key issues relevant to renewable energy development in the area. Further details are set out in the PACR.
- 4.3.3 To date, all the issues raised and discussed were to be addressed within the Section 36 application and/or EIAR and as such they did not prompt a change to the design of the Proposed Development.

5. DESIGN APPROACH

5.1 Design Process

- 5.1.1 The Applicant appointed a team of specialist consultants to work alongside the Applicant in designing and developing the layout of the Proposed Development. Consistent with renewable energy policy, the key overall objective was to maximise the energy generation potential of the Site, whilst having regard to the protection of sensitive environmental receptors.
- 5.1.2 The design process was underpinned by site specific design guidance in the form of a Design Brief document which was developed by and agreed with the Applicant, specialist consultants and design engineers.
- 5.1.3 The approach to design was informed by and responded to:
- Good practice and windfarm design guidance such as SNH (2017) Siting and Design of Wind Farms in the Landscape¹³;
 - Planning policy documents (e.g., NPF4⁸, South Lanarkshire LDP2⁹); and
 - Consultation responses received through pre-application consultation, EIA scoping and the Gatecheck process¹⁸.

Design Brief

- 5.1.4 An initial Design Brief was agreed with the Applicant setting out key parameters for the Proposed Development. The brief included:
- A preliminary turbine layout (Layout 01: Initial Landscape Design) provided by the Applicant, based on early feasibility and due diligence studies undertaken by specialist landscape architects;
 - Details of land available (illustrated by the application Site Boundary); and
 - Project requirements in relation to infrastructure such as construction compounds, borrow pits, substation, BESS, laydown areas, access track geometry and crane hardstanding geometry.
- 5.1.5 Layout 01 (Initial Landscape Design) (as shown in **Figure 2: Design Iterations, Appendix 1**) was informed by input from the specialist landscape architects, and included consideration of the following design objectives in relation to the landscape:
- Objective 1: To create a balanced layout in views of the development from readily accessible public places;
 - Objective 2: To follow the broad topography of the Site; and
 - Objective 3: To ensure that the scale (both of the turbines and the scale of the 'ridges and valleys' landscape) was proportionate.
- 5.1.6 Subsequent to this, the Design Brief was updated to set the scope for constraint mapping by the specialist consultant teams, with the Applicant being responsible for defining technical requirements such as the turbine model and turbine parameters and other design parameters for Site infrastructure such as:
- Turbines should maintain a distance equivalent to turbine tip height (i.e., 240 m distance) from the Site Boundary, where practicable;
 - All watercourses should have a 50 m exclusion area placed around them, in order to ensure protection of water quality, in line with SEPA requirements;
 - Access tracks should minimise the need for watercourse crossings;
 - Access track running width to be between 4.5 m and 7 m depending on gradient and bends;

¹⁸ Full details of the consultation undertaken is provided in **Technical Appendix 1.2: Consultation Register (EIAR Volume 2)**.

- Access tracks should be straight for 20 m before and after a bridge, culvert or hardstanding area;
- Turning areas to be provided sized to allow turning of loaded or unloaded blade transporters (as required); and
- Where possible, borrow pit search areas should be sited in locations that can be reached via existing tracks, in order to avoid the need to construct extensive sections of track to reach them and obtain materials.

Constraints Mapping

- 5.1.7 Following agreement of the Design Brief, the team was instructed to undertake all necessary desktop studies and field work to identify key environmental receptors and constraints (including cumulative constraints) of relevance to the design and assessment of the Proposed Development.
- 5.1.8 Further analysis was completed to categorise constraints as either 'hard constraints' or 'soft constraints'. Hard constraints were defined as those features with formal protection as defined in legislation or adopted planning/industry guidance, whereas soft constraints were characterised as having potential to constrain the development but, subject to careful design consideration and/or mitigation measures, the Proposed Development could be accommodated.
- 5.1.9 Environmental constraints relevant to the Site and design process are detailed on **Figure 3: Environmental Constraints (Appendix 1)**.

Design Workshops

- 5.1.10 Details of the constraints and recommended design guidance was updated into the Design Brief as detailed in **Appendix 2**. This information, along with further survey work and assessment as required, was then used to review the design layout through a series of design workshops.
- 5.1.11 The design workshops were led with the objective to 'design out' potential for significant effects. Where it was not possible to mitigate by design, the environmental constraints have been considered further as part of the EIAR.
- 5.1.12 The conformity of the emerging layout with the specified landscape and visual objectives was reviewed and considered throughout the design process, with further amendments being made to each iteration of the layout (as required) to ensure adherence to these objectives.

5.2 Environmental and Design Constraints

- 5.2.1 In addition to the policy considerations identified, key issues and constraints for consideration in the design process were established through a combination of desk-based research, field survey and consultation (through the EIA scoping process). The design process considered the following environmental constraints, including:
- Landscape character and visual, recreational and tourism amenity within a 25 km study area;
 - Cultural heritage, including mapping all known assets within the Site, all designated heritage assets within 5 km and nationally important designated assets within a 10 km study area of the Site to assess the potential for visibility and setting effects;
 - Sensitive fauna, with the mapping of the presence of protected species within the Site;
 - Sensitive habitats, particularly peat forming habitats (supported by habitat, peat probing and peatland condition assessment surveys) and habitats dependent on groundwater within the Site;
 - Ornithology, including surveys for bird flight activity and breeding bird activity on the Site;
 - Hydrology, hydrogeology and geology, including identifying all sensitive surface water features, groundwater dependent terrestrial ecosystems (GWDTEs), and peat depth of the Site;

- Traffic and transport, including all trunk roads and local roads that are likely to experience increased traffic flows;
- Cumulative operational noise levels and exposure at nearby properties; and
- Aviation and telecommunications assets.

5.2.2 Environmental constraints considered in the design process are shown on **Figure 3: Environmental Constraints (Appendix 1)** and detailed, along with the associated design guidance, in **Appendix 2**.

6. ALTERNATIVES

6.1 Do-Nothing Scenario

6.1.1 The "do nothing" scenario is considered in the EIAR as a basis for comparing the development proposal under consideration. This scenario is considered to represent the current baseline situation as described in the individual chapters of the EIAR. Section 3 of each Chapter of the EIAR outlines the Site Context which characterises the baseline environment and assumed future environmental conditions assuming no development on the Site is established.

6.1.2 It is recognised that the baseline would not remain static for the lifetime of the Proposed Development. In particular, and apart from any changes arising from economic and agricultural policies and economic market considerations, it is predicted that biodiversity and landscape would undergo some level of change as a result of climate change. Due to the complexities and uncertainties inherent in attempting to predict the nature and extent of such changes to landscape and biodiversity during the lifetime of the Proposed Development, it has been assumed that the current baseline would subsist.

6.2 Alternative Layout Design

6.2.1 **Figure 2: Design Iterations (Appendix 1)** shows the various layout iterations throughout the design evolution process for the Proposed Development. It should be noted that throughout the design evolution process, the removal/addition of turbines resulted in the need to re-number turbines (refer to **Table 4.1**).

6.2.2 The following paragraphs explain the changes made through the main design iterations with turbine references related to the turbine number within that design iteration (refer to **Figure 2: Design Iterations (Appendix 1)**).

Layout 01 (Initial Landscape Design) (16 turbines)

6.2.3 Layout 01 (Landscape Design Layout) was informed by input from the specialist landscape architects, based on consideration of landscape capacity only, in conjunction with landownership constraints. The design considered three main objectives to (1) create a balanced layout in views, (2) to follow the broad topography of the Site; and (3) ensure the scale of turbines in relation to the ridges and valleys in the landscape was proportionate.

6.2.4 The outcome of this layout review determined that large scale turbines of up to 240 m in height to tip could be accommodated on-site in landscape and visual terms. This scale of turbine was taken forward to the ongoing design process as turbines of this size are expected to maximise the energy generation potential of the site, while minimising adverse significant effects by requiring fewer turbines.

Layout 02: Scoping Layout (16 turbines)

6.2.5 Layout 02 (Scoping Layout) was confirmed following a design workshop held in June 2024. The Scoping layout represented the layout that was developed based on an initial desk-based constraints review and taking account of findings of the initial ornithology and ecology surveys and the Stage 1 peat probing surveys.

6.2.6 At this stage in the design process, it was considered that the Site would theoretically accommodate up to 16 turbines up to a maximum 240 m tip height.

Layout 03 (Further Environmental Constraints and Engineering Review) (13 turbines)

6.2.7 Following the Scoping stage, further environmental constraints information was gathered which led to the development of an amended layout, which was then reviewed from an engineering/constructability perspective. The revised layout was identified in response to the following:

- Initial noise modelling based on a number of candidate turbine models;

- Community feedback following the initial public consultation period in December 2024;
- The results of the Stage 2 peat probing survey;
- A further review of the sensitivity of GWDTE; and
- A review of the constructability of the turbines and associated infrastructure and access tracks, mainly in relation to topography of the Site.

6.2.8 As a result of a review of the constraints outlined above, the following main turbine movements were made:

- Turbines 1, 9 and 13 were removed to allow sufficient spacing between the turbines to maximise the potential available wind resource. Following removal of these turbines a further review of turbine spacing was undertaken across the Site with Turbines 6, 7, 8, 9, 12, and 15 relocated for this purpose.
- Turbine 2 was relocated further west to allow for the realignment of the access track to Turbine 16 and to relocate the turbine hardstand out of a small area of peat deeper than 1 m.
- Turbines 3 and 4 were relocated further to the east to reduce the area of sensitive ecological habitat (Wet Heath/Acid Grassland Mosaic/Blanket Bog Mosaic (D6/E1.6.1) or Blanket Bog (E1.6.1)) affected, with Turbine 4 also relocated out of a GWDTE buffer.
- Turbines 4, 10, 12 and 14 were relocated to be out of Blanket Bog (E1.6.1) or Wet Heath/Acid Grassland Mosaic/Blanket Bog Mosaic (D6/E1.6.1). This also meant that the area of sensitive ecological habitat affected by the hardstand/other infrastructure associated with the turbines in these areas was reduced.
- Turbine 11 was relocated further west to allow for the orientation of the turbine hardstand and alignment of the access track in this area to reduce the effect on sensitive ecological habitat (Unimproved Acid Grassland/Blanket Bog Mosaic (B1.1/E1.6.1)).
- Turbine 16 was relocated further north following the removal of Turbine 1. This allowed the access track to Turbine 16 to be realigned to reduce the area of sensitive ecological habitat (Wet Dwarf Shrub Heath/Blanket Bog Mosaic (D2/E1.6.1)) affected by the access track in this area.
- None of the proposed turbine locations are within peat deeper than 1 metre (m). A small area of the hardstand for Turbine 4 and a small area of the access track to the substation and the access track to Turbine 11 are located in an area of peat deeper than 1 m. The access track from Turbine 14 to Turbine 15 is located in an area of deeper peat and in this area the access track is proposed to be floated.

6.2.9 Overall, three turbines were removed resulting in a 13-turbine layout.

6.2.10 Further to the turbine locations this layout also included associated infrastructure such as borrow pits, access tracks, turbine hardstands and the location of the temporary compound, substation and BESS.

6.2.11 The location for the BESS was determined in tandem with the location of the substation, as the BESS is required to be adjacent to the substation.

6.2.12 A number of locations immediately south of the forestry track which bisects the Site east to west were reviewed and the proposed location for the substation and BESS was selected due to the following:

- Appropriate topography allowing for a relatively level area minimising earthworks required;
- Easily accessed as you enter the main area of the Site;
- The location provides good opportunities for visual screening; and
- Reduced distance to the contracted grid connection point at Elvanfoot substation, 8.5 km north of the Site.

6.2.13 In addition, the BESS compound area was initially seeking a flat area of ground approximately 124 m x 160 m in plan. Review of the site topography, and specifically that in the location finally chosen for the BESS, led to the decision to change the arrangement of the BESS infrastructure to a longer and narrower 190 m x 50 m compound that better fits local topography and reduces the earthworks required

Layout 04: Design Freeze Layout (13 turbines)

6.2.14 Layout 04 (Design Freeze) represents the final layout which amended Layout 03. One borrow pit was removed (by Turbine 6); a further review of the material requirements for the development meant that two borrow pit locations were proposed to be taken forward to the design freeze layout. Turbines 5 and 15 were relocated 30 m north to review the location of the turbines in relation to the theoretical Line of Sight (LOS) of Glasgow Prestwick Primary Surveillance Radar (PSR).

6.2.15 These revised locations were reviewed against more detailed terrain data which confirmed that the turbines were still within the theoretical LOS and as such this will be considered further in the EIAR. The revised turbine locations were maintained for the purposes of the design freeze.

6.2.16 Layout 04 (Design Freeze) also includes two access routes which connect the main area of the Site where the turbines are located with the road network:

- Western Access – Off the A702 road through Watermeetings Forest ; and
- Eastern Access – Off the Daer Water road to enter the site at Wintercleugh.

6.2.17 For the Eastern Access, it is acknowledged that the track is located in proximity to the Smithwood, Bastle House Scheduled Monument. Informed through consultation with Historic Environment Scotland (HES)¹⁸, mitigation measures including the implementation of a stand-off buffer with protective fencing are proposed as part of the cultural heritage mitigation for the Proposed Development, in order to protect this asset from direct effects during construction.

6.2.18 The turbine numbering for Layout 04 (Design Freeze) has been updated to align with the 13 turbine layout as shown in **Table 4.1**.

Table 4.1: Turbine Numbering – Layout 01 to 03 vs Layout 04 (Design Freeze)			
Layout 01 to Layout 03	Layout 04 (Design Freeze)	Easting	Northing
11	1	295138	608020
6	2	294004	608436
7	3	294210	608044
10	4	295198	607540
8	5	294455	607687
12	6	294266	607086
14	7	293875	606403
15	8	293921	605354
5	9	294596	605841
4	10	295263	606185
3	11	295885	606169
2	12	295299	605418
16	13	294650	605231

7. DESIGN SOLUTION

7.1 Design Freeze Layout

7.1.1 The final 'design freeze' layout is the outcome of numerous design iterations, as outlined in **Section 6** of this Design Statement. The finalised layout includes the following key components:

- Up to 13 wind turbines with a maximum tip height of 240 m and with a combined generation capacity of > 50 MW;
- Permanent foundations supporting each wind turbine, and associated crane hardstanding at each wind turbine base;
- Two site access points for use during construction and operation; the Western Access from the A702 through Watermeetings Forest and the Eastern Access from the Daer Water road to enter the Site at Wintercleugh, with both access points designed to accommodate abnormal indivisible loads (AIL) required for turbine component delivery;
- Series of upgraded, new and floating¹⁹ on-site access tracks with associated watercourse crossings, passing places and turning heads;
- Underground power cables, generally laid in trenches alongside access tracks connecting the turbines to the on-site substation;
- On-site Substation Compound inclusive of substation and control building;
- On-site BESS Compound to accommodate a BESS of approximately 50 MW capacity²⁰; and
- Temporary Construction Compound and laydown areas.

7.1.2 In addition, the following ancillary works would be necessary:

- Extraction of rock from two borrow pits;
- Temporary on-site concrete batching plan – located within the temporary compound areas;
- Temporary anemometer masts for three to six months during the construction period for calibration purposes;
- Habitat management and enhancement areas (further details are provided in **Appendix 6.7: Outline Biodiversity Enhancement and Management Plan (OBEMP), EIAR Volume 4**); and
- A permanent diversion to a short section (approximately 880 m) of the SUW at the point where the western access route enters the main site area.

7.1.3 Felling of approximately 1.59 ha would be required for construction of the Western and Eastern Access tracks. Compensatory planting would be provided which would complement the native broadleaved woodland planting proposed within the OBEMP (see **Technical Appendix 2.3: Forestry and Woodland Assessment and Technical Appendix 6.7: Outline Biodiversity Enhancement and Management Plan (OBEMP), EIAR Volume 4**).

7.1.4 The location of the temporary construction compound, substation and BESS benefits from being located in an area of appropriate topography as well as being easily accessible.

7.1.5 For the substation the location reduces the distance to the contracted grid connection point at Elvanfoot approximately 8.5 km north of the Site.

7.1.6 The locations of the proposed turbines and other infrastructure would be subject to 'micrositing'. This process allows for minor changes in turbine or infrastructure locations to respond to possible variations in ground conditions across the site, which would only be confirmed following detailed site investigation work carried out immediately prior to construction. This process also provides scope for further mitigation of localised potential environmental effects through avoidance of

¹⁹ Floating tracks proposed where it is not possible to avoid areas of peat greater than (>) 1 m and suitable engineering criteria are met, for example shallow topography (below 5%).

²⁰ Approximate capacity of the BESS within the BESS Compound based on current technology.

sensitive features. It is anticipated that a maximum micro-siting distance of 100 m would form a condition of any consent. Any repositioning would be carried out under the supervision of an Ecological Clerk of Works (ECoW) and an appropriately experienced and qualified engineer with the objective to optimise the development whilst avoiding or minimising any new or additional significant environmental effects.

- 7.1.7 The Proposed Development is described in detail in Chapter 2: Description of Proposed Development (EIAR Volume 2).
- 7.1.8 The proposed layout for all infrastructure associated with the Proposed Development is shown on **Figure 4: Site Layout (Appendix 1)**.

8. ACCESS

8.1 Access from Public Roads

8.1.1 Access to the Site would be taken from the following roads:

- Western Access – from the A702 through Watermeetings Forest
- Eastern Access – off the Daer Water road to enter the site at Wintercleugh.

8.1.2 For more information on the delivery route to the Site see **Chapter 9: Access, Traffic and Transport (EIAR Volume 2)**.

8.2 Internal Site Access

8.2.1 Approximately 13.97 km of new on-site access tracks and approximately 2.73 km of upgraded track would be required to provide access to the wind turbines, substation and BESS compounds, borrow pits and construction compound (**Figure 4: Site Layout, Appendix 1**).

8.2.2 Tracks would have a typical 6 m running width with appropriate widening on bends, at junctions and passing places.

8.2.3 In areas where the peat and topsoil are consistently less than 1 m deep, the vegetation and soil would typically be stripped to a suitable subsoil layer and the track (approximately 300 mm to 500 mm thick) would be constructed on the subsoil. The upper topsoil layer, together with turf, would be stored temporarily for use in landscaping and revegetating the track shoulders and track side drainage, where possible.

8.2.4 Once the soil has been removed, as described above, to a suitable founding layer, the road and running surface would be constructed by tipping and compacting aggregate of the required shape and thickness. Cross-sections of the final road shape following reinstatement of the roadside slopes by replacing the layers of excavated material in the correct order are presented in **Figure 5: Typical Access Track Detail (Appendix 1)**.

8.2.5 Where it has not been possible to avoid areas of peat greater than 1 m and suitable engineering criteria are met, for example shallow topography (below 5%), floating tracks would be required to be constructed. It is anticipated that there would be a maximum of 0.67 km of floating track required in the southwest of the Site between Turbines 7 and 8. The use of 'floating roads' in these areas of deeper peat eliminates the need for peat excavation and minimises effects on ecology and disruption to existing water paths and allows for some filtration.

8.2.6 The on-site track layout has been designed to minimise environmental disturbance and land take wherever possible, by avoiding areas of deeper peat and steep slopes in excess of 21% and, wherever possible, avoiding or minimising areas of identified environmental constraints.

8.2.7 The track layout has been carefully designed to minimise the number of watercourse crossings.

8.3 Public Access

8.3.1 Public access to the Proposed Development would be restricted during the construction of the wind farm for health and safety reasons due to construction activities, the movement of heavy plant and the erection of turbines.

8.3.2 A temporary diversion during construction would be put in place for the part of the SUW which would follow an established diversion route used during forestry operations and is formed of an existing track alignment.

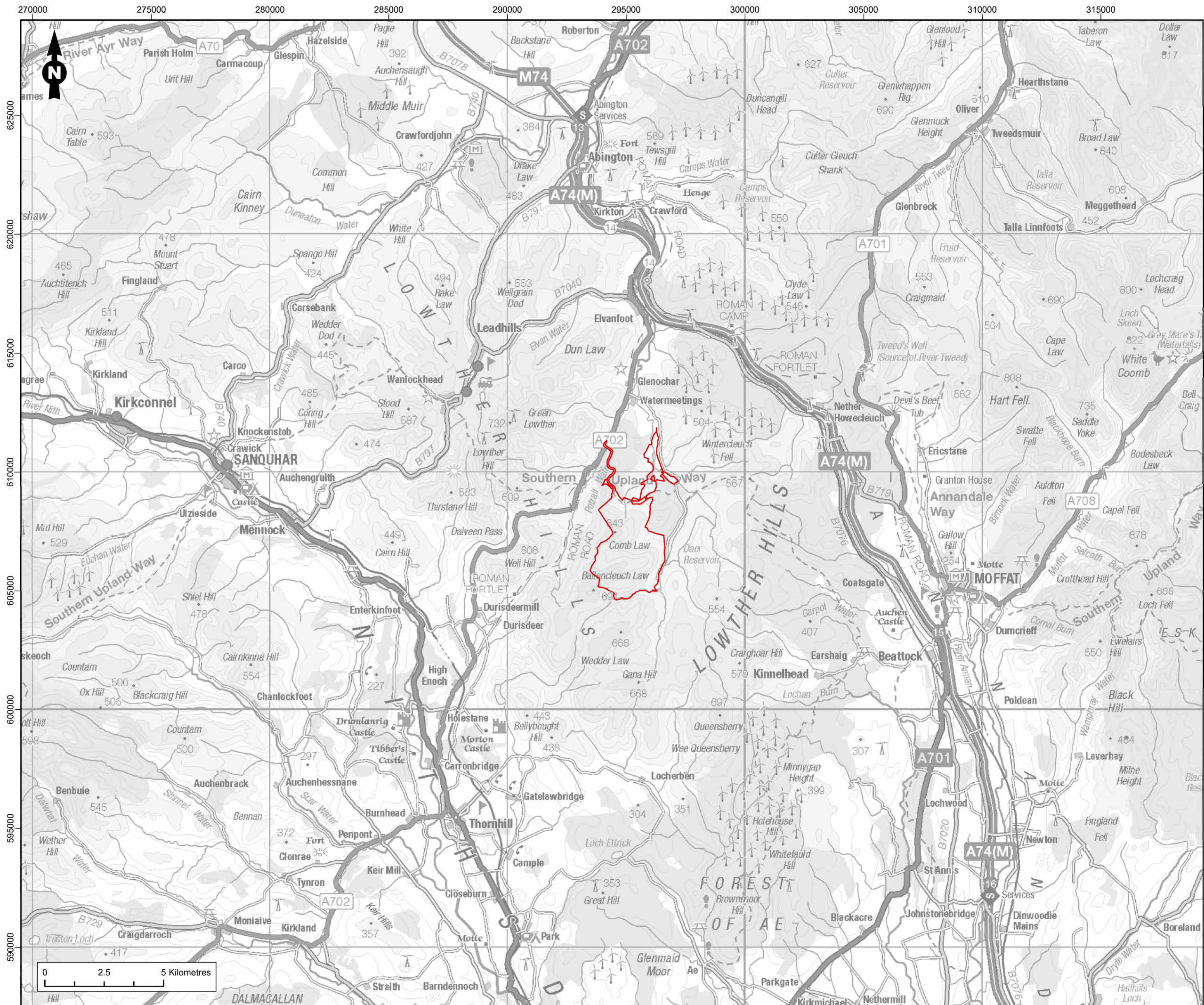
8.3.3 While no formal access arrangement would exist, once operational, it is proposed that the Site access tracks associated with the Proposed Development would be available for full public use for non-motorised users upon completion of the construction and commissioning phases, subject to following the Scottish Outdoor Access Code.

- 8.3.4 In relation to this, a permanent diversion to a short section (approximately 880 m) of the SUW at the point where the Western Access route enters the main development area of the Site is proposed. The permanent diversion would be provided so that users of the SUW can avoid infrastructure associated with the Proposed Development. During the construction phase, the permanent diversion would not be used by construction traffic associated with the Proposed Development, instead it would provide continuing access for existing users away from the active construction areas at the Proposed Development.
- 8.3.5 During periods of maintenance, access by the public could be restricted depending on the nature of the maintenance activity required.

9. SUMMARY

- 9.1.1 This document provides an overview of the iterative design process undertaken by the Applicant in relation to the Proposed Development. It describes the principles and design approach that have shaped and influenced the design of the Proposed Development and summarises the relevant planning policy considerations, the Site context and consultation activities which have influenced the final design solution.
- 9.1.2 The design process was an iterative constraint-led process driven by the technical, engineering and environmental constraints on Site. Consultation through the Scoping Opinion has further provided input to the design narrative.
- 9.1.3 The final layout comprises of up to 13 wind turbines with a maximum tip height of 240 m, along with associated infrastructure and a BESS of an approximate 50 MW capacity.
- 9.1.4 The careful placement of the proposed turbines and associated infrastructure through an effective design process has helped to mitigate the majority of potentially significant effects arising from the Proposal Development.
- 9.1.5 Further information on the mitigation measures proposed to reduce the significance of the residual environmental effects of the Proposed Development is presented in the **Chapter 13: Schedule of Environmental Commitments (EIAR Volume 2)**.
- 9.1.6 Overall, the final design solution is considered to include the most appropriate number of turbines on the Site, balancing energy output and the associated contribution towards government targets, with planning and environmental constraints.

APPENDIX 1 FIGURES



Legend

Site Boundary

Figure Title
Site Location

Project Name
Watchman Energy Park

Project No./Filey ID
1620016964 / REH2024N01805

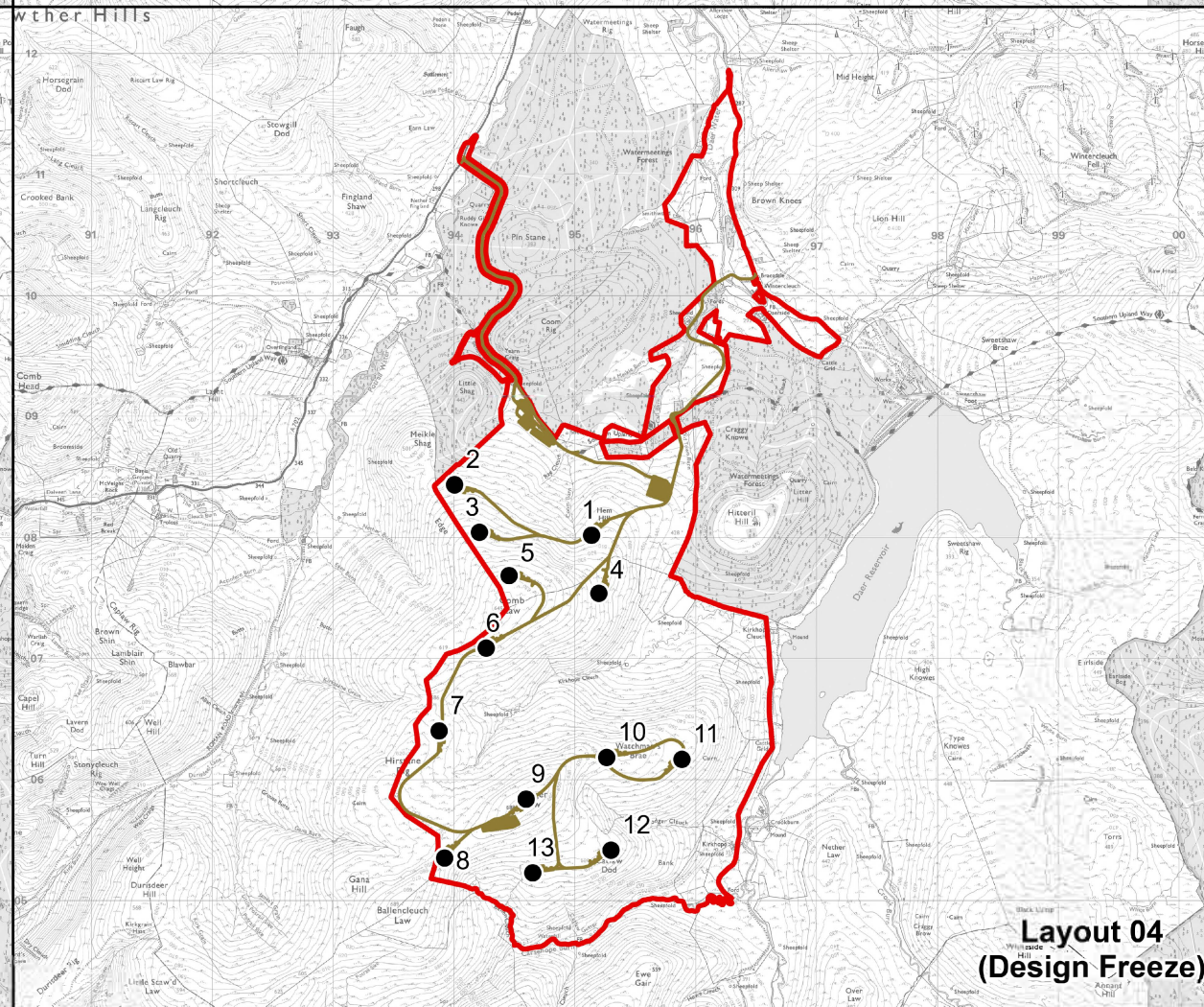
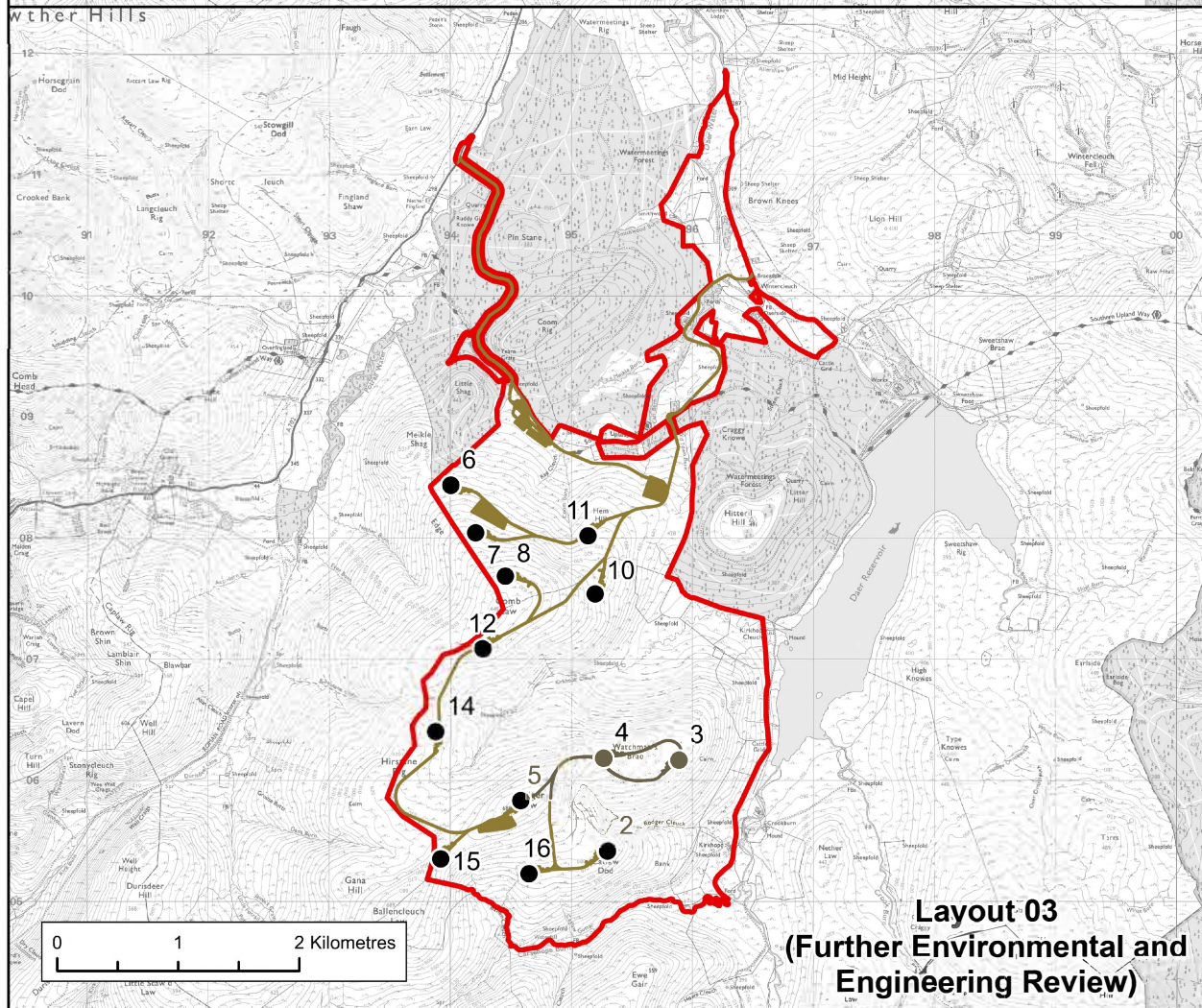
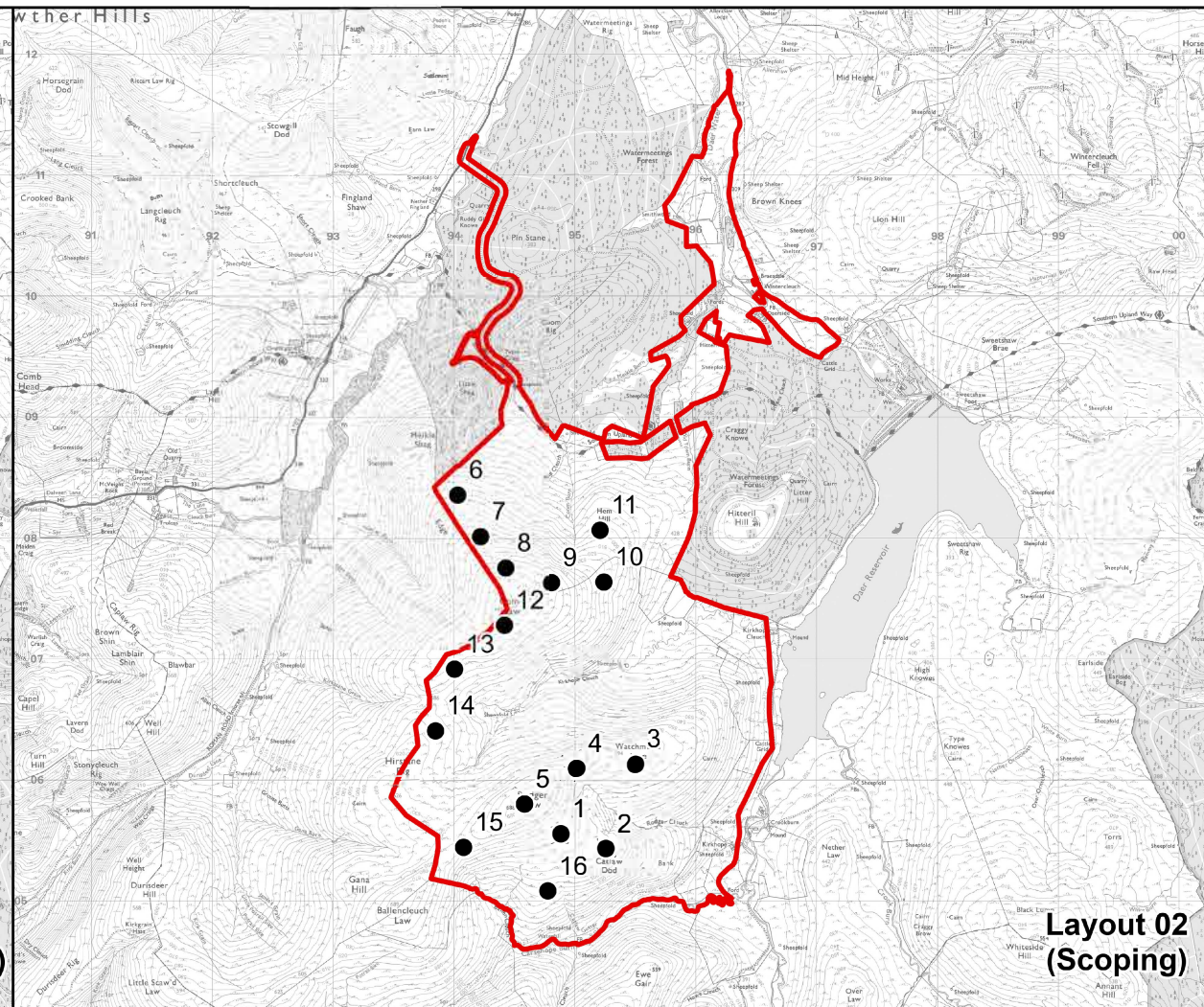
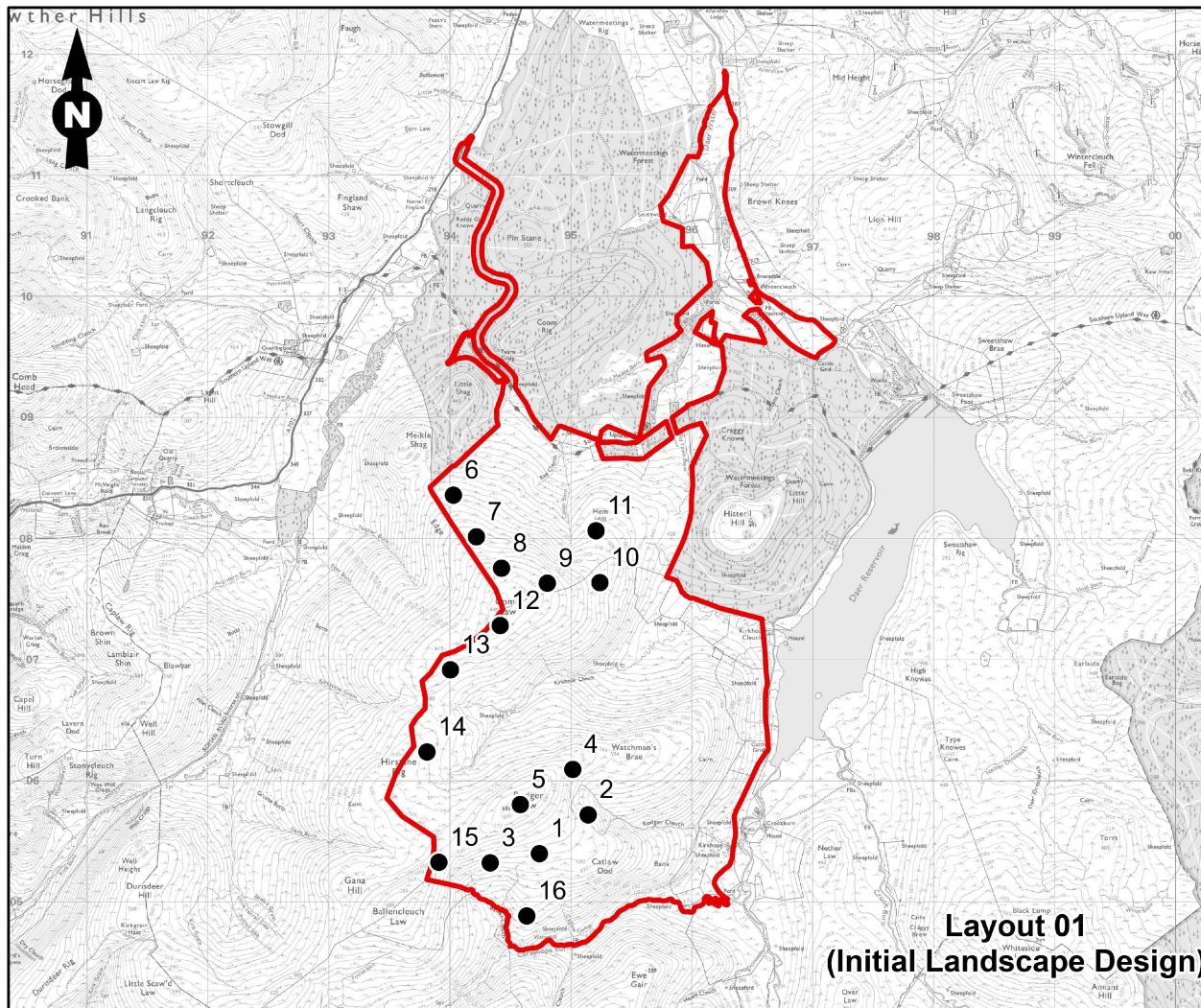
Date February 2026	Figure No. 1	Revision 1.0
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Client
Watchman Energy Park Ltd

RAMBOLL





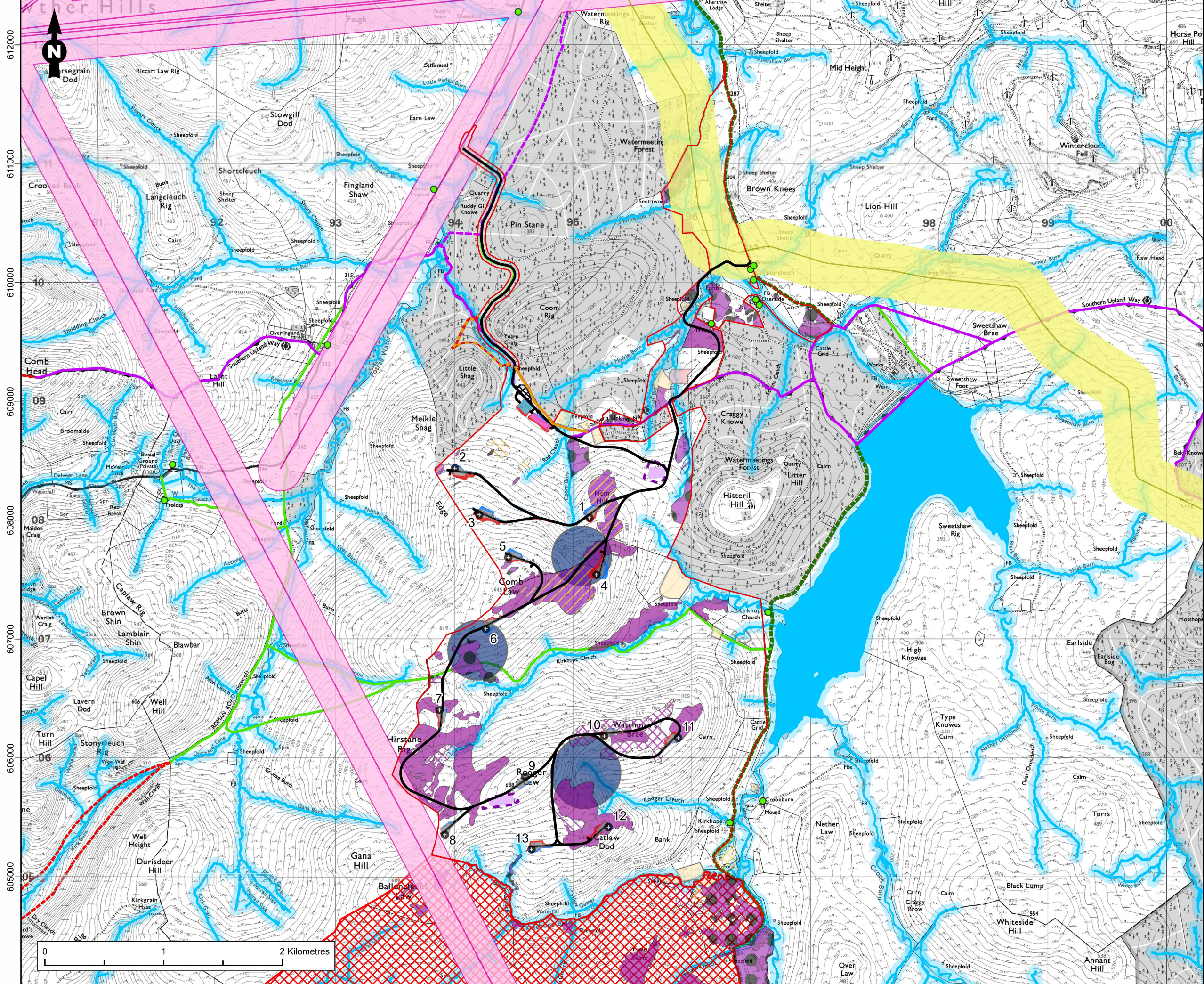
Legend

- Site Boundary
- Turbine Layout
- Infrastructure

Note: As part of the design process, turbine identification numbers were revised and renumbered for Layout 04 (Design Freeze).

Figure Title Design Iterations		
Project Name Watchman Energy Park		
Project No./Filey ID 1620016964 / REH2024N01805		
Date February 2026	Figure No. 2	Revision 1.0
Prepared By RS	Scale 1:60,000 @A3	
Client Watchman Energy Park Ltd		

291000 292000 293000 294000 295000 296000 297000 298000 299000 300000



Legend

Site Boundary	Wet Dwarf Shrub Heath/Blanket Bog Mosaic (D2/E1.6.1)
Turbine Locations	Wet Dwarf Shrub Heath/Wet Modified Bog Mosaic (D2/E1.7)
Infrastructure	Wet Heath/Acid Grassland Mosaic/Blanket Bog Mosaic (D6/E1.6.1)
Southern Upland Way Diversion (Temporary)	Blanket Bog (E1.6.1)
Southern Upland Way Diversion (Permanent)	Blanket Bog/Wet Modified Bog Mosaic (E1.6.1/E1.7)
Access Track	Wet Modified Bog (E1.7)
Turbine Hardstand	Wet Modified Bog/Acid Neutral Flush Mosaic (E1.7/E2.1)
Construction Compound	Shiel Dod SSSI
Substation	GWDT (Hydrology Target Notes) + 250m buffer
BESS	Cultural Heritage
Borrow Pit Excavation Area	Non-designated Heritage Assets
Borrow Pit Search Area	Scheduled Monuments
Earthworks	Path Network
Earthworks Cut	Core Path
Earthworks Fill	Aspirational Core Path
Infrastructure / Telecommunications	Wider Network
Gas Transmission Line	Wider Network On Road
Wireless Telegraphy Register (WTR) links	Crossboundary Link
Wireless Telegraphy Register Line Buffer	Residential
Gas Transmission Line Buffer	Residential Dwellings
Ecology	Water Features
Unimproved Acid Grassland/Blanket Bog Mosaic (B1.1/E1.6.1)	Watercourse/body 50 m Buffer
Unimproved Acid Grassland/Wet Modified Bog Mosaic (B1.1/E1.7)	Watercourse
Marsh/Marshy Grassland/Blanket Bog Mosaic (B5/E1.6.1)	Waterbody

Figure Title
Environmental Constraints Plan

Project Name
Watchman Energy Park

Project No./File ID
1620016964 / REH2024N01805

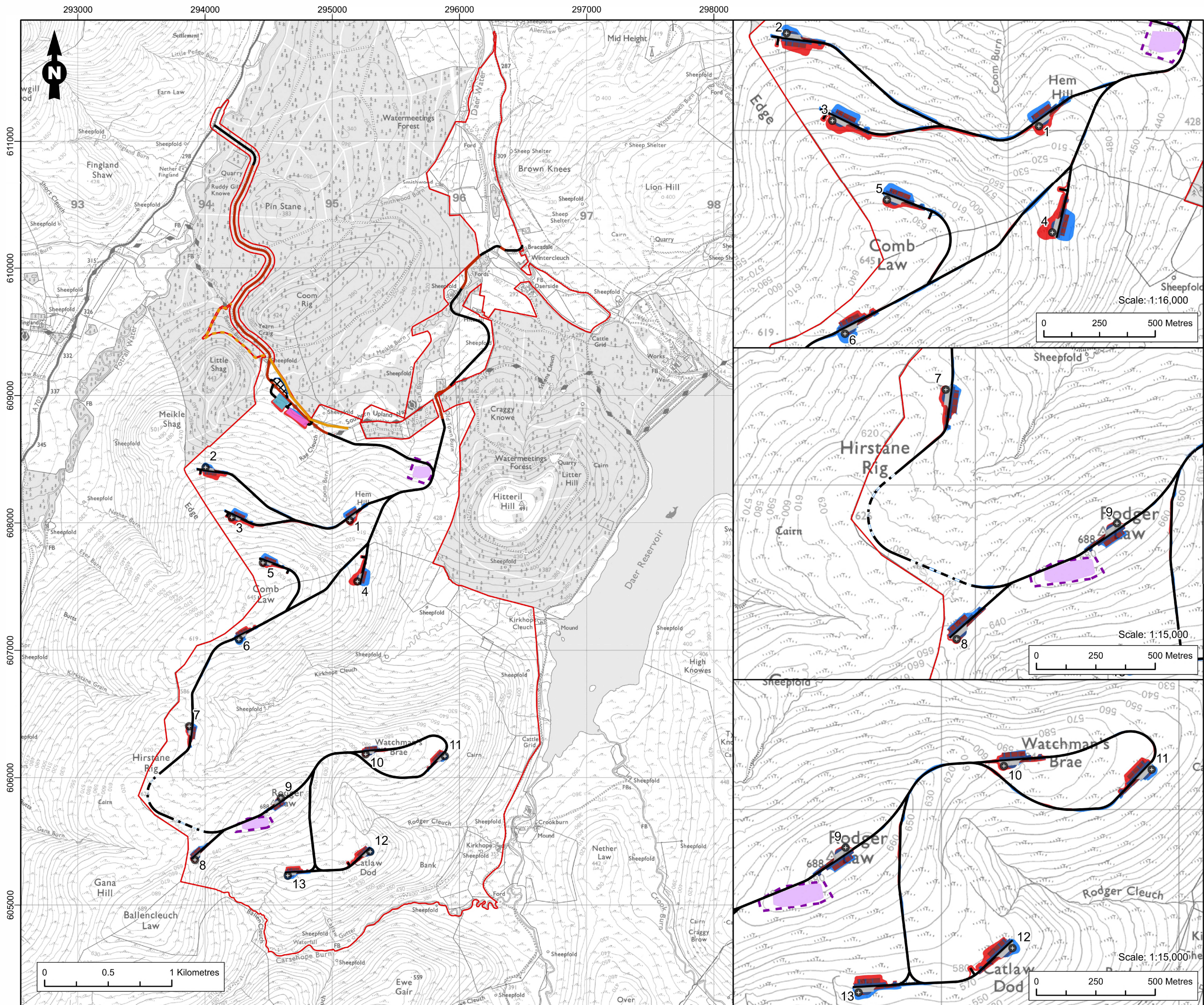
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February 2026	3	1.0

Prepared By
RS

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Client
Watchman Energy Park Ltd

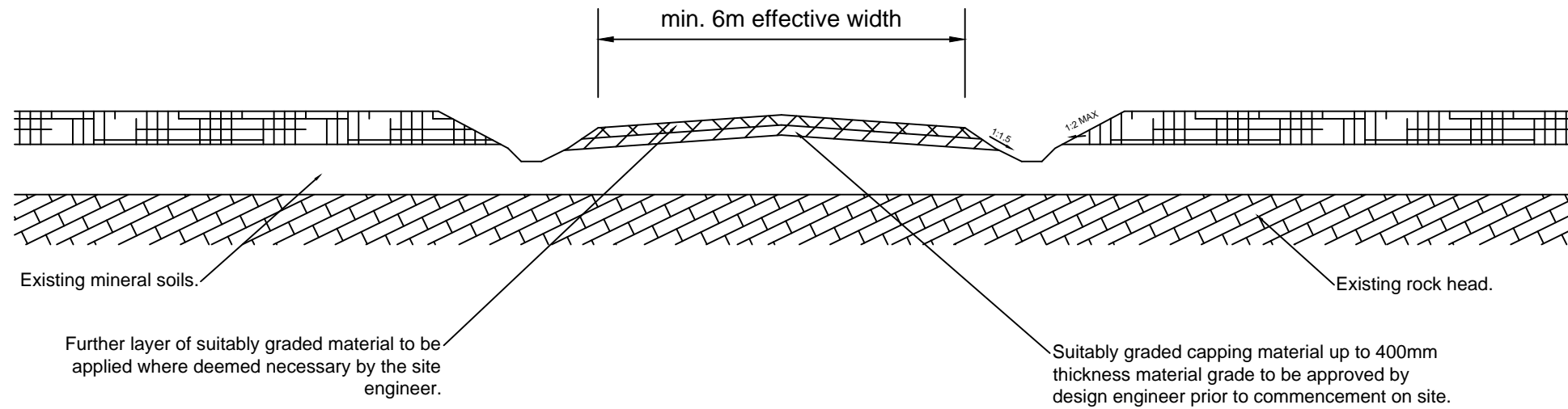




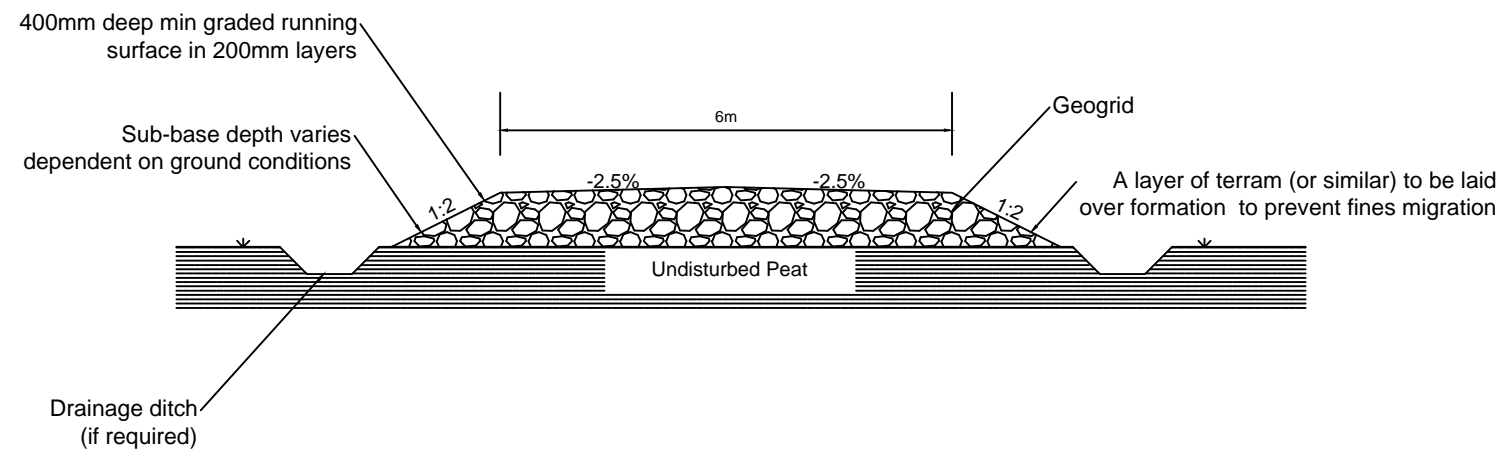
Legend

- Site Boundary
- Turbine Locations
- Infrastructure Permanent**
 - Southern Upland Way Diversion (Permanent)
 - Access Track (New)
 - Access Track (Upgraded)
 - Access Track (Floating)
 - Turbine Hardstand (Permanent)
 - Substation
 - BESS
- Infrastructure Temporary**
 - Southern Upland Way Diversion (Temporary)
 - Turbine Hardstand (Temporary)
 - Turbine Hardstand (Clearance)
 - Construction Compound
 - Borrow Pit Excavation Area
 - Borrow Pit Search Area
- Earthworks**
 - Earthworks Cut
 - Earthworks Fill

Figure Title Site Layout		
Project Name Watchman Energy Park		
Project No./Filey ID 1620016964 / REH2024N01805		
Date February 2026	Figure No. 4	Revision 1.0
Prepared By RS	Scale 1:28,000 @A3	
Client Watchman Energy Park Ltd		



TYPICAL TRACK FORMATION ON OVERBURDEN SOIL



TYPICAL FLOATING TRACK

Figure Title
Typical Access Track Detail

Project Name
Watchman Energy Park

Project No./Filey ID
 1620016964 / REH2024N01805

Date September 2025	Figure No 5	Revision 1.0
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Prepared By NMCK	Scale NTS @A3
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APPENDIX 2 ENVIRONMENTAL CONSTRAINTS AND DESIGN GUIDANCE

Table 3.1: Preliminary Site and Design Guidance for Watchman Energy Park

Topic	Baseline Constraints Analysis	Design Guidance
<p>Landscape and Visual: Landscape Fabric</p>	<p>The Site is located in the area between Daer Reservoir and Daer Water in the east, and the A702 road in the west within South Lanarkshire.</p> <p>Predominantly upland moorland in character, the Site is undulating and includes a series of rounded hills characteristic of the Southern Uplands including Comb Hill (645 m Above Ordnance Datum (AOD)), Watchman’s Brae (594 m AOD) and Rodger Law (688 m AOD).</p> <p>To the north, elevations reduce and include the floodplain of the Daer Water comprising semi-improved farmland and woodland planting, including extensive commercial forestry plantations, beyond the Site Boundary.</p> <p>An approximate 2.0 km section of the SUW crosses through the Site in a northwest to southeast orientation following an existing forestry track.</p>	<p>Design Objectives for the Site:</p> <ul style="list-style-type: none"> ▪ Objective 1: To create a balanced layout in views of the development from readily accessible public places; ▪ Objective 2: To follow the broad topography of the Site; and ▪ Objective 3: To ensure that the scale (both of the turbines and the scale of the ‘ridges and valleys’ landscape) was proportionate. <p>For this Site, these Objectives are applied as follows:</p> <ul style="list-style-type: none"> ▪ The scale of the landscape, both in absolute terms and in its character is large, and therefore the size of turbines can be taller. This is further reinforced by the large extent of the surrounding contiguous Landscape Character Type (LCT) Southern Uplands – Glasgow and Clyde Valley; ▪ The Site landform demands following ridgelines precisely because these are narrow, and the Site does not feature any plateau like areas. ▪ Due to the extensive existing and proposed wind farm development in the surrounding area, most views to the Site are also influenced by these wind farm developments. The likely visual effects should therefore be placed in the context of all proposed or existing development in the area.
<p>Landscape and Visual: Landscape Character and Designations</p>	<p>LCTs relevant to the Site:</p> <ul style="list-style-type: none"> ▪ LCTs hosting the turbine array: Southern Uplands – Glasgow & Clyde Valley (LCT 217). ▪ Other LCTs hosting other small parts of the Site: Upland Glen – Glasgow & Clyde Valley (LCT 209). <p>National and local landscape designations to be considered for landscape and visual effects:</p> <ul style="list-style-type: none"> ▪ National - Drumlanrig Castle Garden and Designed Landscape (GDL); ▪ Local - Leadhills and Lowther Hills Special Landscape Area (SLA) (South Lanarkshire); ▪ Local - Thornhill Uplands Regional Scenic Area (RSA) (Dumfries & Galloway); ▪ Local - Moffat Hills RSA (Dumfries & Galloway); and ▪ Local - Tweedsmuir Uplands SLA (Scottish Borders). 	<p>Refer to Design Objectives and how these are applied to the Site under ‘Landscape Fabric’.</p>

Table 3.1: Preliminary Site and Design Guidance for Watchman Energy Park

Topic	Baseline Constraints Analysis	Design Guidance
Landscape and Visual: Visual Amenity	<p>Visual receptors to be considered in relation to changes in visual amenity:</p> <ul style="list-style-type: none"> ▪ Residents within settlements and of individual properties; ▪ People who travel through the area with potential views of the Proposed Development; and ▪ People engaged in recreational activities including walkers on hills, Long Distance Footpaths, Core Paths and visitors to tourist destinations where the visual experience is likely to include a focus on the surrounding landscape. 	Refer to Design Objectives and how these are applied to the Site under 'Landscape Fabric'.
Cultural Heritage	<p>Designated Assets (National Importance)</p> <ul style="list-style-type: none"> ▪ One Scheduled Monument (a designated asset of national importance) within the Site boundary (to the north): Smithwood, Bastle House 900 m southwest of Daerside (SM 5647). 	<ul style="list-style-type: none"> ▪ Where possible, turbines to be sited to minimise impacts on the setting of the Scheduled Monument within the Site Boundary. ▪ Recommended minimum buffer of 200 m should be applied to the Scheduled Monument to reduce direct and indirect impacts. ▪ No groundbreaking works to take place within the Scheduled area and there can be no potential for direct impacts on the asset.
	<p>Non-Designated Assets (Regional or Local Importance)</p> <ul style="list-style-type: none"> ▪ 30 non-designated heritage assets within the Site of regional or local importance, mainly located to the east and north of the Site. These include non-designated assets (of regional or local importance) recorded on the West of Scotland Archaeology Service (WoSAS) Historic Environment Records (HER) as well as those identified on historic maps and/or during the field survey. 	<ul style="list-style-type: none"> ▪ Recommended 10 m buffer should be applied to non-designated assets (regional or local importance). ▪ Where possible, turbines and site infrastructure should be sited to avoid direct impacts upon known remains. ▪ Where infrastructure would be located in close proximity to known assets, but would not directly impact upon them, mitigation measures such as the temporary fencing-off, or marking-off, of assets to prevent inadvertent damage by plant movement during the construction phase may be required. ▪ Where assets cannot be avoided, potential direct impacts are likely to require mitigation through preservation by record undertaken through archaeological watching brief(s) or excavation.
Ecology	<p>Designated Sites</p> <ul style="list-style-type: none"> ▪ Shiel Dodd Site of Special Scientific Interest (SSSI) located immediately to the south of the Site Boundary. 	<ul style="list-style-type: none"> ▪ Recommended buffer of 75 m should be applied to the boundary of the SSSI. ▪ Avoid watercourse crossings on watercourses hydrologically linked to the SSSI to reduce risk of impact.

Table 3.1: Preliminary Site and Design Guidance for Watchman Energy Park

Topic	Baseline Constraints Analysis	Design Guidance
	<p>Bats</p> <ul style="list-style-type: none"> ▪ Preliminary Roost Assessment (PRA) noted 21 features with the potential to supporting roosting bats, with some Moderate and High potential. ▪ No features with Moderate or High potential were recorded within 200 m + blade length of proposed turbine locations. ▪ Bat activity surveys were undertaken in 2023 and 2024 and showed bat activity across the Site with species of high collision risk present. 	<ul style="list-style-type: none"> ▪ Implement a 50 m buffer from blade length to relevant habitat features, e.g., woodland edges. ▪ Positioning of turbines to ensure potential bat roosts (Moderate or High potential) lie outwith a protection buffer of 200 m plus blade length (285 m). ▪ Where access tracks within the Site are to be constructed, should these come within 30 m of potential roost features, further surveys (e.g., endoscope surveys, tree climbing, or dawn/dusk surveys at the appropriate time of year) may be required prior to construction.
	<p>Internationally or nationally important habitats (Annex 1 habitats, Scottish Biodiversity List)</p> <ul style="list-style-type: none"> ▪ Based on the habitat surveys, the Site predominantly supports a mixture of marshy grassland, unimproved acid grassland, wet dwarf shrub heath and blanket bog. ▪ Other habitat types distributed across the Site include wet modified bog, acid neutral flush, acid dry dwarf shrub heath, improved and semi-improved grassland, broad-leaved plantation woodland and coniferous plantation woodland. 	<ul style="list-style-type: none"> ▪ Blanket bog (including mosaics) generally considered the most sensitive habitat present and this is likely be present on areas of deeper peat – Avoid where feasible. ▪ Wet modified bog (including mosaics) is also considered a sensitive habitat - Avoid where feasible. ▪ Minimise the loss of the higher quality habitats. Where habitat loss cannot be avoided, enhancement, management and compensation to be considered through the Biodiversity Enhancement and Management Plan (BEMP).
	<p>Riparian mammals (esp. Water vole)</p> <ul style="list-style-type: none"> ▪ Signs of water vole, including burrows, feeding signs and runways, were recorded along Kirkhope Cleuch and Carsehope Burn, along the southern extent of the Site. 	<ul style="list-style-type: none"> ▪ Implement of a 50 m buffer between works and watercourses on-site. ▪ Locations of proposed watercourse crossing to be reviewed against water vole burrow data as these would fall outwith the 50 m buffer recommended above.
	<p>Fish</p> <ul style="list-style-type: none"> ▪ Site not accessible to migratory salmonids. ▪ Freshwater surveys recorded a total of four fish species within watercourses within the Site: brown trout (<i>Salmo trutta</i>), minnow (<i>Phoxinus phoxinus</i>) and stone loach (<i>Barbatula barbatula</i>) and brook lamprey (<i>Lampetra planeri</i>). ▪ American signal crayfish (invasive non-native species (INNS)) were recorded during surveys and should be assumed to be present throughout watercourses. 	<ul style="list-style-type: none"> ▪ Implement a 50 m buffer from watercourses. ▪ Recommended to minimise the number of watercourse crossings (based on increased risk to fish species). ▪ Biosecurity measures will be required on Site, implemented through the CEMP, due to presence of American signal crayfish.

Table 3.1: Preliminary Site and Design Guidance for Watchman Energy Park

Topic	Baseline Constraints Analysis	Design Guidance
Ornithology	Schedule 1 species breeding locations present within or close to the Site Boundary.	<ul style="list-style-type: none"> ▪ No turbines or new infrastructure to be located within the relevant species disturbance avoidance buffers . ▪ Access routes through the buffer may still be proposed but works to the existing road/tracks should be kept to a minimum within this area and working restriction measures may be required to avoid disturbance during the breeding season. Any required overrun or oversail should be designed to ensure no loss of know nest sites.
	Breeding wader species present within the Survey Area, with the majority located to the east of the Proposed Development.	<ul style="list-style-type: none"> ▪ Avoidance of the most sensitive habitats (Annex 1 habitats) on Site which are likely to support breeding waders would limit the level of displacement of breeding wader species.
	Black Grouse (lekking sites) – none within the Site from the site surveys but these were recorded in the wider area. RSPB data does record a historical lek site within the Site Boundary.	<ul style="list-style-type: none"> ▪ No turbines or key infrastructure to be located within the relevant buffer (500 m/750 m from lek sites).
Hydrology and Hydrogeology	<p>Watercourses</p> <ul style="list-style-type: none"> ▪ Several watercourses within the Site. ▪ South of the Site (approximately 50% of the total Site area) is within the catchment of Daer Water, upstream of Daer Reservoir. ▪ Central area of the Site (approximately 30% of the total Site area) drains to Kirkhope Cleuch which in turn flows to Daer Reservoir, with the west of the central catchment draining directly to Daer Reservoir. ▪ North of the Site (approximately 15% of the total Site area) drains via Meikle and Calf Burn to Daer Water downstream of the reservoir. ▪ Small area (<5% of the total Site area) drains in a north westerly direction to Potrail Water. <p>Larger waterbodies to which the Site discharges have been assessed by SEPA under the Water Framework Directive (WFD) classification system¹ as follows Daer Water (upstream of Daer Reservoir), Daer Reservoir and Potrail Water: Good Overall Condition. Daer Water (downstream of Daer Reservoir):Moderate Overall Condition.</p>	<ul style="list-style-type: none"> ▪ Implementation of a 50 m buffer on watercourses and, where in proximity to the infrastructure, their extent on the ground must be verified as they may not coincide exactly with the mapped extents. ▪ An exception to the above is made for watercourse crossings, which should be minimised in number and be laid perpendicular to watercourses. ▪ Impermeable surface for infrastructure/battery storage etc. would require detailed drainage design to manage surface water runoff.
	Flood Risk (SEPA Flood Risk mapping) ²	<ul style="list-style-type: none"> ▪ Avoidance of infrastructure within Flood Zones (where feasible).

¹ SEPA Water Framework Directive. Available at: <https://www.sepa.org.uk/data-visualisation/water-environment-hub>

² SEPA Flood Maps - Available at: <https://beta.sepa.scot/flooding/flood-maps/>

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Topic	Baseline Constraints Analysis	Design Guidance
	<ul style="list-style-type: none"> ▪ Only lower lying land in close proximity to watercourses on the Site is at risk of flooding from rivers, including areas at a high risk of flooding (1 in 10 (10%) Annual Exceedance Probability (AEP)). The majority of the Site is assessed by SEPA to be at very low likelihood (>1 in 1,000 (0.1%)) AEP of flooding from rivers. ▪ The majority of the Site is at a very low risk of surface water flooding (less than a 1 in 1,000 (0.1%) annual probability). Areas close to smaller watercourses do show High (10%), Medium (0.5%) and Low (0.1%) probability of surface water flooding. 	<ul style="list-style-type: none"> ▪ Sustainable Drainage during construction and operation should be incorporated to ensure no increase in run off volumes. ▪ Watercourse crossings to be designed to a 1 in 200 annual probability plus allowance for climate change³.
	<p>Groundwater Dependent Terrestrial Ecosystems (GWDTE)</p> <ul style="list-style-type: none"> ▪ Habitat surveys confirmed that areas of the Site are classified as 'potentially GWDTE'. ▪ Further hydrological assessment has confirmed that while potentially groundwater dependent vegetation communities are present, these areas are not supported by groundwater. 	<ul style="list-style-type: none"> ▪ The design should assume a 250 m buffer to turbines and crane hardstanding/borrow pits and a 100 m to excavated tracks pending any relaxation of buffers agreed with SEPA. ▪ Where development is within these buffers, a hydrological risk assessment should be prepared in order to demonstrate that no significant adverse impacts would occur.
	<p>Private Water Supplies (PWS)</p> <ul style="list-style-type: none"> ▪ Two PWS locations in the south of the Site and one PWS close to the northern Site Boundary, but outwith the Site. ▪ Further PWSs identified outwith the Site Boundary have been determined to not be in potential hydrological/hydrogeological connection to the Site. 	<ul style="list-style-type: none"> ▪ A 250 m buffer for PWS is recommended. ▪ If possible, avoid development near source watercourses and preferably avoid development in their catchments.
	<p>Daer Water Drinking Water Protected Area (DPWA)</p> <ul style="list-style-type: none"> ▪ Approximately 30% of the Site is within the Daer Water Drinking Water Protected Area (DWPA, Surface). ▪ This DWPA also includes Daer Reservoir itself and public water supply is provided from the Daer Water Treatment Works, which are situated adjacent to and downstream from the reservoir. ▪ Southern area of the Site is within the catchment of Daer Water, upstream of Daer Reservoir, and is 	<ul style="list-style-type: none"> ▪ Design of the layout must minimise the potential impact to watercourses draining into the DWPA.

³ Scottish Environment Protection Agency (2025) Climate change allowances for flood risk assessment in land use planning [Version 6]. Available at: <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

Table 3.1: Preliminary Site and Design Guidance for Watchman Energy Park

Topic	Baseline Constraints Analysis	Design Guidance
	therefore in hydrological connection to the Daer Water DWPA.	
Peat	<p>Stage 1 and Stage 2 Peat Surveys</p> <ul style="list-style-type: none"> ▪ The Stage 1 and Stage 2 peat depth survey results indicate that the Site is predominately underlain by areas where either no peat is present or a shallow depth of peat is present (approximately 85% of peat depth probes recorded peat depths less than or equal to 0.5 m depth). Further, approximately 95% of the peat depth probes recorded peat depths less than or equal to 1 m depth. ▪ The mean depth of peat recorded during the surveys was 0.27 m, with the maximum peat depth recorded at 3.0 m in the southwest of the Site. 	<ul style="list-style-type: none"> ▪ Peat depth greater than 1.0 m should be avoided by turbines and infrastructure. ▪ Where avoidance of peat greater than 1.0 m is not possible, the design should seek to minimise the effects on peat by adopting alternative construction methodologies and carefully planning site drainage. ▪ Consideration should be given to the additional impacts of access tracks when siting turbines. ▪ The option for floating tracks where they would cross peat depths greater than 1.0 m, should be considered if these areas of peat cannot be avoided.
Traffic and Transport	<p>The main transport impacts would be associated with the movement of general HGV (and LGV) traffic travelling to and from the Site during the construction phase of the Proposed Development.</p> <p>Each turbine is likely to require between 11 and 13 abnormal loads to deliver the components to Site. The components are likely to be delivered on extendable trailers which would then be retracted to the size of a standard HGV for the return journey.</p>	<ul style="list-style-type: none"> ▪ No specific design recommendations regarding access route to the Site. ▪ Reference should be made to specific design guidance included in this table for other environmental constraints when considering the design and route of the Site access.
Noise	<p>The immediate vicinity of the Site is sparsely populated, with scattered dwellings within the valleys. There is one uninhabited residential property located within the Site, with a number of residential properties also located within approximately 2.5 km of the Site Boundary including properties along the A702 road, and the Daer Water road leading to the Daer Reservoir.</p> <p>Where noise levels resulting from the construction, operation or decommissioning of the Proposed Development are likely to be above the relevant limit levels, there is the potential for significant effects to occur.</p> <p>In line with the recommendations contained within PAN1/2011⁴, operational wind farm noise from the</p>	<ul style="list-style-type: none"> ▪ Consideration should be given to the location of the turbines in relation their distance from Noise Sensitive Receptors (NSRs); the greater the distance from NSRs the less potential there is for significant effects to occur. ▪ Ensure that the 'Total ETSU-R-97 Noise Limits' are not exceeded by the cumulative operation of all turbines in the area. ▪ To enable wind farm noise for individual developments to be controlled 'Site Specific Noise Limits' must be set which take account of the proportion of the Total ETSU-R-97 Noise Limit which has been given to, or could realistically be used by other schemes.

⁴ Scottish Government (2011) Planning Advice Note 1/2011: Planning and Noise. Available at: <https://www.gov.scot/collections/planning-advice-notes-pans/>

Table 3.1: Preliminary Site and Design Guidance for Watchman Energy Park

Topic	Baseline Constraints Analysis	Design Guidance
	<p>Proposed Development would be assessed in line with ETSU-R-97⁵ and the IOA GPG⁶.</p> <p>Cumulative wind farm developments within 10 km of the Proposed Development are to be considered within the cumulative operational noise assessment. IOA GPG guidance states <i>'If the proposed wind farm produces noise levels within 10 dB of any existing wind farm/s at the same receptor location, then a cumulative noise impact assessment is necessary'</i>.</p>	
Aviation	<p>The Proposed Development has the potential to cause significant effects on the aviation assets and activities listed below.</p> <ul style="list-style-type: none"> ▪ National Air Traffic Services (NATS) En Route (NERL) Lowther Hill and Cumbernauld Primary Surveillance Radars (PSRs), as the Site is within the operational range of and has the potential to be detected by these radars. ▪ Prestwick Airport IFPs, as the Site is within the area where the effects of tall constructions on IFPs are required to be assessed. Impacts may occur in the construction, operation and decommissioning phases. ▪ Military low flying, as the Site is located in a specialist low flying area where flight at less than 250 feet above ground level (agl) is permitted. ▪ Aviation Lighting will also be required by UK civil air law as turbines are higher than 150 m. MoD also required infrared lighting on all turbines to enhance wind farm visibility for military crew using night vision systems. 	<ul style="list-style-type: none"> ▪ Consideration of a reduced lighting scheme to be approved by the Civil Aviation Authority (CAA) – reduction of nighttime LVIA effects. ▪ NERL will require the developer to enter into a radar mitigation services contract. This is likely to focus on using the inherent technical capacity of the Lowther Hill radar but may also require in-fill using another NATS radar that does not have line of sight to the turbines. ▪ Likely commission of formal IFP assessment for Prestwick Airport IFPs.
Telecommunications	<p>Wind turbines can cause electromagnetic interference through physical and electrical interference, which has the potential to be significant if not appropriately mitigated. Physical interference can cut across electromagnetic signals resulting in ghosting effect which largely affects television signals and radar. Electrical interference arises as a result of the operation of the generator within the nacelle of the turbine and can affect communication equipment in proximity to the turbines.</p>	<ul style="list-style-type: none"> ▪ Any potential effects on telecommunication links should be mitigated during the turbine layout design stage via the implementation of exclusion zones (recommended 100 m buffer + blade length) around any link paths, where possible. Where this is not feasible suitable mitigation measures would be agreed with the system operators (if required). ▪ Maintain a buffer of 100 m + blade length from identified WTR Wireless Telegraphy Link.

⁵ The Working Group on Noise from Wind Turbines (1996). ETSU-R-97 The Assessment and Rating of Noise From Wind Farms. UK: Energy Technology Support Unit

⁶ Institute of Acoustics (2013). A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise'. UK: Institute of Acoustics

Table 3.1: Preliminary Site and Design Guidance for Watchman Energy Park

Topic	Baseline Constraints Analysis	Design Guidance
	<ul style="list-style-type: none"><li data-bbox="504 279 1153 391">▪ There is one fixed microwave telecommunications link within 1 km of the Site Boundary. This is operated by Mobile Broadband Network Ltd (MBNL) between Shiel Dod and Green Lowther.<li data-bbox="504 391 1153 454">▪ WTR Wireless Telegraphy Link transects the western part of the Site.	

