



Allt Domhain Wind Farm Design and Access Statement

Energyfarm Allt Domhain Ltd

June 2025

CONTENTS

1	INTRODUCTION	2	Archaeology and Cultural Heritage	6
	Context	2	Design Iterations	6
	The Applicant	2	First Design Iteration	8
	Methodology	2	Second Design Iteration	9
	The Application	2	Third Design Iteration	10
			Fourth Design Iteration	11
2	SITE SELECTION	3	Fifth Design Iteration – Final Layout	12
	Introduction	3		
	The Site	3	5 ACCESS	13
	GIS Constraints Mapping	3	Introduction	13
	Review of Planning Context	3	Existing Highway Environment	13
	Wind Speed Data	3	Initial Access Route Assessment	13
	Selection of Allt Domhain Wind Farm	4	Disregarded Access Route Options	14
			Proposed Access Routes	15
3	DESIGN INFLUENCES	5	The Southern Route	15
	Introduction	5	The Northern Route	15
	Design Criteria	5		
	Planning History	5	FIGURES	
	Design Guidance	5	Figure 2.1: Cumulative Development Landscape	
	Design Consultation	5		
4	DESIGN EVOLUTION, AMOUNT, LAYOUT AND SCALE	6	Figure 4.1: First Design Iteration	
	Introduction	6	Figure 4.2: Second Design Iteration	
	Constraints Mapping	6	Figure 4.3: Third Design Iteration	
	Technical Constraints	6	Figure 4.4: Fourth Design Iteration	
	Landscape and Visual	6	Figure 4.5: Fifth Design Iteration	
	Noise	6		
	Peat	6	Figure 5.1: Assessed route options around Glenbarr and the Barr Glen Road	
	Ecology and Ornithology	6	Figure 5.2: Assessed Barr Glen Road route option	
			Figure 5.3: Assessed bypass route options	
			Figure 5.4: Proposed access route options	

1 INTRODUCTION

Context

- 1.1 This Design and Access Statement has been prepared by Energyfarm Allt Domhain Ltd ("the Applicant") to accompany a planning application for consent under Section 36 of The Electricity Act 1989 (Section 36 application) to Scottish Ministers for a wind farm consisting of up to 9 wind turbines and associated infrastructure ("the Proposed Development") located approximately 6.15km east of Glenbarr in Argyll and Bute.
- 1.2 This Design and Access Statement explains the design rationale behind the layout, providing an explanation of the design principles and concepts that have informed the Proposed Development (as described in Chapter 3 of the EIA Report), and how transport and access issues have been taken into consideration.

The Applicant

- 1.3 The applicant is Energyfarm Allt Domhain Ltd, a Special Purpose Vehicle (SPV) set up with the sole purpose of delivering the proposed development. Energyfarm Allt Domhain Ltd is part of the Energiekontor group with UK based projects overseen by Energiekontor UK Ltd, a renewable energy development company with offices in Glasgow, Edinburgh and Leeds. The company was formed in 1999 and develops small to medium-sized onshore wind and solar farms throughout the United Kingdom. The company operates seven existing wind farms in the UK and has a number of other wind and solar projects at various stages of the development process.
- 1.4 The Energiekontor Group parent company, Energiekontor AG, was established in 1990 in Bremerhaven, Northern Germany. It has since grown to become one of the leading wind energy companies in Europe, having consented and built 170 wind farms in Europe.

Methodology

- 1.5 Design and access statements are not a statutory requirement for Section 36 applications, however, are seen as positive tools to assist understanding of design evolution.

The process involved in formulating the design of the Proposed Development has been led by a combination of environmental design and engineering requirements. The aim has been to arrive at an appropriate layout maximising energy yield whilst seeking to minimise environmental effects.

- 1.6 The Environmental Impact Assessment (EIA) process provides opportunities for positive design, rather than merely seeking to avoid adverse environmental effects. The Design and Access Statement is seen to have an important role in contributing to the design process through the clear documentation of design evolution. Wind farms are a sustainable form of development, potential environmental effects are usually associated with the construction period and the temporary effects during the operational period of the development on landscape and visual amenity. The Proposed Development has therefore been developed with environmental considerations at the forefront of both site selection and site design.

The Application

- 1.7 The Section 36 application is, in addition to this Design and Access Statement, accompanied by the following documents which should be read together:

- Environmental Impact Assessment Report Volume I: Written Statement;
- Environmental Impact Assessment Report Volume II: Figures;
- Environmental Impact Assessment Report Volume III: Visualisations ;
- Environmental Impact Assessment Report Volume IV: Technical Appendices;
- Environmental Impact Assessment Non-Technical Summary;
- Planning Statement; and
- Pre-Application Consultation Report.



2 SITE SELECTION

Introduction

- 2.1 This section of the Design and Access Statement describes the Site area and outlines the approach to site selection.

The Site

- 2.2 Spanning approximately 667 hectares (ha), the site is situated on the spine of the Kintyre peninsula in Argyll and Bute on a sloping hillside moorland. The main windfarm area of the site is approximately 6.15km east of Glenbarr, and approximately 8km west of Carradale.
- 2.3 The main windfarm area of the site is situated on a hill side gradually sloping downwards from east to west. The eastern extent of the site reaches a maximum elevation of 360m AOD, with the summit of Cnoc Donn (405m AOD) just beyond the site boundary. The eastern boundary of the site meets the boundaries of the 2 existing wind farms to the east of the site, Beinn an Tuirc 1 and 2.
- 2.4 The site extends to the west around Blary Hill (272m AOD) and Blary Hill wind farm and towards the Barr Water and Arnicle. The site access area extends westwards down the Barr Glen connecting with the A83 at two separate points: at Glenbarr village to the south, and north of Glenbarr primary school at the northern point of connection.
- 2.5 The landscape comprises of a rolling terrain, the site area and wider landscape to the north, south, and west slopes generally down westwards towards the A83 and coastline. To the east of the site the land rises towards the spine of the peninsula and then slopes eastwards down to the B842 and the peninsula's eastern coastline.
- 2.6 The closest settlement is Glenbarr, approximately 6.15km west of the main wind farm area, situated at the western extent of the site boundary. Residential properties are scattered within Barr Glen. There is no residential property in the localised site area to the north or south and a small amount of scattered residential property to the east along the B842. Additional settlements within 10km of the site include Carradale, Saddell and Muasdale.
- 2.7 The nearest trunk road is the A83 which the site boundary extends to.

- 2.8 Several watercourses flow from east to west through the main wind farm area of the site, Allt an Tuirc, Allt Domhain (from which the development takes its name), and Allt a' Bhlaire. All three watercourses join Abhainn a' Chnocain which flows south to north at the foot of the hill slope to the west of the main windfarm area. This joins the Barr Water at Arnicle and flows west through Glen Barr towards the sea. As such the site is well drained.

2.9 Site Selection Criteria

- 2.10 The overall approach to wind farm site selection is to identify areas of land where the siting of a wind farm would result in minimal environmental effects, be free from overriding technical constraint and be viable on an economic basis. The criteria involved in the selection of Allt Domhain Wind Farm were based on:
- A review of the planning context for renewables in Scotland and at the local authority level;
 - Geographical Information System (GIS) constraints mapping;
 - Consideration of proximity to potential electricity connection points; and
 - A review of suitable site access points and related transportation issues.

GIS Constraints Mapping

- 2.11 A Geographical Information System (GIS) "sieve mapping" exercise was carried out as part of the site selection process. This involved identifying and mapping constraints to wind farm development in order to identify potential sites. The various constraints considered as part of the site selection exercise for the Proposed Development included but were not limited to:
- Hydrological, geological and hydrogeological constraints – including effects on groundwater, water resources and local geology;
 - Landscape designations – including National Parks, and special landscape areas;
 - Ecological designations – including Ramsar sites, Special Protection Areas, Special Areas of Conservation and Sites of Special Scientific Interest;

- Cultural heritage designations – including Gardens and Designated Landscapes, Registered Battlefields, World Heritage Sites, Listed Buildings, Properties in Care, Conservation Areas and Scheduled Monuments;
- Aviation interests – including local licensed aerodromes and visibility to radars, both military and civilian;
- The pattern of settlements, and;
- Existing, approved or proposed wind farms.

Review of Planning Context

- 2.12 Information on the planning context for renewables Argyll and Bute was reviewed as part of the site search exercise, which is set out fully in Chapter 5: Renewable Energy and Planning Policy and the Planning Statement which accompanies the application.

Current and now superseded planning policy considerations include:

- National Planning Framework 4 (2023);
- Argyll and Bute Local Development Plan (2015);
- Argyll and Bute supplementary guidance (2016);
- Argyll and Bute Landscape Wind Energy Capacity Study (2017); and
- Argyll and Bute Local Development Plan 2 (2024)

Wind Speed Data

- 2.13 The predicted wind resource in any given location is an important consideration in identifying potentially suitable wind farm sites. The electricity that can be generated by a wind farm is directly linked to the wind speed. Wind speed generally increases with height above ground level and the amount of electricity generated increases disproportionately with increases in wind speed. This in turn affects the carbon emission savings and the commercial viability of a site.
- 2.14 *Potential wind farm sites are therefore reviewed in relation to a number of publicly available data sources in the first instance, the NOABL wind speed database¹.*

¹ The NOABL wind speed database was created by the Department of Trade and Industry and provides annual mean wind speeds on a kilometre grid square basis.

Access Suitability

2.15 An assessment is required to ensure that appropriate access to a potential wind farm site is available for the transportation of wind turbine components. Further information on access can be found in section 5 of this Design and Access Statement and chapter 12 of the EIA report.

Selection of Allt Domhain Wind Farm

2.16 The information from the sieve mapping exercise was combined with relevant planning policy, wind speed data and details of the local electricity distribution network to identify suitable areas within the study area for potential wind turbine development. From the various land areas identified, Allt Domhain Wind Farm was selected due to a number of factors, including:

- **Energy capture** – software modelling indicates that the Site offers a strong wind resource.
- **Environmental designations** – the Site is sufficiently removed from any statutory designations which could have the potential to constrain wind farm development.
- **Residential separation distances** – the Site achieves separation distances in excess of 1.8km from the nearest residential properties.
- **Surrounding development** – the sites is positioned between currently operational wind farms to the east and west. Existing turbines have had significant influence during the site selection and design process. Consideration has been applied to the existing cumulative development landscape, as such, the site selection and design process has sought to design out factors such as significant cumulative development lateral spread by using topography and siting to lessen the impact.
- **Landscape** – the Site is out with any nationally designated landscapes and benefits from local topographical landscape features that lessen visual impact.
- **Transport infrastructure** – the Site is positioned close to a trunk road and two options are available for transporting the components from highway to site.
- **Grid Connection** – the applicant has consulted with the local distribution network operator to ensure infrastructure can accommodate the electricity produced by the proposed development. As of June 2025 the proposed development has a transitional grid connection offer.

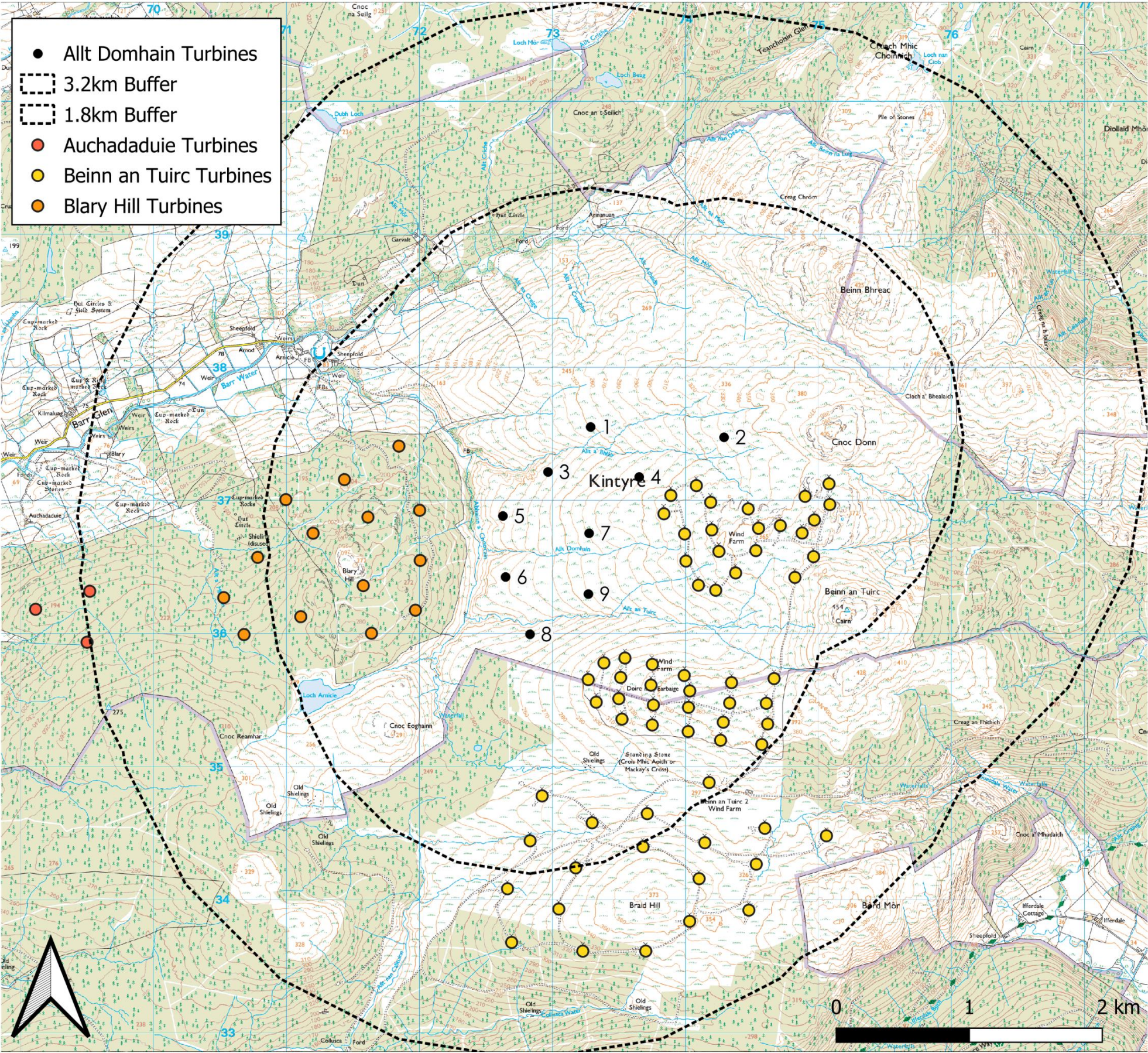


Figure 2.1: Cumulative Development Landscape

3 DESIGN INFLUENCES

Introduction

- 3.1 Once a site has been selected, the design of the wind farm is optimised in order to produce a layout which maximises the use of land available for power generation, balancing this against the overall environmental, social and economic effects of the development. Optimising the layout of a wind farm in this way depends on a range of technical, economic, planning and environmental criteria.

Design Criteria

- 3.2 A range of environmental considerations have influenced the design of the wind farm. These include:
- **Landscape and visual** – the design of the Proposed Development seeks to match the scale of the turbines and the scale of the overall development with the scale of the landscape. Computer modelling via WindPro was used as a tool to aid design. 3D models/wireframes were generated, producing visuals from key design viewpoints around the Site.
 - **Ecology** – the layout takes account of the ecological interests of the Site and the surrounding area.
 - **Archaeology and Cultural Heritage** – all archaeological features in proximity to the site have been plotted, assessed and avoided as far as possible. Cultural heritage receptors have been included in design considerations such that no unacceptable effects on setting are likely to occur.
 - **Residential properties** – a minimum separation distance from residential properties of 1.8km was included in the design.
 - **Peat Depth and Condition** – extensive peat probing surveys and condition assessments are completed at assess the nature of all peat on the site of the proposed development. Early surveys were carried out to understand the status of peatland and its quality, which was found to be significant eroded. The Site has been designed to minimise impact on peatland.
 - **Hydrology** – all watercourses within the Site have been considered in the design, buffers of 50m or greater from all infrastructure have been designed in to safeguard the hydrogeology of the area.

Planning History

- 3.3 Planning guidance and discussions with statutory and non-statutory consultees and the local community have also had an influence over the evolution of the design.
- 3.4 The EIA studies commenced at an early stage in the evolution of the proposed development, with the scoping process commencing **on February 25th 2021**.
- 3.5 These studies defined the environmental sensitivities and constraints associated with the Proposed Development, the Site, and its surroundings.
- 3.6 There is no planning history of wind farm application on this site.

Design Guidance

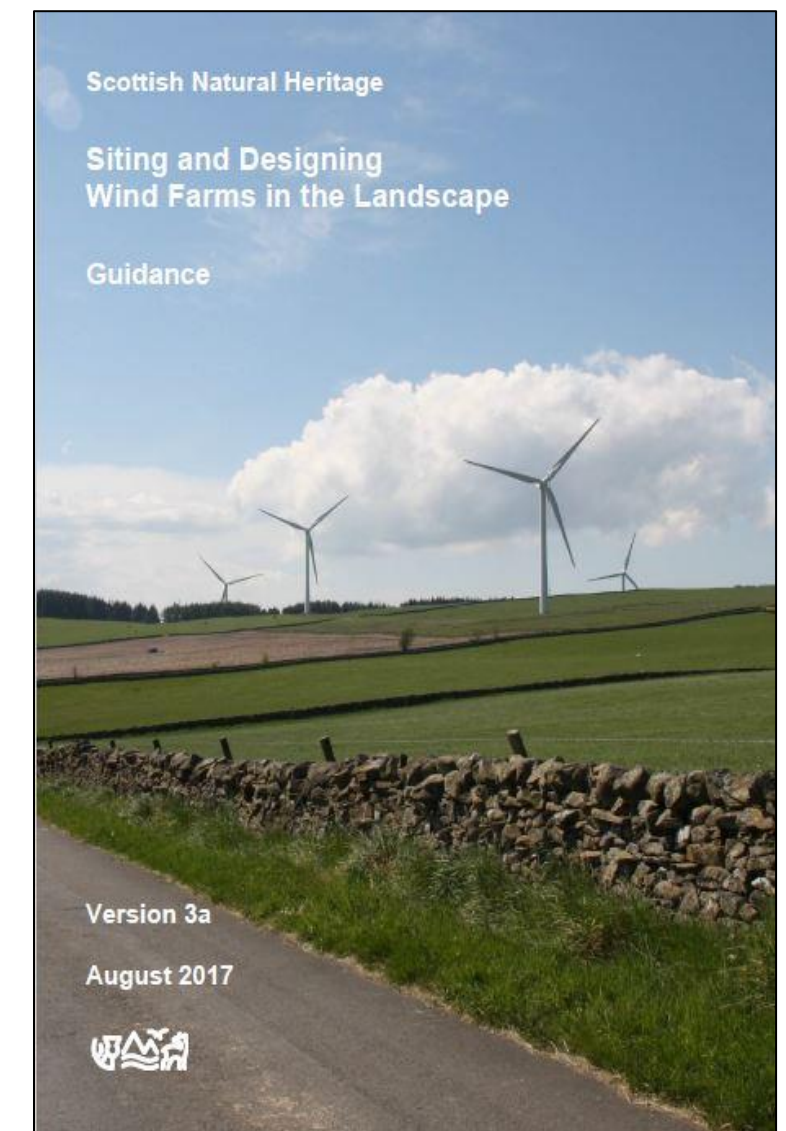
- 3.7 The inherent nature of wind turbines as tall, modern structures means that the form and appearance of the wind farm as a whole is important. The appearance of the wind farm as an object or composition in the landscape has been a key factor in generating the layout. In this respect the design evolution has taken account of the following guidance:
- SNH Guidance on Siting and Designing Windfarms, Versions 3a, 2017, which aims to achieve a simple, rational and cohesive design that, to a reasonable degree, avoids overlapping turbines and gaps within the visual composition; and
 - Landscape constraints, opportunities and guidance for wind farm development within the Upland Forest Moot Mosaic LCT, described by the ABLWECS

Design Consultation

- 3.8 The Applicant has undertaken a programme of consultation prior to the submission of this planning application, which is detailed within the Pre-Application Consultation Report.
- 3.9 The Scoping Report submitted February 25th, 2021, comprised of a wind farm layout of 12 turbines at a height of between 200 and 230m.
- 3.10 Consultation with the local community began in early 2025. An initial public exhibition was held in February 2025 to introduce the proposals to the local public. This initial consultation introduced the proposed 9 turbine development.
- 3.11 More recently, a further public two public exhibition events took place in May 2025, in advance of planning being submitted. These exhibitions expanded on the initial

introduction to the development, focusing on key development aspects such as the route to site for turbine components.

- 3.12 Consultation with a range of stakeholders has also been ongoing since the submission of the pre-application enquiry and these have been documented within each of the assessment areas as detailed in Volume 1 of the EIA Report.
- 3.13 This process of consultation has identified a number of potential design constraints which the Applicant has subsequently sought to address as part of the EIA and design process. Further details are set out in the various stages of the design iterations below and relevant chapters of the EIA Report. Full detail of the pre application consultation process is available in the pre application consultation report which accompanies this application.



4 DESIGN EVOLUTION, AMOUNT, LAYOUT AND SCALE

Introduction

- 4.1 The wind farm layout in its proposed form takes account of stakeholder feedback received during pre-application discussions and environmental and technical constraints. In designing a layout which is simple in composition and restrained in size, the final design results in a development which is sympathetic to its local and wider setting.
- 4.2 The overall design layout principle of the Proposed Development has been to achieve a coherent and compact design, which minimises direct and indirect adverse effects on the local and wider landscape, whilst balancing commercial considerations and maximising energy production.

Constraints Mapping

- 4.3 The starting point for the design of a wind farm is the preparation of a detailed constraints map which sets out all relevant buffer distances, key features and other factors that may constraint the location of wind turbines.
- 4.4 The process of EIA plays an important role in this as it enables all the technical constraints to be identified which could restrict the location of wind turbines. The evolution of design has, as such, been informed by matters including standoff distances to residential properties, ecological buffer distances and separation distances between existing and proposed wind turbines.

Technical Constraints

- 4.5 The following technical considerations were considered in the design process:
- A minimum separation distance between the turbines of 4 x 3 rotor diameters in order to minimise turbulent interactions between wind turbines (wake effect)
 - Respect for existing operational developments, and adhering to appropriate set back distances;
 - Distance from residential properties (1.8km);
 - Civilian and military aviation radar coverage of the Site;
 - Grid connection, the site takes advantage of a close connection station at the Carradale substation situated approximately 6.7km from the proposed on-site Allt Domhain substation.

Landscape and Visual

- 4.6 The principal design objectives of the Proposed Development are as follows:
- Design the wind farm in accordance with the guidance set out by Argyll and Bute Council within the ABLWECS.
 - Achieve a simple, balanced, rational and coherent design when viewed in the local and wider landscape and cumulative development environment.
 - Assess cumulative visual impacts to design a site that sits within and between existing developments, preventing cumulative development lateral spread.
 - Apply significant consideration to visual impact upon appropriate local viewpoints to reduce intrusion and aid landscape cohesion.
 - Minimise landscape and visual effects on views from local residential properties and communities.
 - Utilise topographical features to maximise reduce landscape and visual impact of increased turbine heights

Noise

- 4.7 The wind farm design has been developed to ensure that a standoff distance of at least 1.8km can be achieved between wind turbines and residential properties. This is extended to 3.2km to the closest residential properties not financially involved in the development.

Peat

- 4.8 The wind farm design and placement of infrastructure is highly considerate of peat, with respect to peat depth and classification.
- 4.9 Peat condition assessments and probing surveys have heavily influenced the design process. As detailed in chapter 9 of the EIA report the site consists of variable peat thickness, with the condition of peat present on site considered to be highly degraded, primarily as a result of the level of artificial drainage on site and extensive livestock grazing.
- 4.10 The design process has considered the finding of peat depth and condition surveys and sited turbines and infrastructure accordingly. Consequently, four of the nine turbines are sited on 'peaty soil' rather than peat. Three of the nine turbines are sited on peat recorded at depths of between 0.5m and 1.0m, not deep peat. The two remaining turbines are sited on peat recorded at depths slightly greater than 1.0m (1.2m and 1.5m respectively), however the position of these turbines is constrained by other design constraint factors.

Ecology and Ornithology

- 4.11 The Site is not the subject of any statutory nature conservation designations. A full suite of ecological and ornithological studies have been undertaken which has allowed the layout to be designed around local sensitivities.

Archaeology and Cultural Heritage

- 4.12 Certain assets that are deemed to be of particular importance are given legal protection. The importance of heritage assets and the protection of these and their settings is recognised in legislation as well as national, regional and local planning policy.
- 4.13 Assessments conducted during the design process have identified five potential receptors for significant effects via changes within the setting of the heritage asset. The cultural heritage assessment process, impacts and conclusions are discussed in chapter 10 of the EIA report that accompanies this application.
- 4.14 The statutorily designated cultural heritage assets in closest proximity to the proposed site, are Blary dun (SM3077) and Garvalt dun (SM3740). Whilst the proposed development would introduce a new, visible and clearly modern visual component to views of and from the receptors assessed, these effects are not considered likely to be significant.
- 4.15 The construction of Site infrastructure has potential to remove or disturb both recorded and previously unrecorded archaeological remains. However, by following an agreed programme of mitigation through preliminary walkover survey, micro siting and/or on-site monitoring of access works and turbine installation this would not be anticipated to result in a significant effect.
- 4.16 As part of the design process the applicant has engaged with Historic Environment Scotland (HES) to ensure cultural heritage assets are considered appropriately within the design process. A meeting held with HES on September 25th 2024 provided opportunity at the early stages of the design process for consultee input into the proposed development.

Design Iterations

- 4.17 The design process has been undertaken over a number of months and the proposed development has been progressively revised and refined during this time to take account of the information arising from pre-application consultation with stakeholders, and the findings of the EIA. As a result, the design and EIA process has been highly iterative and all aspects of the final design, including the location of the wind turbines, turbine compounds, the site access, layout of the access tracks, the locations of the substation,

construction compound and borrow pits have been influenced by various technical, environmental and planning considerations.

- 4.18 Design Iterations were taken forward from the initial ideas expressed within the Scoping Report and subsequently refined through receiving baseline environmental data as described above. Several iterations were produced, which are described below.

First Design Iteration

4.19 Illustrated in Figure 4.1, the first design iteration consisted of 12 wind turbines. The layout was based on land considered to be potentially available and adhered to the following principal environmental and technical constraints:

- Initial 3x3 turbine ellipses used to position turbines;
- Applying a residential buffer of 1.2km between wind turbines and residential properties;
- Applying a watercourse buffer of 50m between wind turbines and watercourses; and
- Avoiding gradients exceeding feasible construction parameters.

4.20 The first design iteration comprised of a mix of 200m and 230m tip heights. This design attempted to maximise the sites energy yield whilst being conscious from the first step that the site would likely require a mixed tip height approach in order to sit appropriately within the landscape.

4.21 This layout represents what the Applicant felt was a likely 'maximum' layout, acknowledging that Turbine 1 may be too close to residential properties and acknowledging potential buildability concerns with T6 and T9.

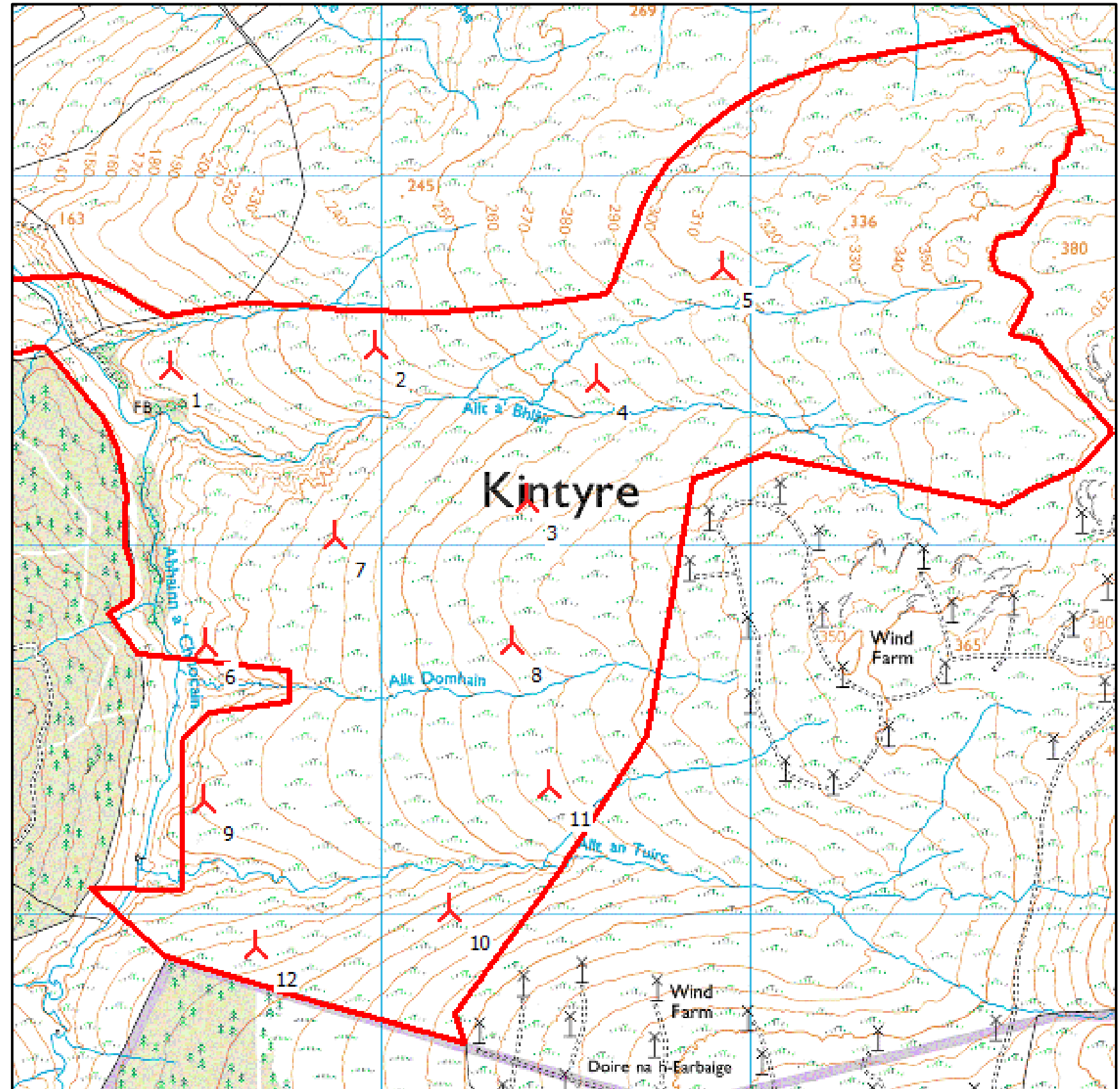


Figure 4.1: First Design Iteration

Second Design Iteration

- 4.22 Illustrated in Figure 4.2, the Second Iteration comprised of 12 wind turbines with mixed tip heights of 200m and 230m.
- 4.23 This layout was the basis for the Scoping Opinion sought from the energy consents unit (ECU) in February 2021, the layout maintained the buffers around watercourses and residential properties. As onsite survey works had progressed this layout took account of onsite ecological and ornithological constraints in addition to baseline geology, hydrology and peat surveys.
- 4.24 The second design iteration considered peat condition surveys to assess the quality of all onsite peat. The site, previously designated as class 1 peat, was assessed to contain significant areas of heavily drained peat. As such the design was informed, moving turbines from peatland that retained a good condition to areas of poor peatland condition.
- 4.25 The design considers, and attempts to maximise, topographical on-site features to minimise landscape and visual impact and align the proposed development with the wider cumulative landscape of the area. Turbines were repositioned in the east and southeast of the site, notably turbines 3 and 10, moved down the hillside to a lower elevation. This enhanced the designs cumulative cohesion aligning turbine tip heights closer to the surrounding developments, of Blary Hill and Beinn an Tuirc, operating with lesser turbine tip heights but positioned on elevated land. Additionally, turbine 6 was moved eastwards to increase its buildability.
- 4.26 Throughout the design process design iterations were modelled from key local viewpoints and regional designated landscapes, notably the Mullach Buidhe summit located in the North Arran National Scenic Area (NSA). In addition to key local viewpoints, notably Glenbarr and the War Memorial.

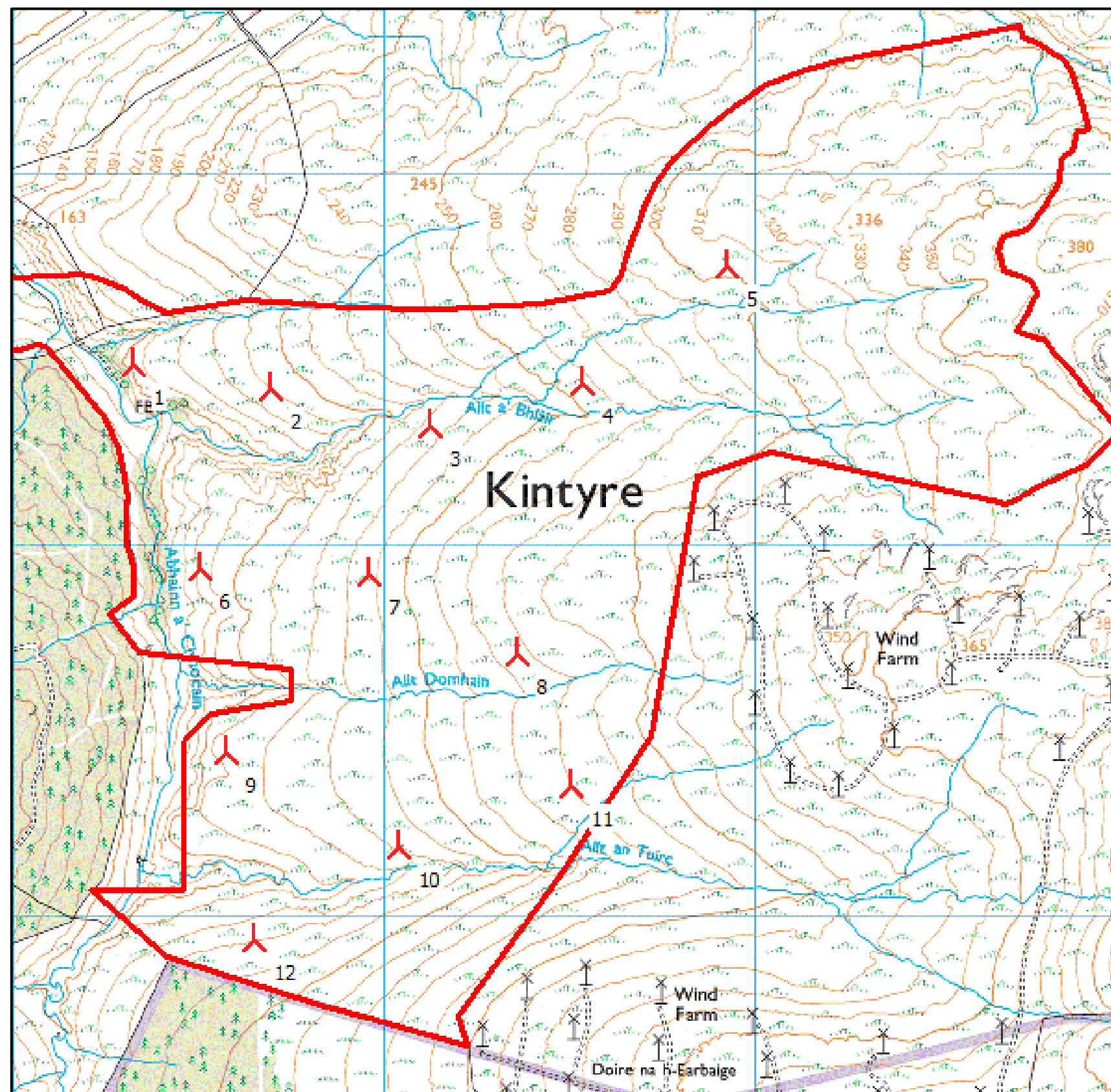


Figure 4.2: Second Design iteration

Third Design Iteration

- 4.27 Illustrated in Figure 4.3, the third iteration comprised of 10 wind turbines. The third iteration was largely based on the feedback received as part of the scoping process.
- 4.28 Further consideration of peat was carried out, with the interpolated peat results reflected against the Scoping layout. The results, in addition to analysis of the peat condition survey, refined the developable area of the site and effected alterations to the position of several turbines to satisfy statutory requirements, most notably turbine five of the scoping layout.
- 4.29 The northern and north-western extents of the site were removed from the developable area and highlighted as a location suitable for habitat and peatland restoration and enhancement.
- 4.30 The north-western part was additionally used as clear setback from the Arncliffe cluster. Consequently, the northern most turbine in the scoping layout (design iteration 2) was relocated southwards to improve amenity.
- 4.31 Following receipt of the Scoping Opinion, engagement with involved parties in surrounding properties, and further review of the landscape and visual impact of previous designs the decision was taken to reduce the design from 12 to 10 turbines.
- 4.32 The reduced layout was redesigned within the refined developable area to maximise spacing requirements between turbines in a 10-turbine design and reduce wake effect. A 10-turbine design was found to significantly enhance the position of the design strategy, reducing the footprint of the developable area thus achieving a design largely positioned in the area between Blary Hill and Bein an Tuirc wind farms. Thus, minimising the lateral spread of the turbine cluster when viewed from elevated positions within the NSA, or viewpoints in the Glenbarr area.

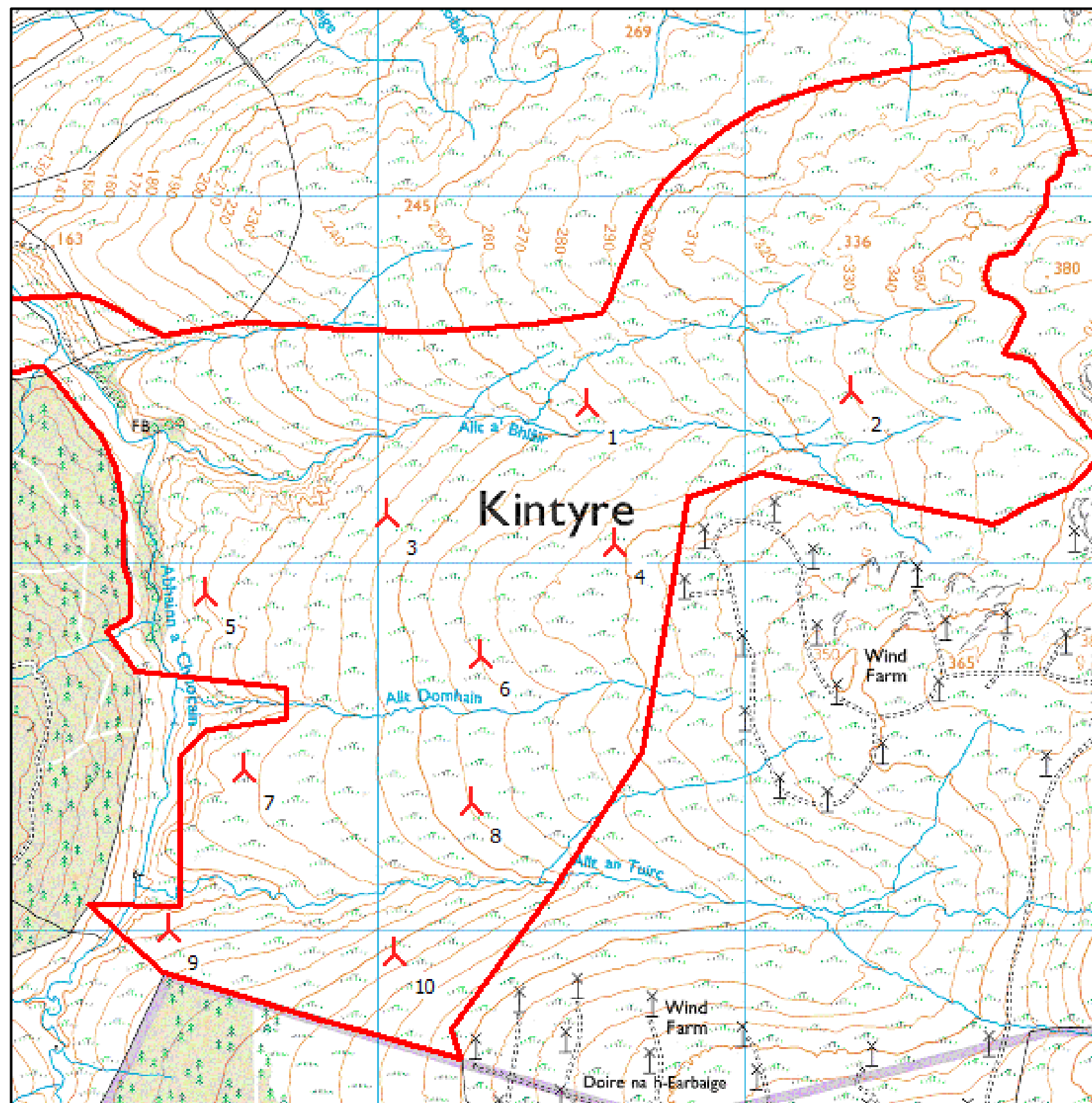


Figure 4.3: Third Design iteration

Fourth Design Iteration

- 4.33 Illustrated in Figure 4.4 the fourth design iteration was further reduced to 9 turbines with a turbine removed from the southern end of the site.
- 4.34 The design retained a mixed tip height layout with turbines 1, 2, 3 & 4 at 200m and turbines 5, 6, 7, 8 & 9 at 230m. These heights and the decision to remove the 10th turbine were the result of continued assessment of the design in a cumulative landscape from local viewpoints and the North Arran National Scenic Area. The mixed tip heights, and reduced number of turbines combined with the removal of turbines from the northern extent of the site refined the design to further enhance cumulative cohesion.

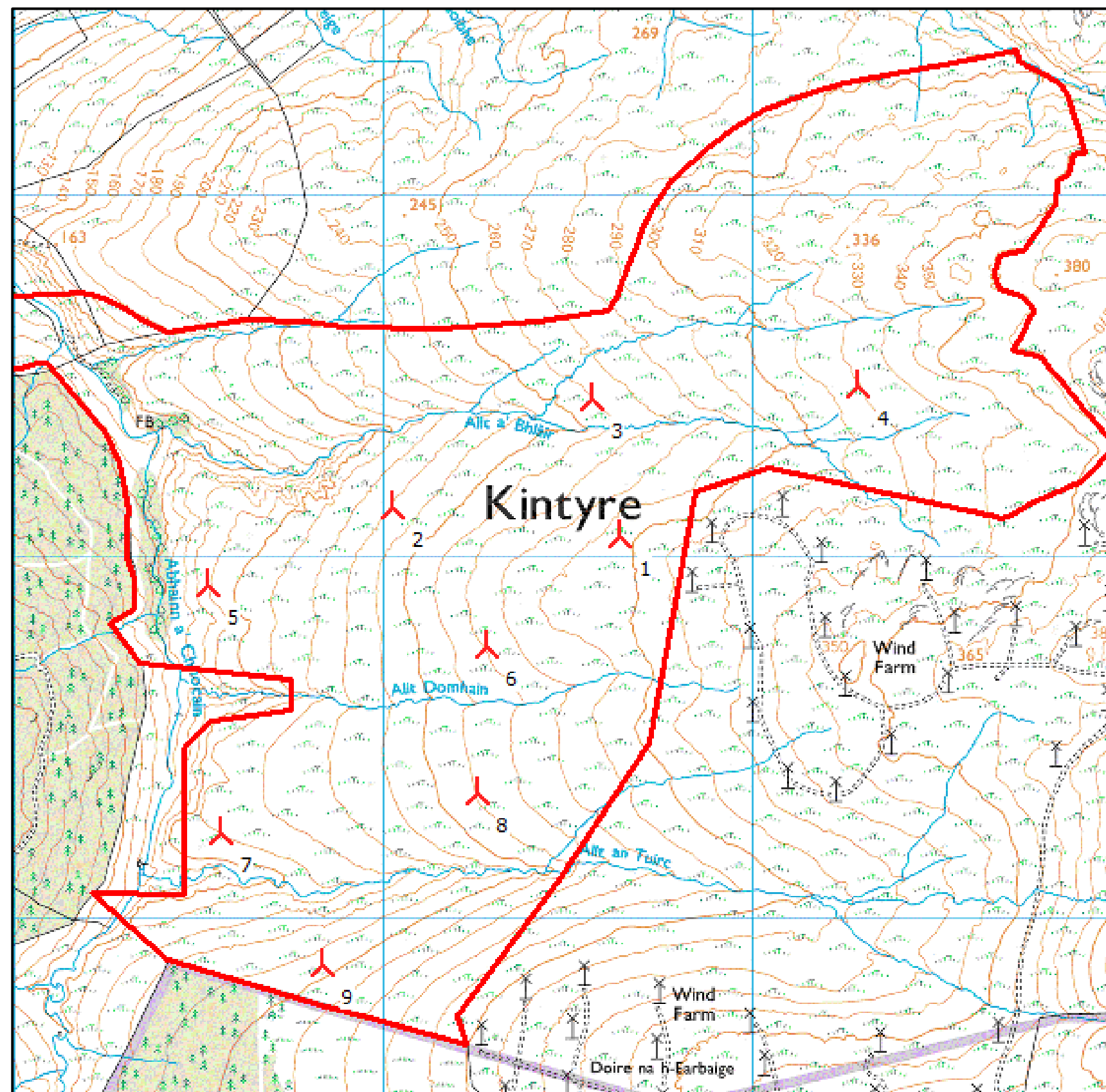


Figure 4.4: Fourth Design iteration

Fifth Design Iteration – Final Layout

- 4.35 Figure 4.5 shows the final design iteration, 9 turbines retaining the same mixed tip heights as the 4th design iteration.
- 4.36 The final stage of the design process continued to review the cumulative impact from viewpoints on Arran and within the wider landscape, as such the decision was taken to move turbine 1 and 3 westwards to a lower elevation, further improving cumulative cohesion and landscape fit. This was additionally observed to improve the cumulative picture from local viewpoints in Glenbarr as it further aligned turbine tip heights with turbines at Blary Hill Wind Farm and aimed to limit effects on the North Arran NSA by not displaying hubs to parts of the NSA at coastal level. The extent of the westward relocation of turbines 1 and 3 was however limited to ensure separation distances between the turbines and properties at Arncliffe remained satisfactory.
- 4.37 Turbine spacing was then tested to ensure suitable setback distances were retained with some minor adjustments to turbine position made. The final design aims to satisfy all previously stated technical, environmental and visual constraints, whilst creating an organised linear layout within which additional infrastructure can be placed and on-site connecting tracks minimised. Infrastructure design is detailed further within the EIA report.
- 4.38 This design iteration was presented at public exhibitions with wire lines and photomontages produced to visually demonstrate the designs appearance from key viewpoints in the surrounding area. Information detailing the public exhibition and consultation process is displayed within the PAC report.
- 4.39 The design was tested against all environmental constraints again, and relevant discussions regarding the design were held with consultees such as SEPA, NatureScot and Historic Environment Scotland, details of which are contained within the respective chapters.

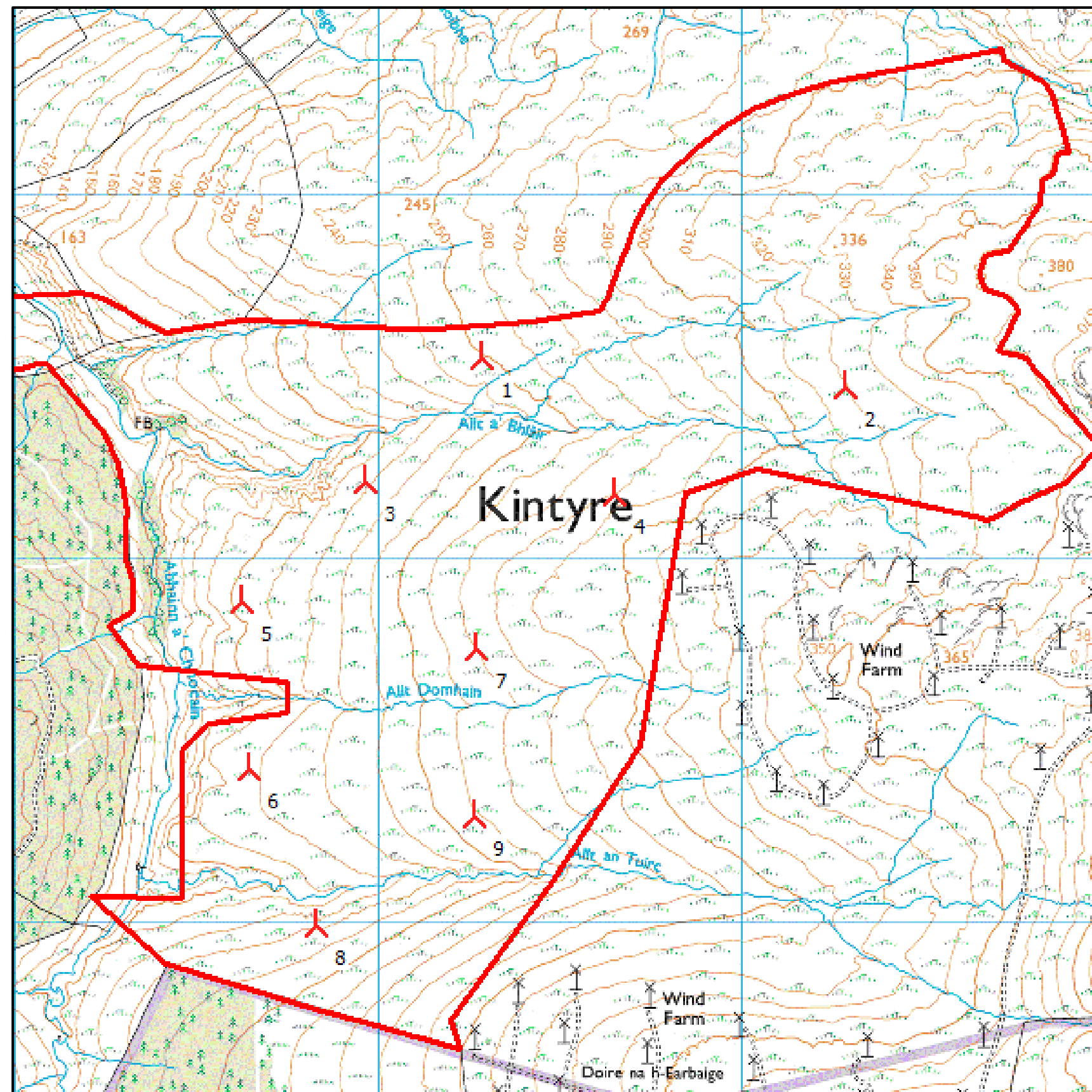


Figure 4.5: Fifth Design iteration

5 ACCESS

Introduction

- 5.1 This section of the Design and Access Statement sets out the issues and options considered during the development of the access plan. Ensuring that the transport and construction of the Proposed Development causes the minimum disruption to the highway network, highway safety and local residents is an important part of the design process.
- 5.2 Construction traffic access and the turbine delivery route has been noted as the key concern of local residents. As such an extensive design process, involving desk-based study and on-site survey works has been undertaken, with targeted consultation of residents. The following section sets out the issues and options considered during the development of the access plan. Ensuring that the transport and construction of the proposed development causes the minimum disruption to the highway network, highway safety and local residents.
- 5.3 The site access point and accompanying internal track layout have been designed to accommodate the range of vehicles anticipated during the construction and operation of the Proposed Development.
- 5.4 The preferred access options for turbine components to the site are detailed in full in Chapter 12 of the EIA report that accompanies this application. The delivery route options are considered suitable for commissioning of the site with mitigation measures and required upgrades/construction set out.
- 5.5 Assessment has established that the most suitable delivery route for general construction HGV traffic is from the north via the A83(T) to Glenbarr. From here general construction traffic will access the site via one of two potential access routes as set out in the following sections. The most suitable delivery route for turbine components is to take delivery at Campbeltown Port, where turbine components will be offloaded from barges. Components will then be transported through Campbeltown, exiting the town via the A83 and following the A83 up the peninsula to Glenbarr.

Existing Highway Environment

- 5.6 The main transport movements during the construction phase would be associated with the movements of Heavy Goods Vehicles (HGVs) to and from the Site. Vehicle movements would be associated with delivering turbine components, concrete and the travel of workers to and from the Site.

- 5.7 The traffic generated by construction of the Proposed Development (over an 18 month period) will result in a temporary increase in baseline traffic levels.
- 5.8 Once the development is operational, it is envisaged that the amount of traffic would be minimal. Visits will be made to the Site for maintenance activities. The vehicles used for these visits are likely to be a 4x4 or similar, there may be occasional need for an HGV to access the Site for maintenance and repairs.

Initial Access Route Assessment

- 5.9 Access was initially considered via the south and through FLS land and the existing SPR entrance to Beinn an Tuirc. This was considered unfeasible at a relatively early stage given topographical, technical, legal and commercial constraints. It was therefore considered that the access to the main wind farm area would require to utilise the A83 up until Glenbarr village and utilise the Barr Glen Road.

- 5.10 Access through the Glenbarr village area was assessed with a range of routing options developed, as shown within figure 5.1 below. It was evident from an early stage that any proposed access route utilising the Barr Glen Road and existing infrastructure from the Blary Hill construction process would result in disruption to local residents and require several complex legal agreements. As such the access design process has sought throughout to investigate all practical options for bypassing the village and / or Barr Glen Road.
- 5.11 Figure 5.1 presents various route options that were assessed throughout the design process and presented at public exhibitions. Routes presented in red have since been discarded, the reasons for this are detailed within the following section of this chapter. The routes presented in black deemed most appropriate and included in the application for the proposed development, these routes are detailed in the following section and in full in Chapter 12 of the EIA Report.

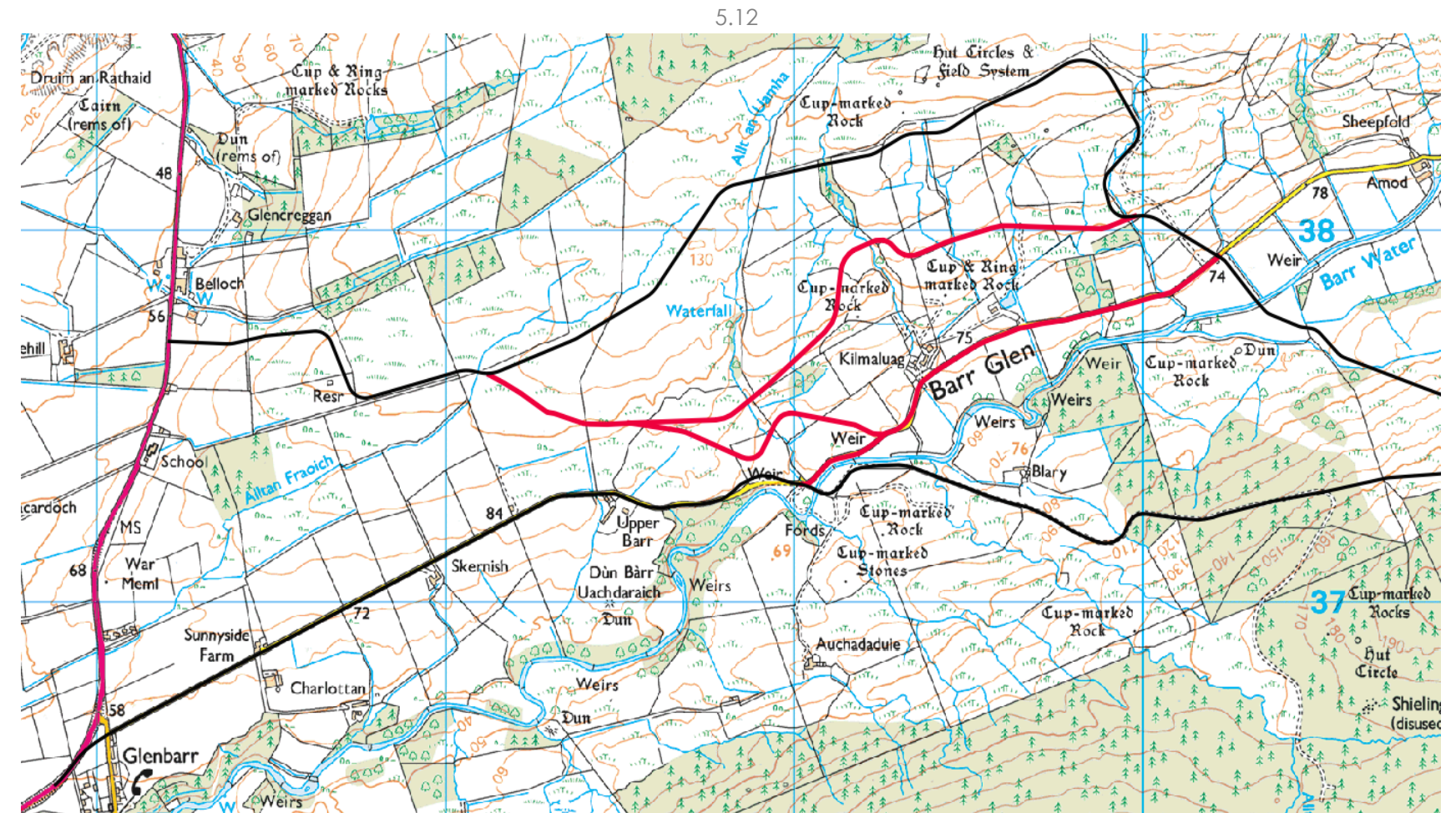


Figure 5.1: Assessed route options around Glenbarr and the Barr Glen Road

Disregarded Access Route Options

- 5.13 Figure 5.2 demonstrates an assessed and since disregarded route option utilising approximately 3.6km of the Barr Glen Road. This route was proposed along with the southern access route, since bought forward to the application, as access options that attempt to maximise existing highway infrastructure (the Barr Glen Road) and minimise new track length. However, the subsequent public consultation process and swept path assessments concluded that this route would impose excessive disruption to local residents and provide difficulty in terms of ground levels past the Blary Hill turnoff. Consequently, the prospect of utilising the full length of the Barr Glen Road all the way to Arnicle Farm was disregarded on topographical, engineering and disruption grounds.
- 5.14 To reduce construction traffic along the Barr Glen Road prospective bypass options were developed, as displayed in figure 5.3. Bypass options proposed the construction of new track to route construction traffic on a new junction with the A83, around the village of Glenbarr and rejoining / crossing the Barr Glen Road further up the glen.
- 5.15 Bypass route options were presented at the public consultation stage. These options were largely deemed preferable to local residents. As such preliminary survey works were undertaken to assess the potential environmental implications of bypass track construction and the technical requirements for track alignment. It was concluded that to facilitate a bypass that minimises disruption to local residents a new bridge crossing across the Barr Water would be required, enabling a bypass track to extend beyond the preexisting bridge crossing into Blary Hill wind farm. A bridge feasibility study, and environmental assessment were undertaken for the proposed crossing point and form part of this application.
- 5.16 It was however subsequently concluded that the bypass option could be developed further to increase set back distances between construction traffic and local residents and further reduce potential disruption to residents.

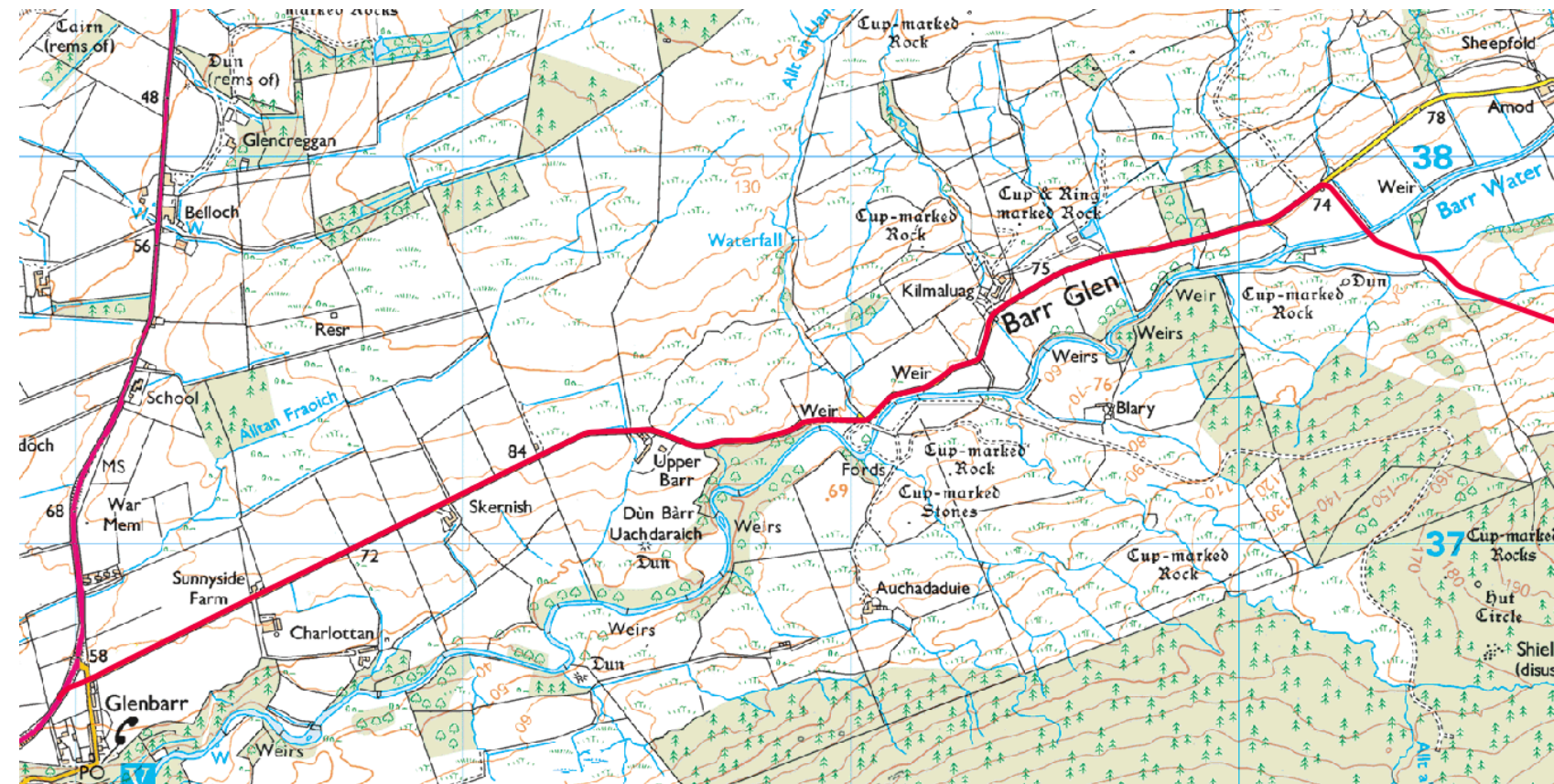


Figure 5.2: Assessed Barr Glen Road route option

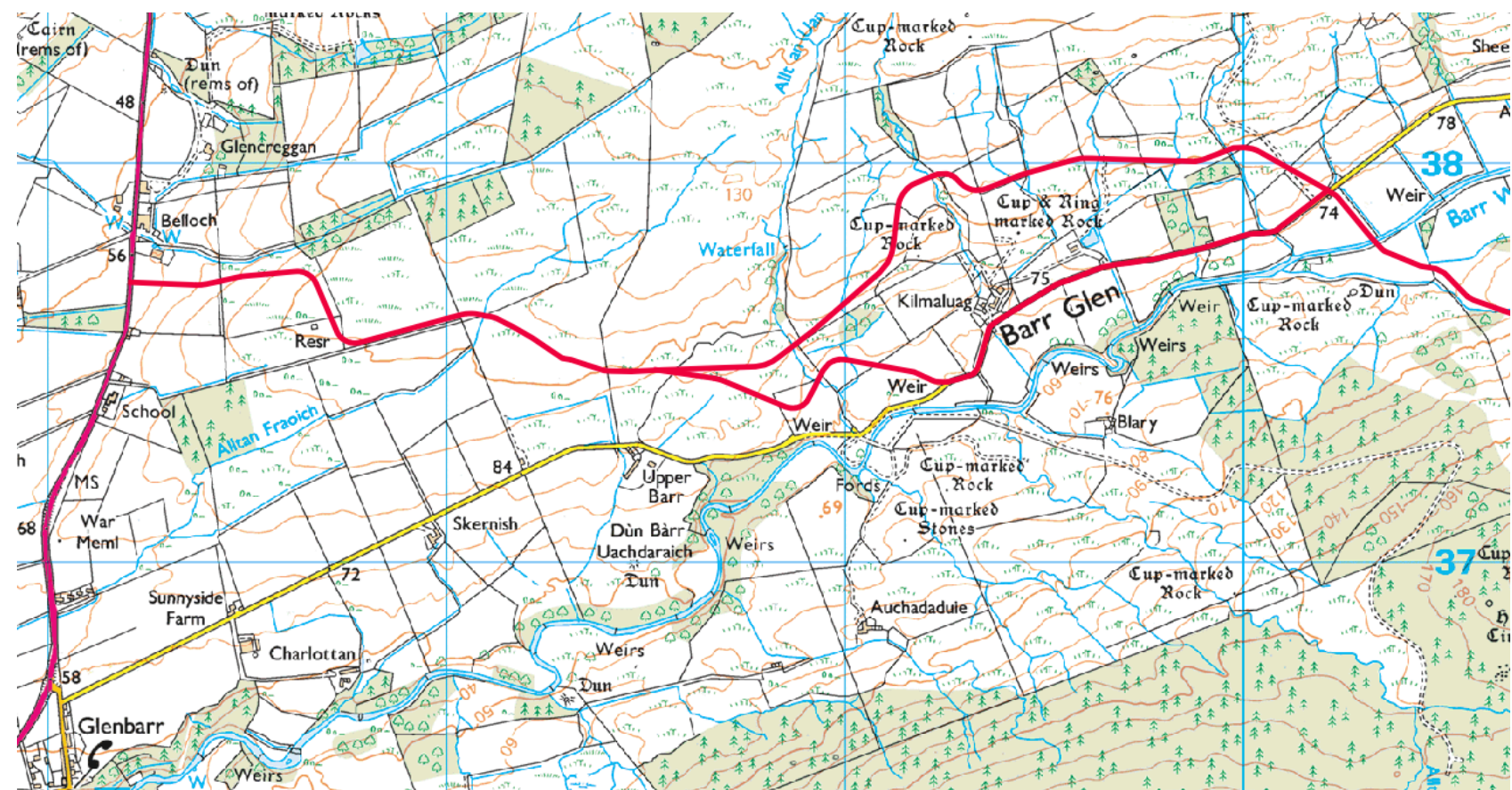


Figure 5.3: Assessed bypass route options

Proposed Access Routes

5.17 Figure 5.4 demonstrates the two proposed access options which have been taken forward to application. The two routes prioritise different key considerations and have been refined through the previously discussed extensive access design process. The two route options have been designed to facilitate the delivery of turbine components with swept path assessments undertaken to assess the extent and location of any required upgrades.

The Southern Route

5.18 The Southern route exits the A83 at Glenbarr through the Major's Field following a pre-existing track and follows the Barr Glen Road east before crossing the Barr Water. From here the route utilises existing track, built to service Blary Hill Wind Farm, suitable for abnormal loads. Before entering the main wind farm area of Blary Hill the access route turns off the existing track and follows contour lines around Blary Hill and up the valley to meet with the proposed developments' on-site tracks. Note that the felling to the immediate east of the existing Blary Hill track, to the boundary with the Site has been felled as part of Blary Hill construction works. This route utilises existing track and road as far as possible, however, is likely to cause disruption to the local community of Glenbarr and the residents of the Barr Glen. This was raised as a significant point of concern during the public exhibition process.

5.19 To facilitate access via the southern route upgrade works would be required along the Barr Glen Road, to satisfy mandatory road width requirements for turbine delivery. Upgrades would additionally be utilised to reduce the impact of construction traffic on residents. This would include the construction of additional passing places along the road. The locations and detailed extent of these would be subject to planning condition.

5.20 Assessment of this route have however concluded that disruption to residents would be significant, as the single-track Barr Glen Road is the only route available to access properties in the glen. To mitigate this disruption to a practical minimum, Chapter 12 sets out appropriate mitigation measures.

The Northern Route

5.21 A northern site access route was developed to significantly reduce potential disruption, removing the Barr Glen Road and Glenbarr village from the access route. Multiple options were assessed to access the site from this direction; the route

illustrated in Figure 5.4 has been refined to satisfy multiple constraints:

- Avoiding Glenbarr village a suitable location was required to construct a new junction with the A83, illustrated in Figure 5.1 and 5.2.
- Aligning the route with technically viable bridge locations
- Ecological, ornithological and peat surveys identified areas not suitable for track to be constructed
- Avoidance of excessive gradients to facilitate turbine component delivery

5.22 The northern access route exits the A83 north of Glenbarr, as shown in Figure 5.1 & 5.2, this location was identified to satisfy visibility splay requirements and aimed to achieve a sufficient set back distance from Glenbarr school.

5.23 The access route then follows a high line up the Barr Glen, this route satisfies technical constraints, however the primary consideration is to minimise disruption and proximity to Barr Glen residents. Removing the Barr Glen Road from the proposed northern access route significantly reduces the disruption to residents and routes construction traffic away from residential properties.

5.24 At the point of crossing the Barr Glen Road and subsequent Barr Water the access route is restricted by field boundaries; to minimise impact upon better agricultural land the route is aligned with boundaries. The proposed route then climbs Blary Hill to ensure minimal impact upon agricultural land. Here the proposed northern and southern routes converge and continue around Blary Hill to meet on-site tracks.

5.25 The Barr Glen hosts several cultural heritage assets that the northern access route would interact with, cup marked rocks, and a dun located close to where the route crosses the Barr Water. Historic Environment Scotland have been engaged at the pre application stage to introduce the proposed development and fully understand all potential impacts the development may have upon the surrounding historical environment. Its is considered that although the access route does pass within a close proximity to the setting of such historical assets the primary impact will be during the construction phase. As this is a temporary period any potential impact upon the setting of cultural assets will be temporary and therefore limited. These interactions have been assessed further, and in detail, in the cultural heritage chapter of the EIA report. Similarly, impacts upon ornithology, ecology and peat are also discussed in the relevant chapters of the EIA Report.

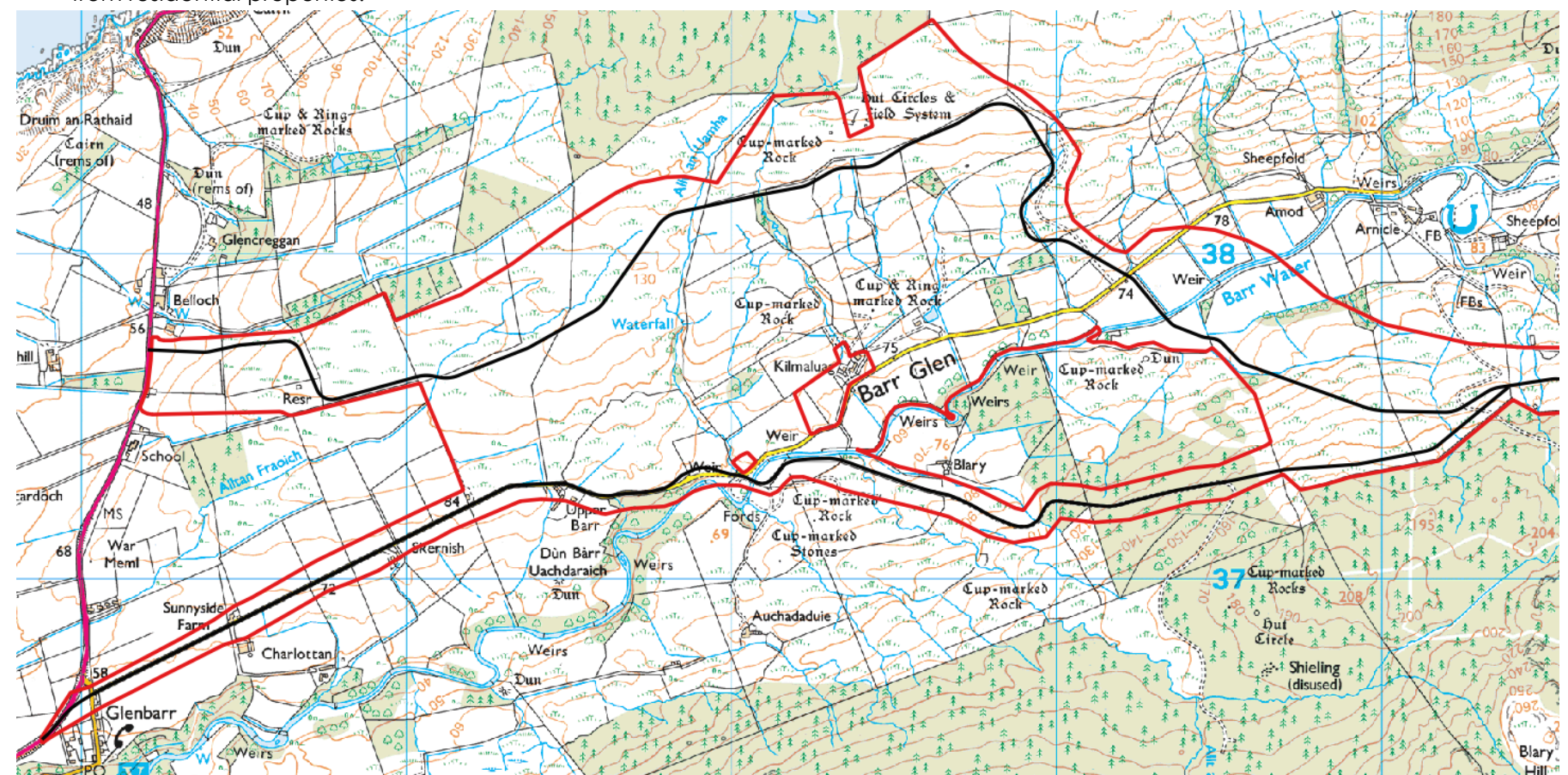


Figure 5.4: Proposed Access Route Options