Technical Appendix 4.5
Gatecheck Report

This page is intentionally blank.

Hagshaw Energy Cluster – Western Expansion |Phase 1

Gatecheck 1 Report

Client:	3R Energy
Project/Proposal No:	4188
Version:	3.0
Date:	2024-10-30

Document Information

Project Name:	Hagshaw Energy Cluster – Western Expansion |Phase 1
Document Title:	Gatecheck 1 Report
Client Name:	3R Energy
Client Contact:	Theo Philip
Client Address:	Lanark Auction Market, Hyndford Road, Lanark, ML11 9AX
Document Status:	Draft
Author:	Niamh Hurley
Reviewed:	Anna Hudson
Approved:	Anna Hudson
Date:	2024-10-30
Version:	3.0
Project/Proposal Number:	4188
ITPEnergised Office:	4th Floor, Centrum House, 108-114 Dundas Street, Edinburgh, EH3 5DQ

Revision History

Version	Date	Authored	Reviewed	Approved	Notes
1.0	2024-09-24	Niamh Hurley	Anna Hudson	Anna Hudson	First Draft
2.0	2024-10-29		Anna Hudson	Anna Hudson	Address Client Comments
3.0	2024-10-30		Niamh Hurley	Anna Hudson	For Issue

Contents

Figures

Appendices

1. Introduction

1.1 Introduction

Spirebush Ltd (hereafter referred to as "the Applicant"), a member of the same group of companies as 3R Energy Solutions Ltd (3R Energy), intends to apply to the Scottish Ministers for permission to construct and operate Phase 1 of the Hagshaw Energy Cluster-Western Expansion (hereafter referred to as the "Proposed Development"), at a site centred at British National Grid (BNG) NS 70740 325550 (see **Figure 1**). The total generating capacity of the Proposed Development will be greater than 50 MW, therefore the Applicant intends to submit an application to the Scottish Ministers via the Scottish Government Energy Consents Unit (ECU) under Section 36 of the Electricity Act 1989.

The Applicant submitted an Environmental Impact Assessment (EIA) Scoping Report for an earlier iteration of the Proposed Development on the 22 of September 2022 to the ECU. The Applicant received an EIA Scoping Opinion on the 14 of March 2023. Following significant changes to the Proposed Development the Applicant submitted a Scoping Update Report on the 15 of February 2024 and the updated EIA Scoping Opinion was received on the 17 of May 2024.

This Section 36 Gatecheck Report provides the ECU with an update on the status of the Proposed Development and progress with the EIA Report since submission of the Scoping Update Report. This report summarises how the Applicant intends to respond to the points raised within the updated EIA Scoping Opinion (17 May 2024) and the design iteration process which the Applicant has undertaken to date.

1.2 The Applicant

The Applicant for the Proposed Development is Spirebush Ltd, a company established by 3R Energy for the purpose of taking forward the Proposed Development. 3R Energy has been developing renewable energy projects in Scotland since 2009, and has its head office situated in Lanark. The company was initially established to help farms and rural businesses benefit from renewable energy, with the mainstay of the business being farm sized wind turbines, Combined Heat and Power (CHP) systems and biomass boilers. More recently, 3R Energy has diversified into larger-scale renewable energy projects and has now developed over 330 MWs of onshore wind projects within the Hagshaw Energy Cluster (including a further 80 MWs of energy storage) which are all now in operation or under construction and together will make a substantial contribution to the local area and to national renewable energy and climate change targets.

As a local company, 3R Energy is committed to working with the communities closest to the Hagshaw Energy Cluster for the long term, to develop and deliver successful projects which create significant and tangible benefits for the local area.

2. Consultation and Engagement

2.1 Public Engagement

In accordance with best practice, a programme of pre-application community engagement has been undertaken by the Applicant. The consultation strategy was tailored to the local circumstances of the Proposed Development. The Applicant is committed to undertaking meaningful consultation with the local community and keeping them up to date with project progress.

The project website went live in September 2022 and contains information to the Proposed Development such as site location, proposed infrastructure, contact information (via phone or email) and details of any upcoming consultation events.

Consultation Events

A first round of public consultation events was held in November 2022 to inform and consult with those communities closest to the Proposed Development. These events presented the larger 72 turbine scheme. Consultation events were held at the following locations:

- Muirkirk, 14 November 2022, 2pm – 7pm
- Sandford, 15 November 2022, 2pm – 7pm
- Lesmahagow, 16 November 2022, 2pm – 7pm
- Douglas, 17 November 2022, 2pm – 7pm
- Coalburn, 21 November 2022, 2pm – 7pm

A further three public events were held in March 2024 to inform local communities of the proposed changes to the Proposed Development and the phasing approach being taken forward as set out in the Scoping Update Report (February 2024). The public consultation events took place in the following locations:

- Sandford, 19 March 2024, 2pm – 7pm
- Muirkirk, 20 March 2024, 2pm – 7pm
- Douglas, 21 March 2024, 2pm – 7pm

The events were advertised through:

- The official project website;
- Adverts placed in the following papers:
- Lanark Gazette
- Cumnock Chronicle
- East Kilbride News
- Mail drop to properties within 2 km of the Proposed Development site; and
- Emails to local community councils, ward councillors, Members of Scottish Parliament (MSP's) and Members of Parliament (MP's).

Members of the public who were unable to make the event were encouraged to view the materials online on the official project website. There was also the opportunity to submit questions via email, text and/or call an available team member with any queries and request additional information.

Community Councils

Prior to the submission of the Scoping Update Report the Applicant informed local community councils of the phasing of the project and invited them to attend the second round of public consultation events.

Future Events

Following detailed review of abnormal load access route options, the decision has been made to apply for two route options shown in **Figure 3**.

- Access Option 1: From the King George V dock the abnormal loads vehicles would navigate onto the M8 motorway and then onto the M74 Trunk Road. The abnormal loads will exit the M74 at Junction 8 and continue south-west along the A71 through Strathaven before turning onto the B743 to the northern Access Point A.
- Access Option 2: From the King George V dock the abnormal loads vehicles would navigate onto the M8 motorway and then onto the M74 Trunk Road. The abnormal loads will exit the M74 at Junction 11 and use the private haul road within the Hagshaw Energy Cluster as far as Hagshaw Repower. From here a new road will be constructed from the existing wind farm tracks to join the A70 west

of Glespin, then taking loads west through Muirkirk before traveling north on the B743 to northern Access Point A.

It is proposed that an additional public consultation event will be held in early 2025 in Strathaven only as public events on the Proposed Development have not been previously been held in Strathaven due to there being limited impacts and visibility of the Proposed Development from Strathaven. The newly proposed use of the A71 through Strathaven as an option for abnormal load deliveries will now be assessed within the EIA, hence there is an additional public consultation event proposed to be held in Strathaven.

The Applicant is committed to continuing engagement with the public and community leaders and will attend future community council meetings where invited, keep the project website and exhibition updated with project progress.

2.2 Statutory Consultee Engagement

Since the submission of the Scoping Update Report the Applicant has undertaken consultation with multiple organisations. A summary of consultation undertaken since Scoping Update Report submission is provided in **Table 2-1** below.

Table 2-1 Summary of Consultation following Scoping Update Report (Feb 2024)

Consultee	Date	Persons	Description of Correspondence
Historic Environment Scotland (HES)	21 February 2024	Heritage Consultant to HES	Email to arrange a meeting to discuss the Proposed Development design changes and how it may impact the setting of Dungavel Hill cairn (SM2848).
	14 March 2024	EIA Lead to HES	Email sharing updated 360-degree cumulative wirelines for Layout AQ ahead of meeting the following week.
	18 March 2024	Applicant, Heritage Consultant and EIA Lead	Meeting to discuss Layout AQ. HES suggested some amendments to layout, including removal of two turbines to improve intervisibility with Cairn Table (SM4631), Blacksidend cairn (SM2924), and Glen Garr cairn (SM2469).
	26 March 2024	EIA Lead to HES	Email sharing amended Layout AR and updated 360-degree wireline with the removal of T3 and T7. Further turbines removed for ecological considerations.
	17 April 2024	HES to EIA Lead	Letter response to Layout AR. HES welcomed removal of T3 and T7 and stated their removal made positive improvements. Layout comments and concerns: • T4 still has the potential to interrupt key views between the Dungavel Hill cairn and Glen Garr cairn and Blacksidend cairn (SM2924). • T6 has the potential to impact the setting of the Dungavel Hill cairn by dominating the experience.
	25 June 2024	EIA Lead to HES	Email sharing amended Layout AU and updated 360-degree wirelines. Amendments to layout from previous iteration shared included dropping a further two turbines and dropping tip heights of some turbines to 200 m, in particular for T6 to reduce impact on Dungavel Hill cairn.
	16 July 2024	HES to EIA Lead	Letter response to Layout AU. HES welcomed the reduction in tip height of T6 and commented that removal of additional turbines in this direction has opened up views beyond. HES noted it is likely that the cairn will experience significant impacts, but it is their opinion that these are unlikely to warrant an objection.
Scottish Environmental Protection Agency (SEPA)	6 June 2024	Geology & Peat Lead to SEPA	Email request for a meeting to discuss latest layout (Layout AU) and any other matters relating to peat, soils and habitat.
	6 June 2024	SEPA to Geology & Peat Lead	Email to confirm SEPA would be available to attend meeting to discuss layout. Request for additional plans showing Scoping Update layout (Layout AO) overlain with latest layout and peat probing data.

Consultee	Date	Persons	Description of Correspondence
	13 June 2024	Geology & Peat team to SEPA	Email providing the requested overlain layout plans.
	23 July 2024	Applicant, Geology & Peat Lead, Hydrology Lead and EIA Lead	Meeting to discuss Layout AU. Layout comments from SEPA • T15 is in area of deep peat and should be relocated or removed. • Questioned why T14 was moved north into deeper peat. Explained this was due to aviation constraints and proximity to SPA. Team would look at relocation. • Asked if access track between T14 and T18 could be rerouted to avoid areas of deepest peat or floated to minimise disturbance of peat. • Asked if T11 and construction compound could be repositioned to keep within shallow peat depths. Project team explained they are located along contours to minimise earthworks but would look into this further. • Look into rerouting T6 access track through areas of shallower peat. • Look into relocating Borrow Pit C to shallower peat depths. Hydrology lead presented findings of Private Water Supply (PWS) survey and asked about appropriate set backs required for Solar development.
	23 July 2024	SEPA to Hydrology Lead	Email sharing new SEPA final draft 'Guidance on Assessing the Impacts of Developments on Groundwater Abstrations' within which it states that piling would fall under stage 1a) "all activities" for which a 10 m buffer would be required.
	10 September 2024	EIA lead to SEPA	Email sharing meeting note for July meeting and sharing latest layout iteration (Layout AV) which includes SEPAs suggested removal of T15.
	11 September 2024	SEPA to EIA lead	Email stating that SEPA welcome decision to remove T15 and that they will provide further comment on layout when Gatecheck report received.
NatureScot (NS)	May 2024	Applicant Ecology Lead and NS	Emails to arrange a meeting with NS and RSPB in June 2024.
	04 June 2024	Applicant, Nature Scot, RSPB, Project Ecology Lead, Project Ornithology lead, EIA Lead	Meeting to discuss latest design (Layout AU) and habitat management proposals including potential impacts on Dungavel Wind Farm's approved Habitat Management Plan.
RSPB	04 June 2024	Applicant, Nature Scot, RSPB, Project Ecology Lead, Project Ornithology lead, EIA Lead	Meeting to discuss latest design (Layout AU) and habitat management proposals including potential impacts on Dungavel Wind Farm's approved habitat management plan.
East Ayrshire Council (EAC)	14 February 2024	EIA Lead to EAC	Email update on project programme and consultation on public exhibition dates, venues and advertising.
South Lanarkshire Council (SLC)	14 February 2024	EIA Lead to SLC	Email update on project programme and consultation on public exhibition dates, venues and advertising.
Glasgow Prestwick Airport (GPA)	Various	Aviation Lead and GPA	Regular meetings (19 February 2024, 30 April 2024 and 09 July 2024) to discuss aviation impacts and mitigation proposals
Glasgow Airport (GA)	Various	Aviation Lead and GA	Email correspondence to discuss aviation impacts and mitigation proposals.

3. Design Iterations

3.1 Design Iterations to Date

The layout of the Proposed Development has been an iterative process which started in March 2021, each time taking into consideration information gathered through site assessments or comments from consultees, as well as the professional judgement of technical experts.

Since the submission of the EIA Scoping Update Report and the receipt of the updated EIA Scoping Opinion the Applicant has undertaken design iterations to maximise the capacity of the Proposed Development while minimising the environmental impacts. The main iterations are described below within **Table 4-1** and shown on **Figure 4** to **Figure 8**. These iterations have taken into consideration the existing tracks and on-site environmental and engineering constraints to reduce the impacts on residential amenity and the wider landscape and avoid watercourses and sensitive habitats. **Figure 9** shows the current layout and the onsite constraints.

3.1.1 Turbines

Table 3-1– Design Iterations to Date

Turbine Iteration	Infrastructure Iteration	Turbine No.	Date	Description of Amendments	Access Route & Point of Access	Consulted with:
AO	V16	26	November 2023	Scoping Update layout with access to wind component of the site via the northern access point at Dungavel Forest (shown as 'A' on **Figure 3**).	Access through access point A.	All
AP	V17	26	December 2023	T17 moved c.105 m northwest and T18 moved c.95 m north to avoid deeper areas of peat. Track between T17 and T18 realigned due to turbine and hardstand moves.	Access through Muirkirk, access point A.	
AQ	V18	26	January 2024	All hardstands updated to a new candidate turbine model. Change in access point from access point 'A' to the access point 'B'. Hardstands of T5 and T6 flipped to be accessed from the south. Additional track for turning added northwest of Dungavel Hill to allow access to T2 and T4. Some minor track realignments made and hardstand rotations to optimise layout. T8, T21 and T23 adjusted along with hardstands to improve cut and fill volumes.	Access through Muirkirk, southern forestry access point B.	HES
AR	None	21	March 2024	A number of changes were made to improve views from Dungavel Hill Cairn including • Removal of T2 and relocation of T3 (now T2) c.180 m west to improve views north from Dungavel Hill Cairn. • Removal of T7 to improve views south from Dungavel Hill Cairn, giving direct view of Cairn Table respecting the intervisibility of cairns in the surrounding landscape.		HES

Turbine Iteration	Infrastructure Iteration	Turbine No.	Date	Description of Amendments	Access Route & Point of Access	Consulted with:
				A number of turbines were removed or relocated in order to avoid the core areas of the operational Dungavel Wind Farm's Habitat Management Plan (HMP). This included • Relocation of T15 (now T13) c.150 m east to take it out of HMP areas. • Removal of T16 and T20 as they were in HMP areas. T22 removed to improve spacing between turbines. Following the removal of the 5 turbines a number of other turbines were moved to optimise spacing between the remaining turbines on site, creating a less cluttered layout visually. Turbines moved to improve spacing were T6 (now T5), T17 (now T14), T19 (now T16), and T23 (now T18). T4 (now T3) moved c.80 m east to increase set back from Glengavel House residential property.		
AS	None	20	April 2024	T6 moved c.40 m west to reducing feeling requirements. T10 moved c.80 m southwest to avoid impacts on Dungavel WF HMP further. T13 removed due to large cut and fill requirements on steep slope near Powbrone Burn. T11 removed due to proximity to neighbouring Bankend Rig 3 turbines, and T12 (now T11) moved c.112 m north to further improve spacing with Bankend Rig 3 turbines. The addition of T15 to keep generation up but noting that further peat surveys would be needed in this area. T18 (now T17) moved c.220 m southeast to improve spacing with the neighbouring Kype Muir Extension turbines.		
AT*	V19a	19	May 2024	See Turbine Iteration AU below – both V19 iterations looked to reduce potential impacts on heritage, aviation infrastructure and habitats.		
AU	V19b	19	May 2024	Civil engineer review and infrastructure design led to some minor turbine moves in order to optimise hardstanding orientations and reduce earth work requirements. The turbines moved were T6 c.50 m northwest, T10 c.30 m northeast, T12 c.60 m east, T14 c.80 m southeast, and T15 c.55 m east. Project engineer advised T17 was not going to be feasibly accessible due to surrounding watercourse network. T17 was removed and T16 was relocated c.245 m north to a more optimal location with improved turbine spacing. T6 tip height reduced to 200 m to further reduce impacts on the setting of Dungavel	Access through Muirkirk, access point B.	HES SEPA Nature Scot GPA

Turbine Iteration	Infrastructure Iteration	Turbine No.	Date	Description of Amendments	Access Route & Point of Access	Consulted with:
				Hill cairn. For the purpose of investigating aviation mitigation strategies T14, T15, T17, T18 and T19 tip heights were also dropped to 200 m.		
AV	V20	18	August 2024	Following additional peat probing and consultation with SEPA T15 was removed due to deep peat. Adjustment to T11 c.82 m southeast, T14 c.24 m southeast, and T17 (now T16) c.64m west, to reduce track lengths and improve track alignments.	Access through Muirkirk, access point B.	SEPA
AW*	V21a	17	August 2024	As per Turbine Iteration AX below. An additional turbine was removed from the east of the site but on balance decided to proceed with layout AX.		
AX	V21b	18	August 2024	Further consultation with aviation stakeholders revealed a potential alternative mitigation solution which would not require a reduction in turbine height from 230 m to 200 m. As a result, turbine heights were returned back to 230 m across the layout with the exception of T6 to remain at 200 m due to the improved effect on the setting of Dungavel Hill cairn. Following detailed analysis of the abnormal load route assessment it was determined that access through Strathaven from the north was a viable option to be included. The access point was amended to the northern forestry access point (point A) and hardstands of T3 and T4 flipped. Relocation of T11 c.240 m northwest and T12 c.175 m west to improve internal turbine spacing and spacing with neighbouring Bankend Rig 3 turbines. Civil optimisation of T16, T17 and T18 and hardstandings was undertaken to improve track alignments and reduce earth works.	Access through Strathaven or Muirkirk, access point A.	GPA
AY	V21c	18	September 2024	Gatecheck Layout. Relocation of T16 to improve spacing with the neighbouring Kype Muir Extension turbines. Further investigation of felling requirements leading to the inclusion of forestry spur roads to facilitate wind farm felling. Visible Aviation lighting included in layout.	Access through Strathaven or access through Muirkirk to access point A.	SLC EAC HES NS SEPA

**Iteration not included within figures*.

3.1.2 Solar

There have been minor changes made to the solar layout since submission of the Scoping Update Report. **Figure 10** shows the Scoping Update solar layout and the current solar layout. The access point for the southern development area for solar is Access Point C.

The layout constraints which have been considered for the solar layout are shown on **Figure 11**. The layout constraints include;

- Avoiding impacts on Ancient Woodland;
- Avoiding impacts on Private Water Supplies (PWS);
- Avoiding impacts on Poential (bat) Roost Features (PRFs);
- Reducing potential visual or glint and glare impact on residential properties;
- Maintaining a 5 m set back from watercourses;
- Removal of an area of panels in the east, near Linburn Farm, as there is consent and land rights for a weather mast in this location; and
- Removal of an area of panel in the field west of Lamon Burn as there is an area of well-preserved rig and furrow associated with the farmstead.

3.1.3 BESS

Since submission of the Scoping Update no change has been made to the substation and BESS arrangement within the southern development area as shown in **Figures 2** and **10**.

The Applicant is currently working with Scottish Power Energy Networks to determine the optimum grid connection solution. These discussions have led to consideration of a second possible substation and BESS location within the northern development area of Dungavel Forest, next to Access Point B, and closer to the proposed turbines as shown in **Figures 2** and **8**.

3.2 Future Design Iterations

The Applicant, together with the EIA team, have gathered environmental baseline information for the site across the various technical disciplines to identify a design layout that considers the environmental constraints identified and the consultee opinions received to date.

Details of the design iterations leading to a finalised design will be provided within **Chapter 2** of the EIA Report. **Figure 9** and **Figure 11** shows the local environmental and engineering constraints considered within the design process to date for the Proposed Development.

4. Scoping Responses

Scoping responses were received from the following organisations (refer to **Table 4-1**).

Table 4-1 Updated EIA Scoping Opinion (May 2024) - Scoping Responses Received

Consultee	
British Telecommunications plc	NATS Safeguarding
Crown Estate Scotland	NS
Defence Infrastructure Organisation	ONR Land Use on behalf of Health and Safety Executive
East Ayrshire Council	RSPB Scotland
Edinburgh Airport	Scottish Forestry

Consultee	
Glasgow Airport	Scottish Water
Glasgow Prestwick Airport	SEPA
HES	South Scotland Scottish Raptor Study Group
Joint Radio Company Limited	The Coal Authority
Muirkirk Community Council	Transport Scotland
Muirkirk Enterprise Group	South Lanarkshire Council*

** Although South Lanarkshire Council (SLC) did not submit a response to the Scoping Update submitted in February 2024, we have addressed relevant comments from their scoping opinion dated 30 January 2023 which relate to Phase 1 of the Proposed Development.*

No responses to the updated scoping request (Feb 2024) were received from the following consultees (refer to **Table 4-2**).

Table 4-2 Updated EIA Scoping Opinion (May 2024) - No Scoping Response Received

Consultee	
Association of Salmon Fishery Boards	Mountaineering Council of Scotland
British Horse Society	Muirkirk Community Association
Civil Aviation Authority	Natural Resources Division
Coalburn Community Council	The Crown Estate
District Salmon Fisheries Board	Sanford Upper Avondale Community Council
Douglas Community Council	Scottish Rights of Way and Access (Scotways)
Fisheries Management Scotland	Scottish Wildlife Trust
Galloway and Southern Ayrshire Biosphere	Scotways
Hydrogen Policy	Visit Scotland
Lesmahagow Community Council	Office for Nuclear Regulation

The following sections describe the responses received in relation to each of the technical assessments, how the EIA Report will address these matters and any details of further consultation undertaken or in progress.

4.1 Planning and Policy

The following comments were received as part of the updated EIA Scoping Opinion on planning policy.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
EAC	The Council's East Ayrshire Local Development Plan (adopted in April 2017) remains the current LDP, alongside the East Ayrshire Minerals Local Development Plan. By the time any subsequent Section 36 application is made it is likely that the Council's LDP2 will be adopted, at which point the current 2017 LDP and 2020 Minerals LDP will be superseded. The Applicant is advised to keep this situation under review as they approach their intended submission date to ensure the policy context is as up to date as possible.	The Applicant notes that the East Ayrshire Local Development Plan 2 (LDP2) was adopted 08 April 2024. The policies within the LDP2 will be reviewed and referenced as required by each technical discipline and discussed within the standalone Planning Statement, to be submitted as part of the application.	N/A
HES	We are content that the relevant updates referred to in Section 4 of the updated scoping report reflect current legislation and policy, specifically references to National Planning Framework 4 (NPF4). We do note that references to Town and Country Planning (Scotland) Act 1997, previously referenced are no longer applicable due to the removal of elements of the proposed development (i.e. green hydrogen plant). We would also take the opportunity to highlight updates to our Designation Policy and Selection Guidance (4 December 2020) and our Managing Change in the Historic Environment: Setting (3 February 2020)	Noted. The heritage impact assessment within **Chapter 10: Cultural Heritage** of the EIA Report will refer to any updated guidance.	N/A

4.2 EIA Report Requirements

The following comments were received as part of the updated EIA Scoping Opinion on the EIA Report Requirements.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
EAC	States that the Non-Technical Summary (NTS) should be written in simple non-technical terms. A plan to identify the application site within the wider locality and a proposed site plan should be incorporated as a minimum.	Noted. An NTS will be submitted alongside the EIA Report.	N/A
	A list detailing qualifications and evidence of relevant expertise shall be included.	This will be outlined within **Chapter 1 Introduction** of the EIA Report.	N/A
	A summary of the environmental information assessed throughout the EIA Report shall be provided.	A NTS will be provided alongside the EIA which will summaries all environmental assessments in non-technical terms. **Chapter 14 Schedule of Environmental Commitments** will summarise all mitigation measures presented with the EIA. **Chapter 15 Summary of Residual Effects** will summarise the residual effects outlined within the technical chapters of the EIA Report.	N/A
	Two full paper copies including appendices shall be provided to the Planning Authority for internal use, although additional paper copies will also be required to be placed in appropriate locations for inspection by the public.	Noted. All required printing of paper copies will be arranged.	N/A
	Schedule 4, paragraph 2 of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 requires that information on the reasonable alternatives (including design, technology, location, size and scale) considered and the main reasons for selecting the chosen option, including a comparison of	Consideration of alternatives will be included within **Chapter 2 Site Selection and Design Iteration** of the EIA Report.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	the environmental effects be included within the EIA Report. Such consideration of alternatives should therefore be included within the EIA Report.		
	There should be a degree of flexibility adopted within the EIA Report when reporting the significance of the impacts as moderate effects can be considered as significant in terms of the EIA Regulations and would be based on the assessor's judgement.	Noted.	N/A
	Although not a specific topic, an assessment of the likely impacts of decommissioning of the Proposed Development on all of the environmental topics shall form part of the EIA Report (though it is noted for some topics this could be scoped out).	Noted. Decommissioning impacts will be addressed within each technical chapter of the EIA Report where not scoped out.	N/A
	The application shall be accompanied by a decommissioning report which sets out a costed breakdown of the decommissioning, restoration and aftercare works likely on site, based on the observations made within the EIA Report regarding decommissioning.	Noted.	N/A
SLC	The topics listed in the scoping report are acceptable to the Council and should be fully assessed within the EIA Report. The Council would also request that a standalone chapter that contains a summary of all the proposed mitigation and enhancement measures associated with the Environmental Impact is proposed as part of any EIA Report.	**Chapter 14 Schedule of Environmental Commitments** will summarise all mitigation measures presented with the EIA.	N/A
NS	The EIA Report must contain the information required to undertake this appraisal in view of the site's conservation objectives for its qualifying interests. This should include information on, and an appraisal of, the following:	This will be included in the ornithology assessment in **Chapter 6 Ornithology** and associated appendices of the EIA Report. Impact on habitats will be covered in the ecology assessment **Chapter 7 Ecology** of the EIA Report.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	➢ Collision risk to SPA qualifying species and how this may affect the viability of the relevant species' population. ➢ Impacts on habitats supporting the qualifying species. ➢ Disturbance and/or displacement of SPA qualifying species as a result of construction, operation and/or decommissioning of the Proposed Development . ➢ Cumulative impacts.		
	As part of the EIA submission, we would request that the applicant completes the template in Annex 1 of the guidance. If the Proposed Development infrastructure locations (including a 250 m buffer) meet the criteria in the template, we would also request that an additional map is provided showing these locations (e.g. *Sphagnum* species) in relation to the Proposed Development.	Noted. This will be included within the application submission.	N/A
ECU	Due to the varied environmental impact of each generating station in each planning authority, Scottish Ministers would encourage the Company to take careful consideration on whether it would be more pragmatic to submit two separate applications, taking into account the regulatory requirements of an EIA Report prior to submitting any application(s) for consent under section 36 of the Electricity Act 1989.	The Applicant has considered the option of splitting the Proposed Development into two separate applications and taken external advice. While there are two distinct development areas located across the South Lanarkshire / East Ayrshire boundary both areas form part of a single generating station which benefits from a single grid connection agreement and has been developed as a single project. If the Applicant were to split the section36 application into two, given the potential for transboundary effects from both wind/solar sources it is likely that both councils would need to be consultees to each application, along with all other consultees, and would reply to the two applications separately. Two applications would still likely be covered by a single EIA in order to cover any potential for in combination and cumulative effects of all component generating stations and ancillary infrastructure. The Applicant therefore considers it a more streamlined process for all stakeholders to keep the Proposed Development within a single Section 36 application, especially as all consultation to date has been on the Proposed Development as a whole.	

4.3 Landscape and Visual

The following comments were received as part of the updated EIA Scoping Opinion on the landscape and visual assessment.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
ECU	As the maximum blade tip height of turbines exceeds 150m the LVIA as detailed in section 5 of the scoping report must include a robust Night time Assessment with agreed viewpoints to consider the effects of aviation lighting and lighting mitigates the effects.	A night time visual assessment will be included within **Chater 5 Landscape and Visual** of the EIA Report. Night-time visuals will be produced from LVIA: ➢ Viewpoint 1 – Drumclog ➢ Viewpoint 6 – B743 (east of Nethershield) ➢ Viewpoint 9 – A71, bridge crossing Calder Water	The current proposed lighting design is shown in **Figure 8**. The viewpoints proposed for LVIA are outlined in **Appendix 1**. We would look for agreement of these viewpoints with SLC, EAC, and NS.
EAC	The Applicant is advised to keep the cumulative situation under review during the preparation of the EIA Report as this is an evolving situation.	Noted.	N/A
	In regards the proposal to digitally include consented but not yet built turbines into the photomontages, it is recommended that this be separate to the photomontages produced showing the proposed scheme against the actual baseline landscape as it is at the time of the assessment, without artificially altering the baseline photography with turbines not viewed in the landscape at that time. It is agreed that the other elements, including solar arrays, BESS, hydrogen plant, substation, tracks, etc. should be shown in the photomontages out to distances of 5km and these should be represented as accurately as possible within the photomontages.	Noted. Separate photomontages will be produced showing the Proposed Development against the actual baseline photography and a separate montage showing the digitally included consented or in construction cumulative developments.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	The Planning Authority does not agree that night time landscape effects can be scoped out as aviation lighting has an impact on the landscape character in addition to visual impacts.	A night time visual assessment will be included within **Chater 5 Landscape and Visual** of the EIA Report. Night-time visuals will be produced from LVIA: ➢ Viewpoint 1 – Drumclog ➢ Viewpoint 6 – B743 (east of Nethershield) ➢ Viewpoint 9 – A71, bridge crossing Calder Water	The current proposed lighting design is shown in **Figure 8**. The viewpoints proposed for LVIA are outlined in **Appendix 1**. We would look for agreement of these viewpoints with SLC, EAC, and NS.
	As the design evolves, it would be useful to agree a final set of viewpoints with the Planning Authority and relevant surrounding authorities and NatureScot at that time at the design freeze to ensure the LVIA / RVAA is based on an agreed set of viewpoints at that point.	Noted.	The viewpoints proposed for LVIA are outlined in **Appendix 1**. We would look for agreement of these viewpoints with SLC, EAC, and NS.
	The Planning Authority would request a night time viewpoint within the East Ayrshire district to coincide with visibility of turbines. Based on the ZTV (Figure 5.1) this might be one of either VP5, VP6 or VP8, depending on the extent of visibility of lighting.	Viewpoint 6 – B743 (east of Nethershield) will be included within the LVIA as a night-time visual viewpoint.	N/A
	It would be expected that every effort is made to reduce the impacts of visible aviation lighting as far as possible, particularly given the substantial increase in cumulative pressure/impacts from visible aviation lighting associated with large numbers of wind farm proposals / consents for turbines over 150m in height.	Noted. The current proposed lighting design is shown in **Figure 8**.	N/A
	The Planning Authority would expect that RVA impacts are assessed for both daytime impacts and night time impacts	Noted. This will be included within the RVA Assessment.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	(due to the requirement for visible aviation safety lighting). Wirelines and photomontages should be produced for the properties, with day time and night time (lighting) impacts shown as necessary.		
SLC	The scope of the LVIA set out in chapter 5 of the Scoping Report is considered acceptable, noting the 15 no. proposed viewpoint locations.	Noted.	N/A
	The cumulative assessment of any LVIA should be maintained as up to date as possible prior to submission as this local area is receiving a lot of interest for potential wind farm developments, and therefore the cumulative assessment will be an important part of the submitted LVIA.	Noted. The cumulative situation will be kept under review prior to application submission.	N/!
NS	NS welcomes further engagement with the applicant, on production of a ZTV based on turbine hub heights, to agree locations for night-time visualisations.	A nighttime visual assessment will be included within **Chater 5 Landscape and Visual** of the EIA Report. Night-time visuals will be produced from LVIA: ➢ Viewpoint 1 – Drumclog ➢ Viewpoint 6 – B743 (east of Nethershield) ➢ Viewpoint 9 – A71, bridge crossing Calder Water	The current proposed lighting design is shown in **Figure 8**. The viewpoints proposed for LVIA are outlined in **Appendix 1**. We would look for agreement of these viewpoints with SLC, EAC, and NS.
	Given that the Proposed Development comprises several development areas, as detailed on Figure 2.1 and in paragraph 3.2.15 of the Scoping Report, individual ZTVs for each of these should be included in the EIA Report.	Noted. Individual ZTVs will be included in the figures for **Chater 5 Landscape and Visual.**	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	Night-time visualisations are proposed from representative viewpoints 2 and 5. We advise inclusion of an additional night-time visualisation from Loudoun Hill (proposed viewpoint 8) given the popularity of this viewpoint and its location to the north-west of the proposal.	We propose Nighttime visuals will be produced from LVIA: ➢ Viewpoint 1 – Drumclog ➢ Viewpoint 6 – B743 (east of Nethershield) ➢ Viewpoint 9 – A71, bridge crossing Calder Water It is not proposed to include Loudoun Hill as a night-time visualisation as there would be a limited number of receptors who would be present at the summit after dark. As this viewpoint is not within 5 km of a proposed lit turbine it would benefit from reduced visibility from the built in lighting mitigation.	The viewpoints proposed for LVIA are outlined in **Appendix 1**. We would look for agreement of these viewpoints with SLC, EAC, and NS.
	NS require further information in the form of baseline lighting intensity mapping to confirm that the proposal to scope out turbine lighting effects on landscape character is appropriate.	Noted. This will be included with the Aviation lighting report and the night-time visual assessment within **Chater 5 Landscape and Visual.**	N/A
	NS advise that effects on the special qualities of designated landscapes are scoped into the assessment, in particular the River Ayr Special Landscape Area (SLA), Southern Uplands SLA, and the Douglas Valley SLA	Noted. This will be covered in **Chater 5 Landscape and Visual** of the EIA Report.	N/A
	NS encourage the applicant to consider all mitigation options and present full details of the proposed lighting scheme in the EIA Report.	Noted. Mitigation options considered will be outlined in the EIA Report and details of the proposed lighting scheme.	N/A

4.4 Ecology and Nature Conservation

The following comments were received as part of the updated EIA Scoping Opinion on Ecology and Nature Conservation.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
EAC	Due to the significant biodiversity enhancement measures set out in SPF4, Policy 3, the Planning Authority would expect that mitigation / habitat management measures would need to be ambitious and go beyond mitigation of impacts but deliver substantially improved habitats / biodiversity on site and this should be taken into account when detailing what biodiversity enhancement measures are proposed to be delivered as part of the Proposed Development.	Noted. The Habitat Management Plan (HMP) to be designed and submitted with the application will go beyond mitigation requirements and will look to make wider biodiversity enhancements.	Further consultation will be undertaken with NS to agree the proposed HMP.
	Consultation should also be undertaken with the River Ayr Salmon Fisheries Board and the Ayrshire Rivers Trust, in addition to Marine Scotland Science to agree on the appropriate methodologies and scope of assessment relating to aquatic biota.	Noted.	Further consultation with River Ayr Salmon Fisheries Board and the Ayrshire Rivers Trust will be undertaken to confirm scope of assessments.
SLC – Biodiversity Officer	Welcome the changes to the original proposal to remove the turbines from the designated sites.	Noted	N/A
	Considering the scale and proximity of the solar panels to the Greenock Water and other watercourse, SLC would like to see more information on the potential impact on the aquatic biodiversity. Noting report entitled, *'Potential ecological impacts of ground mounted photovoltaic solar panels*' (BSG ecology, 2019).	The conclusion of the literary review states that *"From the body of research reviewed it is likely that the majority of concerns that have been discussed in the media are not well-founded, or are based on scientific experiments that were not specifically designed to evaluate ecological impacts of ground mounted solar PV sites"* (paragraph 3.1) and that *"the installations of solar PV [should be*	The Applicant provided a response to the ECU on this matter, dated 15 May 2024, which noted that no specific invertebrate surveys were proposed but that invertebrates would be considered as part of the wider impact assessment and habitat management proposals. This was verbally agreed on a call with the SLC Planning officer.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
		seen as] as an opportunity for biodiversity enhancement".	Further consultation will be undertaken with NS, SEPA and RSPB with regard Habitat management and enhancement.
Fisheries Management Scotland	The Proposed Development falls within the district of the Ayr District Salmon Fishery Board, and the catchment relating to the Ayrshire Rivers Trust and Clyde River Foundation. It is important that the proposals are conducted in full consultation with these organisations.	Noted.	Further consultation with River Ayr Salmon Fisheries Board and the Ayrshire Rivers Trust will be undertaken to confirm scope of assessments.
Nature Division Scottish Government	Having reviewed both Chapters 6 and 7, we are content that the scope of the proposed study to inform the EIA is appropriate, as are the suggested survey methodologies for the different species groups associated with this site.	Noted.	N/A
NS	While we note that a blade lifter is to be used during transport along the A70, should any road works be required to facilitate delivery of development components impacts on Ree Burn & Glenbuck Loch Site of Special Scientific Interest (SSSI) may also require to be considered in the EIA Report.	Noted. This will be considered further and included within the EIA should there be any potential impacts on the SSSI.	N/A
	Development should endeavour to avoid undoing previous restoration, compensation or enhancement work where possible, and new habitat management proposals should seek to build on existing management commitments.	Noted.	Further consultation will be undertaken with NS to agree the proposed HMP.
	The Proposed Development overlaps with, or is close to, existing wind farm sites where Habitat Management Plans (HMP) are in place (notably Dungavel Wind Farm, but also Kype Muir Extension and areas within the existing Hagshaw Cluster). The implications of this – for both the species/habitats being manged under these plans and their function in relation to the relevant consents - will require to be addressed in the iterative development of the	Noted. All efforts have been made to avoid impacts where possible on any existing HMPs. In addition, the HMP for the Proposed Development will provide additional enhancements beyond what is proposed for other wind farms.	Further consultation will be undertaken with NS and RSPB to agree the proposed HMP.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	proposal and within the EIA Report. In particular, the relationship between the Proposed Development and the commitments to habitat enhancement for hen harrier within the Dungavel Wind Farm HMP will require robust consideration, given that there appears to be both potential conflict and duplication between the proposal and this HMP.		
	The survey area for potential bat roosting features should extend to 200m plus rotor radius of the boundary of the proposed wind energy elements of the proposal.	Noted.	N/A
	For all turbines, a buffer of at least 50m should be maintained between turbine blade tips and key habitat features for bats. Additionally, we recommend that mitigation proposals include a commitment to 'feathering' turbine blades to reduce their rotation speed during periods when the turbines are idling.	Noted.	N/A
	We note that there is limited detector placement/coverage in the western side of northern development area in comparison with the area to the east. This is a potential limitation on the survey, the implications of which will require to be addressed in the EIA Report.	Noted. This will be addressed in **Chapter 6 Ecology** of the EIA Report.	N/A
	NS advise that the following receptors should also be scoped into the assessment: ➢ Habitats of conservation importance (e.g. those listed on Annex 1 of the EC Habitats ➢ Directive or UK Biodiversity Action Plan Priority Habitats) occurring outside protected areas, or which may occur within protected areas but do not form part of the notified features.	Noted. This will be addressed in **Chapter 6 Ecology** of the EIA Report.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	➢ Groundwater Dependent Terrestrial Ecosystems ➢ Other protected species as appropriate following completion of survey work (i.e. water voles and red squirrel). ➢ Important plant species identified during survey work.		
	NS advise that ➢ Development proposals should clearly set out the type and scale of enhancement they will deliver, ensuring that applications clearly distinguish between those elements mitigating or compensating for adverse effects and those delivering enhancement. ➢ Developers should prioritise on-site enhancement before off-site delivery. Where purely on-site enhancement is not possible, the Scottish Government draft guidance sets out further considerations for off-site delivery. ➢ It is also important that applications demonstrate that the enhancement is to be secured within a reasonable timescale and with reasonable certainty, including appropriate management and monitoring arrangements, and sustained for the future (preferably in perpetuity) in order to deliver a lasting legacy. ➢ Information on predicted losses, and the proposed mitigation, compensation and enhancement should be clearly set out, and also concisely summarised, in any application, so that this can be easily understood by decision makers.	Noted. A HMP will be submitted with the application. The HMP will go beyond mitigation requirements and will look to make wider biodiversity enhancements.	Further consultation will be undertaken with NS and RSPB to agree the proposed HMP.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	➢ Enhancement requires consideration of all biodiversity, not just the significant effects that are the focus of EIA.		

4.5 Ornithology

The following comments were received as part of the updated EIA Scoping Opinion on ornithology.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
NS	NS state that as part of the proposed development site overlaps with the Muirkirk and North Lowther Uplands Special Protection Area (SPA), a Habitats Regulations Appraisal (HRA) will also be required. The EIA Report must therefore contain the information required to undertake this appraisal in view of the site's conservation objectives for its qualifying interests. This should include information on, and an appraisal of, the following: ➢ Collision risk to SPA qualifying species and how this may affect the viability of the relevant species' population. This should include consideration of how collision risk may be influenced by forest or habitat management proposals resulting from the wind farm development. ➢ Impacts on habitats supporting the qualifying species. ➢ Disturbance and/or displacement of SPA qualifying species as a result of construction, operation and/or decommissioning of the Proposed Development. Allowing an appropriately sized buffer strip of trees to be retained between the turbines and the SPA	The site does not overlap with the SPA nor is there any development work proposed within the SPA for Phase 1 of the Proposed Development. A Shadow HRA will be submitted with the application and all impacts on SPA qualifying species will be covered in **Chapter 7 Ornithology** of the EIA Report.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	boundary may assist in reducing the risk of displacement. ➢ Cumulative impacts.		
	The EIA Report should be clear in respect of what any proposals for mitigation are, fully describe how these are to be delivered, and assess their likelihood of success.	Noted. This will be included within the outline HMP.	Further consultation will be undertaken with NS and RSPB to agree the proposed HMP.
	While there is no need for a collision risk assessment in relation to the solar aspect of the proposal, we would welcome inclusion of flight line data from Vantage Point 3 in the EIA to provide contextual data on flight activity over the Proposed Development area.	Noted. This will be included in **Chapter 7 Ornithology** of the EIA Report.	N/A
Nature Division Scottish Government	Having reviewed both Chapters 6 and 7, we are content that the scope of the proposed study to inform the EIA is appropriate, as are the suggested survey methodologies for the different species groups associated with this site.	Noted.	N/A
	Due to proximity to Muirkirk and North Lowther Uplands Special Protection Area (SPA), so in addition to the requirements for an EIA, a HRA will also be required.	A Shadow HRA will be submitted with the application and all impacts on SPA qualifying species will be considered in **Chapter 7 Ornithology** of the EIA Report.	N/A
	Concerned that HRA process outlined in the Scoping report is not an accurate description of the process which is required. The basis for the HRA should be the Conservation Objectives for the site – these can be found on NatureScot's Sitelink website	Noted.	N/A
RSPB	RSPB are aware that the location of proposed turbines within this area will conflict with an area that has been subject to habitat management as part of a condition for consent of the operational Dungavel wind farm. Since this factor is not referenced in the Scoping Report, we	This issue has been considered within the design iteration as outlined in **Table 3-1**. All efforts have been made to avoid impacts where possible on any existing HMPs. In addition, the HMP for the	Further consultation will be undertaken with RSPB and NS to agree the proposed HMP.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	assume that it has not been addressed through design considerations. We recommend that this issue is fully assessed as part of the EIA that is likely to include consideration for iterations to the infrastructure layout.	Proposed Development will provide additional enhancements beyond what is proposed for other wind farms.	
	The competent authority, Scottish Ministers, are required to carry out an Appropriate Assessment (AA) under regulation 63(1) of the Conservation of Habitats and Species Regulations 2017; and under Reg 63(2) the applicant is required to provide information to inform the AA.	Noted. A Shadow HRA will be submitted with the application and all impacts on SPA qualifying species will be considered in **Chapter 7 Ornithology** of the EIA Report.	N/A
	The applicant will need to provide sufficient information to inform the HRA process, to inform an AA to be carried out by the competent authority in line with requirements under the Conservation of Habitats and Species Regulations 2017.	Noted. A Shadow HRA will be submitted with the application and all impacts on SPA qualifying species will be considered in **Chapter 7 Ornithology** of the EIA Report.	N/A
	RSPB highlight the requirement to assess the effect on the integrity of the whole SPA with regard to its qualifying features and conservation objectives and taking into account the species populations at time of designation.	Noted. At designation population numbers will be considered within **Chapter 7 Ornithology** of the EIA Report.	N/A
	The Scoping Report states that operational impacts through collision risk and disturbance/displacement will be assessed through the EIA. We recommend that this includes impacts through permanent operational displacement for all target species as well as temporary impacts through disturbance during construction.	Noted.	N/A
	The Scoping Report references the need to consider mitigation measures during operation and to reduce impacts to an acceptable level. We recommend the applicant needs to consider impacts during all phases of development, including construction and	Noted. An outline CEMP will be submitted with the application.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	decommissioning. These measures are proposed to be included in a Construction Environmental Management Plan (CEMP).		

4.6 Noise and Vibration

The following comments were received as part of the updated EIA Scoping Opinion on noise and vibration.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
EAC	The Planning Authority continue to advise that discussion with the Council's independent noise consultant shall take place in agreeing to any noise monitoring locations or assessment methodology, in conjunction with the Council's Environmental Health Service.	Noted.	N/A
	With regards to the Battery Energy Storage System (BESS) it is requested that the noise assessment set out the anticipated noise emissions from that proposed development based on the proposed components and manufacturer sound data unless more specific noise data is available at the time of the assessment.	Noted. The noise assessment will include noise emissions from the proposed BESS **Chapter 10 Noise** of the EIA Report.	N/A
	The cumulative noise assessment should discuss both the BESS and wind turbines, noting that although the assessment guidance for each is different, there would be expected to be an explanation / assessment to address the fact that both sources of noise could be experienced at the nearest noise sensitive properties.	Noted. This will be included in **Chapter 10 Noise** of the EIA Report.	N/A
SLC	SLC do not recommend the use of the apportionment of limits to individual receptors and would prefer the use of the controlling receptor principal. With regards to this,	Controlling receptors will be identified, where these exist, and limits determined accordingly. Given the complexity of	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	available headroom should not be assumed where it cannot feasibly be achieved. Where the IoA standard condition is applied, this should conform to this principle. Directivity may be taken into consideration however a more conservative approach would be to assume hemispherical propagation from all developments.	referencing historical limits and their interpretation, we propose to agree the approach to noise limit derivation through direct consultation with SLC.	
	Recommendation of conditions for noise propagation calculations include ground attenuation of no greater than 0.5, relative humidity of 70% and temperature of 10°C. Also notes that time periods for the collection of background data are defined as: All evenings from 6pm to 11pm, Saturday afternoon from 1pm to 6pm, Sunday, 7am to 6pm, Night-time is defined as 11pm to 7am. Data from these time periods should be utilised, excluding precipitation ensuring proper representation of wind speeds and direction.	Agreed – meets recommendations of IoA GPG.	N/A
	It is recognised that noise measurement positions have been determined and adjusted to ensure the accuracy of the baseline measurement. As suggested, the SoDAR should have been in place when evaluating relevant data to identify outliers and unrepresentative noise events such as precipitation within the scatter plot data.	Noted.	N/A
	Acknowledges complexity of wind turbines distribution and conditioning, and influence of multiple local authorities and the future section 36 application on this, and suggests a collaborative approach between authorities to assess the Proposed Developments environmental impacts.	Noted.	N/A
ECU	The noise assessment should be carried out in line with relevant legislation and standards as detailed in section 8 of the scoping report. The noise assessment report should	Noted.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	be formatted as per Table 6.1 of the IOA "A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise.		
	The noise assessment report should be formatted as per Table 6.1 of the IOA "A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise.	Noted.	N/A

4.7 Cultural Heritage

The following comments were received as part of the updated EIA Scoping Opinion on cultural heritage.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
EAC	In terms of the proposed cultural heritage viewpoint assessment locations, the list at this time is considered reasonable from EAC's perspective, although would welcome any additional proposed viewpoints based on any further comments made by WoSAS or HES.	Noted.	N/A
SLC	The scope of the assessment and study areas is agreed (subject to a post felling walkover survey and LIDAR to better assess the forested areas in the first instance). WOSAS are also satisfied with the general statements on mitigation, noting that the details can't be agreed until later in the process (ie further consultation and agreement of a written scheme of investigation). WOSAS agree with the matters to be scoped in/out, relative to Cultural Heritage.	Noted.	N/A
HES	We note the presence of a single scheduled monument Dungavel Hill, cairn (SM2848) within the site boundary and that design of the proposed development has avoided any	Noted.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	physical impacts on this nationally important asset. Mitigation must be put in place to ensure that there are no accidental incursions on this asset. This protection should also extend to any preconstruction ground investigation works, e.g. peat probing.		
	Advise that any assessment should give particular focus to the setting of Dungavel Hill, cairn (SM2848). A key aspect of the setting of this asset is the clear visual relationship between the cairn and other cairns lying broadly to the south, including Glen Garr, cairn (SM2469), Blacksidend, cairn (SM2924), and Cairn Table, two cairns (SM4631).	Noted. This will be considered within the setting assessment within **Chapter 9 Cultural Heritage** of the EIA Report.	N/A
	Turbines to the southwest of Dungavel Hill, cairn, particularly Turbine 5, will need careful assessment to ensure there is no interruption of the views to and from other cairns in this direction, specifically Glen Garr, cairn (SM2469) and Blacksidend, cairn (SM2924). Significant impacts should be mitigated through design change.	As noted in **Table 3-1** above careful consideration and consultation with HES has led to a number of design changes to reduce the impacts on Dungavel Hill cairn to an acceptable level. Updated 360-degree cumulative wirelines of Layout AY is included within **Appendix 2** of this report.	The Applicant would welcome any further comments from HES on Layout AY.
	Turbines to the southeast of Dungavel Hill, cairn, specifically Turbine 7, will need careful assessment to ensure there is no interruption of the views to and from Cairn Table, twocairns (SM4631). Significant impacts should be mitigated through design change.	As above.	As above.
	To the east of Dungavel Hill, cairn, Turbine 8 has the potential to dominate the experience of being at the cairn. Consideration should be given to mitigating this negative impact through design change.	As above.	As above.

4.8 Hydrology, Hydrogeology, and Geology

The following comments were received as part of the updated EIA Scoping Opinion on geology, peat, hydrology and hydrogeology.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
EAC	The Planning Authority would note that NPF4 now has Policy 33 for Minerals with specific reference to borrow pits and the matters that will need to be assessed/considered in such proposals. The Applicant is advised to take this into account.	Noted.	N/A
	In terms of flood risk, any potential for the release of water from peat excavation should be considered as a potential cause of flooding. There is some flood risk in various locations throughout the site based on SEPA's flood mapping, though the nature of this is likely to be capable of being avoided through appropriate siting and design.	Noted. Areas of flood risk have been avoided through design iteration and 50 m buffers have been placed on all watercourses.	N/A
	The Council has also recently adopted new non-statutory guidance - Peat, excess soils and sewage sludge, which will be relevant to the proposed development.	Noted.	N/A
	The relevant fisheries boards should be consulted to discuss their expectations and requirements regarding the extent of hydrological assessment required to inform the assessment of hydrological impacts, including water quality impacts / monitoring, which also links to the potential ecological impacts on aquatic life.	Noted.	Further consultation with River Ayr Salmon Fisheries Board and the Ayrshire Rivers Trust will be undertaken to confirm scope of assessments.
	If it is found that any PWS are located within the study area or likely to be drawing from the same catchment as proposed infrastructure is located, then these PWS will require to be risk assessed. It is expected that the PWS Risk Assessment be undertaken and not only the PWS source should be identified, but also the pathway from source to receptor / PWS user should be mapped as this is the only	Noted. A PWS risk assessment will be included as an appendix to **Chapter 8 Hydrology, Geology and Hydrogeology** of the EIA Report.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	way of ensuring that a full understanding of any potential impacts of proposed infrastructure / construction activity can be ascertained. Details of any mitigation and/or contingency measures that may be required should be detailed within the EIA Report		
SLC	The Council's Developer Design Guidance: Flood Risk Assessments and Sustainable Drainage Systems (May 2020) highlights requirements in respect of Flood Risk Assessment and Drainage Strategy. The Council's Flood Risk Management Team would be able to provide advice on their requirements for information in support of the current application, including proposals for future maintenance access and responsibilities	Noted.	N/A
NS	The findings from work undertaken to date, including Phase 1 and Phase 2 peat survey and National Vegetation Classification survey, should be used to inform the iterative evolution of the layout and design of the proposed development. The final siting and design of the proposed development, how this will affect peatland and how compliance with the mitigation hierarchy detailed in NPF4 has been achieved must be fully described and assessed in the EIA Report.	As outlined in Table 3-1 the design iteration undertaken to date has avoided areas of deep peat where possible. Details on any further design iteration will be included within **Chapter 2 Site Selection and Design Iteration** of the EIA Report.	N/A
	The applicant should refer to our updated standard pre-application guidance and our specific guidance on *Advising on peatland, carbon-rich soils and priority peatland habitats in development management* for our standing advice on: ➢ What constitutes carbon-rich soil and priority peatland habitat, and when impacts may raise issues of national interest.	Noted.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	➢ Complying with the mitigation hierarchy set out in NPF4. ➢ Key principles to consider in relation to habitat management to deliver offsetting and biodiversity enhancement. In respect of the this, we would particularly highlight that our current recommendation to achieve peatland offsetting (i.e. compensation, rather than biodiversity enhancement) would be in the order of 1:10 (lost:restored). ➢ Information to include with the EIA Report, including that on habitat management proposals.		
	As part of the EIA submission, we would request that the applicant completes the template in Annex 1 of the guidance. If the Proposed Developments infrastructure locations (including a 250m buffer) meet the criteria in the template, we would also request that an additional map is provided showing these locations (e.g. Sphagnum species) in relation to the Proposed Development (if available, the separate provision of shape files showing the location of infrastructure, NVC communities and peat depths would also aid our assessment and would be welcomed).	Noted. This will be included with application submission.	N/A
	NS suggest that the key to Figure 10.5b: Bedrock Geology and Faults is checked for accuracy. Birk Knowes SSSI and land in the immediate vicinity lies within the Patrick Burn Formation. However, Figure 10.5b appears to indicate another classification for this area.	Noted.	N/A
SEPA	The EIA Report must contain a scaled plan of sensitivities, e.g. peat, GWDTE, proximity to watercourses, overlain with the Proposed Development.	Noted. These figures will be included within **Chapter 8 Hydrology, Geology and Hydrogeology** of the EIA Report.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	We would emphasise that Class 5 peat soil is also important as a carbon store. NPF4 Policy 5 applies to all peat and carbon rich soils, therefore avoidance in the first instance and thereafter minimisation of impact to all carbon rich soils must be demonstrated.	Noted.	N/A
	Where there is scope to do so, design amendments to move the 4 turbines newly positioned in the north-west of Dungavel Forest turbines onto shallower peat should be implemented to minimise peat disturbance as much as possible.	As outlined in **Table 3-1** the design iteration undertaken to date has avoided areas of deep peat where possible. Details on any further design iteration will be included within **Chapter 2 Site Selection and Design Iteration** of the EIA Report.	N/A
	The locations of turbines in the east and south of the Dungavel Forest area where the peat depths appear to be greater than 1 m should be reviewed.	As above.	N/A
	The locations of the borrow pits should be also reviewed to reduce peat depth affected – in particular the location to the east of the Dungavel Forest.	As outlined in **Table 3-1** the design iteration undertaken to date has avoided areas of deep peat where possible. This has included relocation of the borrow pits.	N/A
	'*Figure 3.3 Indicative Wind Layout*' shows the indicative location of access tracks. It will be helpful to have this overlaid on the peat depth mapping at the EIA stage. Where the track crosses deeper peat seeks to amend the layout to reduce the depth of peat affected, or adopt floating construction methods; for example, between T19 and T25, in the vicinity of T21 and of T23.	**Appendix 3** includes updated plans of the infrastructure overlain on the peat depth mapping.	The Applicant would welcome SEPAs comments on the latest Layout AY.
	SEPA recommend the developer considers widening the phase 2 peat probing to include the micrositing tolerance as this may be helpful in demonstrating that the impacts on peat have been minimised.	Additional Phase 2 peat probing has been undertaken in areas where the infrastructure has changed. This includes some areas of micrositing. However, due	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
		to the dense forested nature of the site it is not possible to peat probe a 10 m grid throughout the site and micrositing allowances.	
	The EIA report must include explanation of the rationale for the habitat management area site location and extent. The submission should also consider how to mitigate the effects in the habitat management area due to drainage and forestry on the underlying peat which is adjacent to and continuous with the habitat management area.	Noted. This will be considered in the outline HMP submitted with the application.	N/A
	The provided habitat mapping is sufficient for scoping stage; however SEPA expect this to be updated after felling has taken place and as additional information on likely groundwater dependency of wetlands becomes available. This must include further ecological detail in the habitat management area of Dungavel Forest and must include full coverage of the habitat management area to the west of the Netherwood southern development area.	Noted.	N/A
	The EIA report must include an outline peat management plan and an outline habitat management plan.	Noted. An outline PMP will be included as an appendix to **Chapter 8 Hydrology, Geology and Hydrogeology** of the EIA Report.	N/A
	The submission must include maps showing: ➢ All proposed temporary or permanent infrastructure overlain with all lochs and watercourses. ➢ all proposed upgraded, temporary and permanent infrastructure a be shown at an appropriate scale. This includes all tracks, excavations, buildings, borrow pits, pipelines, cabling, site compounds, laydown areas, storage areas and any other built elements. Existing	Noted. Will be included within the submission	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	built infrastructure must be re-used or upgraded where possible. ➢ A minimum buffer of 50 m around each loch or watercourse. If this buffer cannot be achieved each breach must be numbered on a plan with an associated photograph of the location, dimensions of the loch or watercourse and drawings of what is proposed in terms of engineering works. Measures should be put in place to protect any downstream sensitive receptors. ➢ peat depth survey showing peat probe locations and a plan showing interpolated peat depths. ➢ peatland condition mapping. ➢ National Vegetation Classification Survey (NVC) ➢ All Ground Water Dependent Terrestrial Ecosystems (GWDTEs) are outwith 100 m of excavations <1 m and 250 m from excavations >1 m. ➢ boundaries of where felling will take place and a description of what is proposed for this timber in accordance with '*Use of Trees Cleared to Facilitate Development on Afforested Land*' – Joint Guidance from SEPA, SNH and FCS.		
	A comparison of the environmental effects of alternative locations of infrastructure elements, such as tracks, may be required.	Noted. Consideration of alternatives will be included within **Chapter 2 Site Selection and Design Iteration** of the EIA Report.	N/A
	Crossings must be designed to accommodate the 0.5% Annual Exceedance Probability flows (with an appropriate allowance for climate change), or information provided to justify smaller structures. If it is considered the Proposed	Noted.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	Development could result in an increased risk of flooding to a nearby receptor then a Flood Risk Assessment (FRA) must be submitted.		
	The following information should also be submitted for each borrow pit: ➢ A map showing the location, size, depths and dimensions; ➢ A map showing any stocks of rock, overburden, soils and temporary and permanent infrastructure including tracks, buildings, oil storage, pipes and drainage, overlain with all lochs and watercourses to a distance of 250m. You need to demonstrate that a site specific proportionate buffer can be achieved. On this map, a site-specific buffer must be drawn around each loch or watercourse proportionate to the depth of excavations and at least 10m from access tracks; ➢ Sections and plans detailing how restoration will be progressed including the phasing, profiles, depths and types of material to be used.	Noted. A Borrow Pit Desktop Assessment will be provided as an appendix to **Chapter 8 Hydrology, Geology and Hydrogeology** of the EIA Report.	N/A
	A schedule of mitigation to include reference to best practice pollution prevention and construction techniques and regulatory requirements must be included with the EIA Report – setting out the daily responsibilities of an Ecological Clerk of Works (EcOW), how site inspections will be recorded and acted upon and proposals for a Planning Monitoring Enforcement Officer (PMO).	Noted. Mitigation will be outlined within each technical chapter of the EIA Report. An outline CEMP will also be included in the submission. **Chapter 14 Schedule of Environmental Commitments** will summaries all mitigation measures presented with the EIA.	N/A
ECU	Where borrow pits are proposed as a source of on-site aggregate they should be considered as part of the EIA process and included in the EIA report detailing information regarding their location, size and nature.	Noted. A Borrow Pit Desktop Assessment will be provided as an appendix to **Chapter 8 Hydrology, Geology and Hydrogeology** of the EIA Report.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	Ultimately, it would be necessary to provide details of the proposed depth of the excavation compared to the actual topography and water table, proposed drainage and settlement traps, turf and overburden removal and storage for reinstatement, and details of the proposed restoration profile. The impact of such facilities (including dust, blasting and impact on water) should be appraised as part of the overall impact of the working. Information should cover the requirements set out in '*PAN 50: Controlling the Environmental Effects of Surface Mineral Workings*'.		
The Coal Authority	Our records do not indicate the presence of any coal mining features at surface or shallow depth in the area identified above by the updated red line boundary.	Noted	N/A
	Further consideration of the potential risks posed by recorded coal mining features, on the site identified by the updated red line boundary, will not be necessary.	Confirm that this is scoped out of the EIA Report.	N/A
Scottish Water	There are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking Water Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed activity	Noted – a PWS assessment will be included with **Chapter 8: Geology, Peat, Hydrology & Hydrogeology**	N/A
	For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will not accept any surface water connections into our combined sewer system.	There are no anticipated connections to the local sewer system.	N/A

4.9 Traffic and Transport

The following comments were received as part of the updated EIA Scoping Opinion on traffic and access.

	Scoping Comment	Response to Consultee	Further EIA Consultation
EAC	The Planning Authority would advise that the traffic assessment should be based on a worst-case scenario which assumes 100% of construction materials such as stone requiring to be imported to site. Any expected reduction in stone importation due to the use of borrow pits can be reported within the EIA Report, along with the consequent effect this would have on traffic volumes.	Noted. This will be covered in **Chapter 11 Traffic and Transport** of the EIA Report.	N/A
	The EIA Report should identify potential sources of materials (e.g. stone quarries) if these are off-site and consider the impacts of those routes to site, including communities along those routes. Such assessment should also include cumulative impacts with other developments.	Noted. This will be covered in **Chapter 11 Traffic and Transport** of the EIA Report.	N/A
	The EIA Report should detail the port of entry and the delivery route for turbines and components to site. Transport Scotland may provide advice in respect of the trunk road network, whilst the Applicant is also encouraged to discuss traffic matters with the Council's Ayrshire Roads Alliance.	Noted. This will be covered in **Chapter 11 Traffic and Transport** of the EIA Report.	Further consultation will be undertaken with SLC and EAC on the scope of the transport assessment. Two access routes for abnormal loads will be assessed within the EIA as shown on **Figure 3**.
SLC	The B745 would not be accepted for use under any circumstances due to its condition and geometry; in some areas it is effectively single track. As such the B745 would need to be excluded from any potential 'Agreed Route'.	It is not proposed to utilise the B745 for any construction traffic.	N/A
	The Transport Assessment (TA) should include the following: ➢ Delivery route plans to be included in the EIA report for abnormal loads from the M74 to each development area. Routes for HGV movements should also be detailed. This will eventually be used to develop an	Noted. The transport assessment will includes these points and will be presented in **Chapter 11 Traffic and Transport** of the EIA Report.	Further consultation will be undertaken with SLC and EAC on the scope of the transport assessment. Two access routes for abnormal loads will be assessed within the EIA as shown on **Figure 3**.

	Scoping Comment	Response to Consultee	Further EIA Consultation
	'Agreed Route' plan for inclusion within planning agreements. ➢ An anticipated development programme to be included in the EIA, broken down to show monthly movements for HGV and abnormal loads, and in case of HGV movements this should be subdivided by construction activity e.g., timber extraction, stone delivery, concrete delivery, steel delivery, compound, cabling etc. For avoidance of doubt, this should include works for the Hydrogen facility, solar panels and battery storage works. This will inform the profile of trips and peak movements. ➢ Scenario to be included for importation of aggregates in the event that suitable borrow pits cannot be identified. Borrow pits and their estimated volumes should be clarified where such pits are expected to be used. Details of volumes/vehicle movements associated with any expected removal of surplus material are also required. ➢ An assessment of baseline traffic against anticipated trips for all construction vehicle movements at key locations along the route within South Lanarkshire. ➢ Impact on existing walking and cycling routes to be assessed. The applicant should seek advice from the Council's Access Development Officer (CAG@southlanarkshire.gov.uk). ➢ Swept path analysis to identify pinch points requiring road widening, overrun areas and/or alterations to street furniture as part of an Abnormal Load Route Assessment (ALRA). The applicant may wish to contact the Council's Bridges and Structures Section to verify		

	Scoping Comment	Response to Consultee	Further EIA Consultation
	whether any structures are affected by the route (james.gray@southlanarkshire.gov.uk).		
	A separate Scoping Agreement shall be required between SLC Roads and Traffic Consultant before any survey work is undertaken for the Transport Assessment. This will include agreement on survey locations, threshold levels, committed developments, sensitivity tests for nearby live windfarm sites etc., and traffic growth rates.	Traffic count and speed surveys were undertaken in June 2023. No further surveys are proposed.	N/A
	If the B743 is being accepted as an access for cars and small, transit sized vans, the proposed access onto the B743, which is subject to the national speed limit, should benefit from a 4.5metre by 215 metre visibility splay in both directions. It is acknowledged that vehicle speeds may be lower than the signed speed limit given the local characteristics of the road, which may allow for a reduction in the visibility splay requirements. The Council would, therefore, be willing to consider a reduction in the visibility splay where the applicant can demonstrate, by means of a continuous 7-day vehicle speed survey, that the 85th percentile speed, that is the speed at or below which 85% of motorists consider it safe to travel at with regards to the prevailing road conditions, is lower than the signed speed limit in force on this section of road.	The B743 is proposed for abnormal load access and construction vehicles. Visibility splays are to be investigated further.	Further consultation will be undertaken with SLC and EAC on the scope of the transport assessment. Two access routes for abnormal loads will be assessed within the EIA as shown on **Figure 3**.
	Separate vehicle speed survey points should be established on each approach at the limit of the anticipated visibility splay and not at the access itself. The two survey points may yield different results therefore visibility splays may be different in each direction.	Traffic count and speed surveys were undertaken in June 2023. No further surveys are proposed.	Further consultation will be undertaken with SLC and EAC on the scope of the transport assessment. Two access routes for abnormal loads will be assessed within the EIA as shown on **Figure 3**.
	Depending on the length of the visibility splay the applicant may also need to demonstrate how the splays can be achieved in the vertical plane considering physical	Noted. Visibility splays are to be investigated further.	N/A

	Scoping Comment	Response to Consultee	Further EIA Consultation
	characteristics such as neighbouring boundary features (walls/hedges/fences/steep verges). The applicant may need to undertake a topographical survey of the verge features and levels in both directions to help demonstrate what can be achieved.		
Transport Scotland	Updated guidance was issued by the Institute of Environmental Management and Assessment (IEMA) in July 2023, titled 'Environmental Assessment of Traffic and Movement'. This updated guidance should be used to inform the EIA.	Noted.	N/A
	A full abnormal loads assessment (ALA) assessing the route from the Port of Entry (PoE) to the site access, should be updated as necessary, and submitted as supporting information. The ALA must confirm: ➢ PoE for shipping of wind turbine components. ➢ Number and dimensions of abnormal loads and transporting vehicle, i.e., weight limits, length etc. ➢ All trunk roads to be used by abnormal load vehicles. ➢ Consider the horizontal and vertical alignment of the preferred route(s), defining locations where a detailed swept path assessment (SwPA) is required. SwPAs are required for turbine blades and turbine tower sections, and associated drawings must be provided. ➢ Key organisations to be consulted along the proposed routes. ➢ Initial consideration of: The maximum axle loading on structures, clearance heighs; roadworks or closures that could affect the passage of the loads;	Noted. An ALA will be provided for the two possible abnormal load routes as appendices to **Chapter 11 Traffic and Transport** of the EIA Report.	N/A

	Scoping Comment	Response to Consultee	Further EIA Consultation
	underground services; lay-by areas that can be utilised for temporary parking; and lay-bys that can be used to let traffic pass slow moving abnormal loads. ➢ Details of measures to mitigate the impacts of abnormal load movements. ➢ Drawings providing details of proposed mitigation measures. ➢ Geometry and visibility at access point(s) to / from trunk road. ➢ Abnormal Loads Management Plan introducing measures that could help reduce the impact of abnormal load convoys.		
	The impact assessment should include a calculation of increased traffic generation on the surrounding road network during construction of the wind farm, solar, BESS, substation, and associated infrastructure, based on material and staffing requirements.	Noted. This will be covered in **Chapter 11 Traffic and Transport** of the EIA Report. An outline CTMP will also be provided as an appendix.	N/A
	The impact assessment should include an assessment of the environmental effects of increased traffic generation on the surrounding road network that is likely to be used during construction.	Noted. Environmental effects of increased traffic during construction will be address within the EIA and oCEMP. An outline CTMP will also be provided as an appendix to **Chapter 11 Traffic and Transport** of the EIA Report.	N/A
	The impact assessment should include an assessment of the effects associated with increased traffic through local small settlements, including residential properties.	Noted. This will be covered in **Chapter 11 Traffic and Transport** of the EIA Report.	N/A
	The EIA chapter shall detail the potential number of daily, weekly, and total delivery numbers for the proposed development, providing confirmation of: estimated	Noted. This will be covered in **Chapter 11 Traffic and Transport** of the EIA Report.	N/A

	Scoping Comment	Response to Consultee	Further EIA Consultation
	construction employee trips, the number, size, and weight of construction deliveries, and the anticipated schedule for deliveries.	An outline CTMP will also be provided as an appendix.	
	Full details of volume / percentage of construction material required to be transported to the Proposed Development site must be provided, supported by appropriate justification. Transport Scotland would advise that a worst-case scenario shall be assessed	Noted. This will be covered in **Chapter 11 Traffic and Transport** of the EIA Report. An outline CTMP will also be provided as an appendix.	N/A
	Transport Scotland would advise that study area road links must be clearly defined, with the points beyond which the effects of development traffic would likely be diluted clearly specified. A plan should be provided to illustrate the study area extents and should consider flows on the M74(T).	Noted. This will be included in **Chapter 11 Traffic and Transport** of the EIA Report.	N/A
	Full details of the proposed borrow pits, including dimensions and estimated aggregate yield, should be provided in the EIA. In the event the aggregate yield of the borrow pits is not sufficient, the detailed construction programme must be updated.	Noted. This will be included in **Chapter 11 Traffic and Transport** of the EIA Report. An outline CTMP will also be provided as an appendix.	N/A
	A detailed construction programme must be provided, which sets out anticipated construction traffic volumes by month throughout the construction period. The maximum daily and hourly trip generation should be calculated, and details of construction staff trip generation should be provided.	Noted. This will be included in **Chapter 11 Traffic and Transport** of the EIA Report. An outline CTMP will also be provided as an appendix.	N/A
	The anticipated opening year of the proposed development must be confirmed in the EIA Report.	Noted. This will be included in **Chapter 11 Traffic and Transport** of the EIA Report.	N/A
	The proposed hours of operation for the Proposed Development during the construction phase should be confirmed in the EIA, including any proposals to restrict	Noted. This will be included in **Chapter 11 Traffic and Transport** of the EIA Report.	N/A

	Scoping Comment	Response to Consultee	Further EIA Consultation
	construction traffic movements on specific days or at specific times.	An outline CTMP will also be provided as an appendix.	
	The 2022 Scoping Report proposes the use of a low growth factor from the National Road Traffic Forecast (NRTF) dataset to factor flows observed on non-trunk roads to the year of construction and opening and a high growth NRTF factor for flows observed on trunk roads and motorways. A full justification for the use of these factors should be provided in the EIA.	Noted. This will be included in **Chapter 11 Traffic and Transport** of the EIA Report. An outline CTMP will also be provided as an appendix.	N/A
	Confirmation should be sought from the relevant Local Authority regarding committed developments that may need to be considered within the cumulative impact assessment. Full details of cumulative impacts should be set out, including a detailed programme indicating the worst-case combined trip generation and associated percentage impact relative to baseline traffic levels, both in terms of total traffic and the percentage increase in HGVs.	Noted. This will be included in **Chapter 11 Traffic and Transport** of the EIA Report.	Further consultation will be undertaken with EAC and SLC on other developments which should be considered in the cumulative transport assessment.
	Preparation of a Construction Traffic Management Plan would be appropriate in this instance, as a best practice measure, regardless of the outcomes of the assessment of effects undertaken, and accept that an outline CTMP, as part of the EIA, is appropriate.	Noted. An outline CTMP will be provided as an appendix to **Chapter 11 Traffic and Transport** of the EIA Report.	N/A
	An assessment of study area accident history is required and should include trunk road links within the assessment study area. Trunk road accident data must be requested from accidentdatarequests@transport.gov.scot. The extents of the accident assessment study area must be clearly defined in the traffic and transport assessment, with the end points of the study area specified. A plan should be	Noted. This will be included in **Chapter 11 Traffic and Transport** of the EIA Report.	N/A

	Scoping Comment	Response to Consultee	Further EIA Consultation
	provided to illustrate the locations of the accidents identified in the assessment and the associated severity. The assessment should identify whether any accident clusters are present within the study area and whether development traffic is likely to cause or exacerbate any road safety issues.		

4.10 Socio economics, Recreation and Tourism

The following comments were received as part of the updated EIA Scoping Opinion on Socio economics, Recreation and Tourism.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
EAC	The EIA Report should consider any strategies for long-term public access to the site for recreational uses during its operational lifetime, including any options for connections to be made with surrounding land and uses, to maximise the public access benefits	Details of public access within the Proposed Development site will be noted within **Chapter 3: Project Description** of the EIA Report	N/A
	Management of public access to the site during the construction period should also be detailed. It will be important to ensure that any recreational or tourist receptors which may face significant impacts as a result of landscape and visual impacts are considered.	Details of public access within the Proposed Development site will be noted within **Chapter 3: Project Description** of the EIA Report with potential effects of receptors outwith the site considered within **Chapter 5: Landscape and Visual** or the standalone **Socio Economic Impact Report** where appropriate.	N/A
	Core Paths and Rights of Way alongside any other tourism receptors within the area should be assessed, particularly where views of the elements of the proposed development are likely to be experienced from such routes / receptors.	These will be considered within **Chapter 5: Landscape and Visual** of the EIA Report and cross referenced within the standalone **Socio Economic Impact Report** where appropriate.	N/A

In line with the Sector Deal agreed in 2023, we propose to remove the Socio Economic Impact Assessment from within the EIA Report and **submit a Socio Economic Impact Report** as a standalone document as part of the application submission, unless otherwise requested by consultees.

4.11 Aviation and Radar

The following comments were received as part of the updated EIA Scoping Opinion on Aviation and Radar.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
EAC	It would be expected that every effort is made to reduce the impacts of visible aviation lighting as far as possible, particularly given the substantial increase in cumulative pressure/impacts from visible aviation lighting associated with large numbers of wind farm proposals / consents for turbines over 150 m in height.	The Applicant is proposing a reduced lighting scheme for the Proposed Development, subject to CAA approval. This would be for 8 of the 18 turbines to be fitted with visible lighting, as shown in **Figure 8**.	Consultees and the CAA will be consulted on the proposed lighting scheme.
MOD / DIO	In this case the Proposed Development falls within Tactical Training Area 20T (TTA 20T), an area within which fixed wing aircraft may operate to conduct low level flight training. The addition of turbines in this location has the potential to introduce a physical obstruction to low flying aircraft operating in the area.	Noted.	N/A
	The MOD require conditions are added to any consent issued requiring that the Proposed Development is fitted with aviation safety lighting and that sufficient data is submitted to ensure that structures can be accurately charted to allow deconfliction. As a minimum the MOD would require that the Proposed Development be fitted with MOD accredited aviation safety lighting in accordance with the Air Navigation Order 2016. It is likely that the CAA specified lighting will exceed that required by the MOD but to ensure the safeguarding of any low flying/rotary military aircraft, the MOD would request the wind farm is lit with no less than 25cd visible or infra-red (IR) lighting on perimeter turbines.	The Proposed Development will have aviation lighting to mark it as an en-route obstacle to low flying aircraft. The lighting requirements will be agreed with the CAA, with the lights meeting the requirements set out in the UK Air Navigation Order (ANO). It is anticipated that approximately eight turbines will be lit (see **Figure 8**), marking the Proposed Development periphery and the highest points.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
Edinburgh Airport	No turbine tower of any turbine may be erected, unless and until such time as the Scottish Ministers receive confirmation from the Airport Operator in writing that: (a) an Instrument Flight Procedures (IFP) Assessment has demonstrated that an IFP Scheme is not required; or (b) if an IFP Scheme is required such a scheme has been approved by the Airport Operator; and (c) if an IFP Scheme is required the CAA has evidenced its approval to the Airport Operator of the IFP Scheme (if such approval is required); and (d) if an IFP Scheme is required the scheme is accepted by NATS AIS for implementation through the AIRAC Cycle (or any successor publication) (where applicable) and is available for use by aircraft.	The Proposed Development site lies at a range of over 55 km from the nearest runway threshold. It is therefore anticipated that there will not be any IFP impacts at this range. A IFP assessment will be undertaken if required.	The Applicant will continue to engage with the airport operator.
Glasgow Airport	The scoping report submitted has been examined from an aerodrome safeguarding perspective and we would make the following observations: ➢ The site is outwith the obstacle limitation surfaces for Glasgow Airport; ➢ It is within the radar safeguarding area and will likely require technical mitigation; ➢ It is within the IFP safeguarding area and will likely impact. Detailed assessments will be required, and we would encourage the applicant to engage with us on this as early as possible.	It is anticipated that technical mitigation will need to be agreed. The Applicant is in correspondence with Glasgow Airport to progress this matter. In correspondence with Glasgow Airport, dated 23 August 2024, the Applicant's aviation lead has requested an IFP assessment for the Proposed Development be undertaken. The findings will be outlined within **Chapter 12 Aviation and Radar** of the EIA Report.	Ongoing consultation and commission of the IFP assessment with Glasgow Airport.
GPA	The safeguarding assessment process has identified potential adverse effects on the Airport's primary surveillance radar, Instrument Flight Procedures (IFPs) and VHF Communication Equipment. Those issues having been identified; the Airport conducted an Air Traffic Control	Noted.	There is ongoing consultation between the Applicant and GPA. Mitigation solutions have been identified and will be subject to assessment before being taken forward.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	(ATC) Operational Impact Assessment which is provided for in its Windfarm Safeguarding Assessment Process. Issues raised in the ATC Operational Impact Assessment included: ➢ The need for aviation lighting for obstacles above 150 m in height. ➢ Potential loss of VHF Ground to Air communications in the vicinity of the windfarm as a consequence of the large turbines. ➢ The potential for a full Airspace Change Process regarding changes to the Terminal Arrival Altitude, with a possible requirement to alter the heights of the RNP 21 Procedure.		
	Preliminary Radar Line of Sight (RLoS) analysis at the maximum turbine tip heights of 230 m for the Proposed Development indicated that there is a high likelihood that all of the proposed turbines will be visible to the Airport's primary radar(s). Further assessments will therefore be required to establish and confirm the actual number of turbines which will be visible to the Airport's primary radar(s).	It is anticipated that technical mitigation will need to be agreed. The Applicant is undertaking an aviation assessment (**Chapter 12** of the EIA Report) and is in ongoing communication with GPA regarding a mitigation solution.	There is ongoing consultation between the Applicant and GPA.
	The developer is fully engaged with the airport with the original IFP assessment identifying issues with the Air Traffic Control Safety Minimum Altitude Chart (ATCSMAC) and Minimum Safety Altitude (MSA) and the Terminal Arrival Altitude (TAA) associated with satellite based navigational procedures in the vicinity of the Proposed Development due to the height of the turbines (230 m). An updated and expanded assessment is required to explore the technical feasibility of a change to these levels,	The Applicant is currently in correspondence with GPA and has requested a further operational impact assessment alongside a variation to the ATCSMAC to address the concerns raised both to the ATCSMAC and TTA levels.	There is ongoing consultation between the Applicant and GPA. Mitigation solutions have been identified and will be subject to assessment before being taken forward.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	after which a further operational impact assessment (involving dialogue with our aviation customers and ATC units with whom the airspace is adjacent to) would be conducted. The Operational Impact Assessment has indicated that a change to the ATCSMAC would be required.		
	Further discussions are required with the Developer and our Approved Procedure Design Organisation (APDO) as to whether potential changes to TAA levels would be technically feasible and operationally acceptable (or otherwise), and also the extent of airspace change that may be required to implement any operational changes (if deemed acceptable)		
	Preliminary analysis indicates it will be necessary to conduct a detailed Technical Safeguarding Assessment in respect of the protection of the Airport's VHF Radio Navigation Equipment.	Noted.	There is ongoing consultation between the Applicant and GPA to address matters raised.
	The Airport is interested as to how the Developer intends to address the aviation warning obstruction lighting as required by UK CAA for obstacles greater than 150 m in height above local ground level in accordance with Article 222 of the UK Air Navigation Order (ANO) 2016. While solely a matter for the CAA to consider, should the final aviation lighting scheme consider the use of Aircraft Detection Lighting System (ADLS) dependent upon Electronic Conspicuity (EC) Equipment and be part of any proposed lighting scheme, GPA respectfully request that they are consulted with further.	The Proposed Development will have aviation lighting to mark it as an en-route obstacle to low flying aircraft. The lighting requirements will be agreed with the CAA, with the lights meeting the requirements set out in the UK Air Navigation Order (ANO). It is anticipated that approximately eight turbines will be lit (see **Figure 8**), marking the Proposed Development periphery and the highest points.	N/A
NATS	Predicted Impact on Lowther RADAR. The terrain screening available will not adequately attenuate the signal, and therefore likely to cause false primary plots to be	It is anticipated that technical mitigation will need to be agreed. The Applicant is undertaking an aviation assessment	There is ongoing consultation between the Applicant and NATS. Mitigation options have been identified and will be

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	generated. A reduction in the RADAR's probability of detection, for real aircraft, is also anticipated.	(**Chapter 12** of the EIA Report) and is in communication with NATS regarding a mitigation solution.	subject to assessment before being taken forward.
	Predicted Impact on Cumbernauld RADAR. The terrain screening available will not adequately attenuate the signal, and therefore likely to cause false primary plots to be generated. A reduction in the RADAR's probability of detection, for real aircraft, is also anticipated.		
	Predicted Impact on Glasgow RADAR. The terrain screening available will not adequately attenuate the signal, and therefore likely to cause false primary plots to be generated. A reduction in the RADAR's probability of detection, for real aircraft, is also anticipated.		

4.12 Forestry

The following comments were received as part of the updated EIA Scoping Opinion on Forestry.

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
EAC	Details of any compensatory forestry planting should be detailed within the EIA Report and accompanied by relevant figures to demonstrate areas of loss and compensatory planting as relevant.	An outline compensatory planting plan will be submitted alongside **Chapter 13 Forestry** of the EIA Report.	N/A
	Some details of species composition and design of any compensatory planting areas would be beneficial. It may be worth considering native broadleaf species if appropriate.	Noted. Further work to be undertaken on the compensatory planting plan. Native broadleaf species will be considered where appropriate.	N/A
	Any potential impacts on Ancient Woodland will also require to be considered, with a small area of ancient	The design of the Proposed Development is such that no direct impact on the ancient woodland is expected.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	woodland located within the southern part of the application site, to the north of Muirkirk.		
Scottish Forestry	Where woodland is identified for permanent removal, a commitment to undertake compensatory planting is required.	An outline compensatory planting plan will be submitted alongside **Chapter 13 Forestry** of the EIA Report.	The Applicant with consult with Scottish Forestry on the extent of felling proposed by the Proposed Development and the outline compensatory planting plan.
	A Compensatory Planting Plan (content subject to agreement with Scottish Forestry) is provided that details the area of permanent deforestation that will result from the Proposed Development. This plan should clearly articulate how that area has been calculated. The Compensatory Planting Plan must comply with the UK Forestry Standard and as a minimum include detail relating to species composition, design, cultivation and drainage, protection, deer management and ongoing maintenance requirements and monitoring		
	The area of land for which compensatory planting is proposed should be either under developer ownership or managed under a third party lease agreement of suitable timescale. This land should be capable of supporting woodland growth sufficient to result in the delivery of the required compensatory outcomes.		
	Any appointed clerk of works should have an ecological background and their remit should include the monitoring of the establishment of any compensatory planting.	Noted.	N/A
	The applicant should be aware that certain changes within the UK Forestry Standard become active within Scotland on 1st October 2024. Given likely time required to develop this project and associated forestry plans we advise that the applicant considers and where appropriate factors these changes into planning for forest management	Noted – these changes will be taken into consideration within the EIA Report.	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
SEPA	The submission must include a map with the boundaries of where felling will take place and a description of what is proposed for this timber in accordance with '*Use of Trees Cleared to Facilitate Development on Afforested Land*' – Joint Guidance from SEPA, SNH and FCS.	An indicative wind farm felling plan will be submitted alongside **Chapter 13 Forestry** of the EIA Report	N/A

4.13 Other Matters

The following comments were received as part of the updated EIA Scoping Opinion on Shadow Flicker.

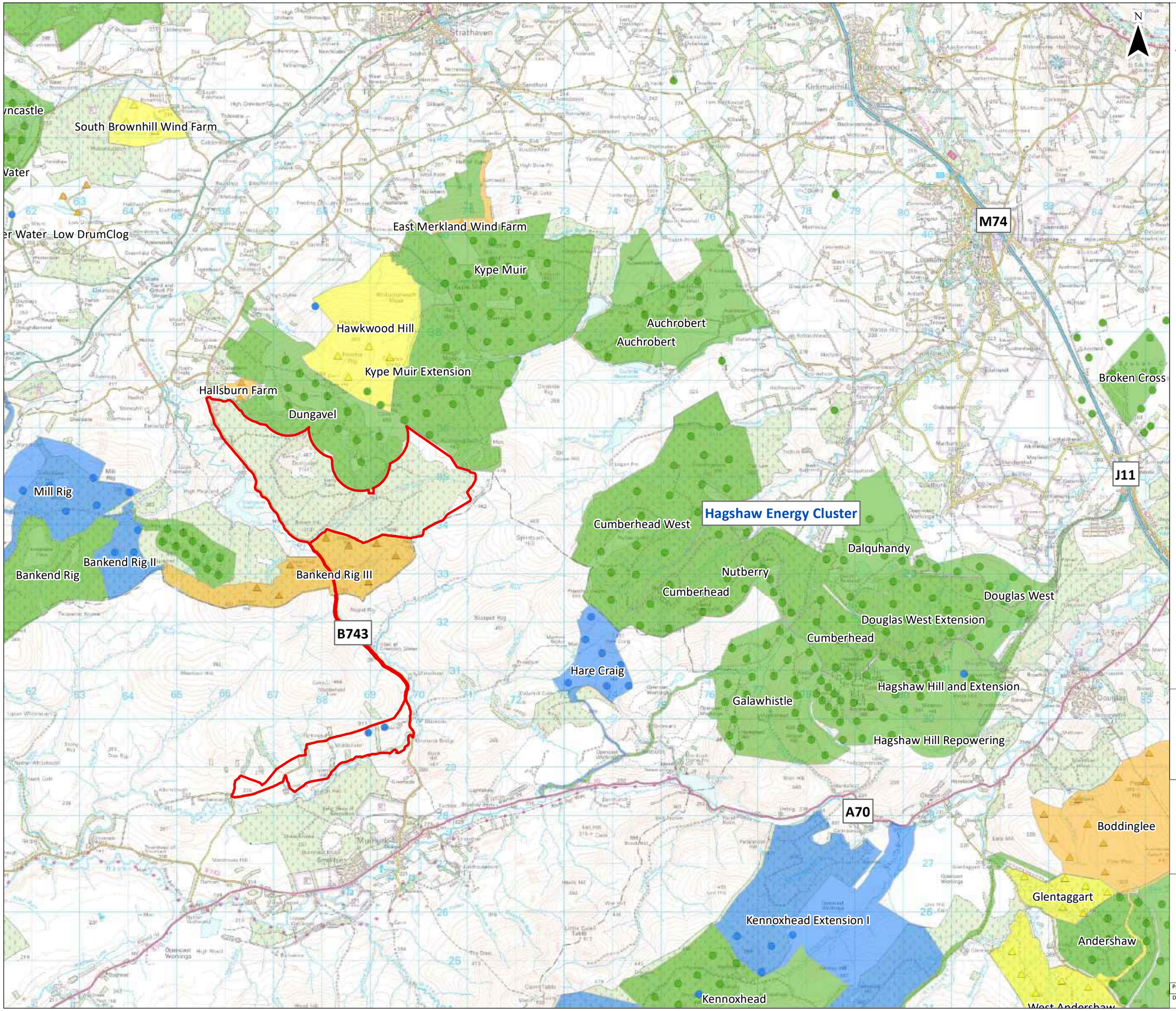
Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
Shadow Flicker			
EAC	As noted in the scoping report, there is no level of shadow flicker which is deemed to be acceptable set out in guidance within the country, and all shadow flicker will require to be mitigated. Although the scoping report mentions that anything above 30 hours will be considered significant, it remains the case that any shadow flicker will require to be mitigated.	Noted – the Applicant proposes that in order to minimise the potential shadow flicker effects and to mitigate potential exceedances of acceptable limits at any property, prior to the erection of the first turbine a written scheme (known as the 'Wind Farm Shadow Flicker Protocol') shall be submitted to and approved in writing by EAC and SLC. The protocol would be engaged if a founded shadow flicker complaint is received and investigations indicate that significant effects may occur in certain atmospheric conditions.	N/A
	The Planning Authority would note that the 10 rotor diameters' distance is a guide and does not guarantee that shadow flicker effects will not be experienced beyond this distance. As such, if there are properties which are beyond such a distance but not too distant, consideration should	When establishing the study area for the shadow flicker assessment, cognisance will be taken to any receptors close to the study area boundary and any factors that	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	be given as to the potential of shadow flicker on such properties.	may influence the shadow throw, such as topography.	
Glint and Glare			
EAC	It is difficult to agree if 1 km study area is sufficient or not without a ZTV to better understand the potential visibility of the solar arrays in the landscape. It may be that views could potentially be more widespread which would indicate a 2 km assessment area may be more appropriate. It is expected that the Applicant allows for a degree of flexibility on the assessment of glint and glare and consider the possibility of a wider study area as their project progresses and assessment materials such as ZTVs enable them to consider such impacts more clearly	Industry standards indicate that a 1 km buffer from the proposed panel area is appropriate for glint and glare effects on ground-based receptors. This reason for this that the significance of a reflection decreases with distance because the proportion of an observer's field of vision that is taken up by the reflecting area diminishes. Screening from terrain and vegetation is also more likely to reduce glint and glare impacts at longer distances. A combined ZTV is provided within **Appendix 1** for reference.	At design freeze the Applicants consultant will review the solar ZTV and consider whether an increased study area is appropriate for the glint and glare assessment.
Major Accidents and Disasters			
EAC	The Planning Authority consider it would be worthwhile to include a summary or table just to highlight each of the potential risks and provide a brief explanation as to why these are not deemed to be relevant or necessary of further detailed consideration within the EIA Report. For any risks which are deemed worthy of fuller assessment, this should be detailed in the relevant chapter of the EIA Report.	A tabulated list of potential risks will be included within **Chapter 4** of the EIA Report and the reasons for scoping out included.	N/A
Telecommunications			
JRC	This proposal is *cleared* with respect to radio link infrastructure operated by the local energy networks.	Noted	N/A

Consultee	Scoping Comment	Response to Consultee	Further EIA Consultation
	In the case of this proposed wind energy development, JRC does not foresee any potential problems based on known interference scenarios and the data you have provided. However, if any details of the wind farm change, particularly the disposition or scale of any turbine(s), it will be necessary to re-evaluate the proposal	The overall scale of the Proposed Development has reduced in size since the Scoping Update.	The Applicant will re-consult with JRC at design freeze to confirm the Proposed Development remains acceptable.
BT	We have studied the proposed windfarm development with respect to EMC and related problems to BT point-to-point microwave radio links. The conclusion is that the Project indicated should not cause interference to BT's current and presently planned radio network.	Noted	The Applicant will re-consult with BT at design freeze to confirm the Proposed Development remains acceptable.

If following design freeze and re-consultation there are no concerns raised by telecommunication operators it is proposed that **telecommunications is scoped out** of detailed assessment with in the EIA Report.

Figures



Legend

- Site Boundary

Cumulative Wind Development

- Wind Farm Operational / Under Construction
- Approved Wind Farm
- Wind Farm in Application
- Wind Farm in Scoping

0 0.95 1.9 2.85 3.8 Km

Scale 1:75,000 @ A3

British National Grid Coordinate System

HAGSHAW ENERGY CLUSTER WESTERN EXPANSION

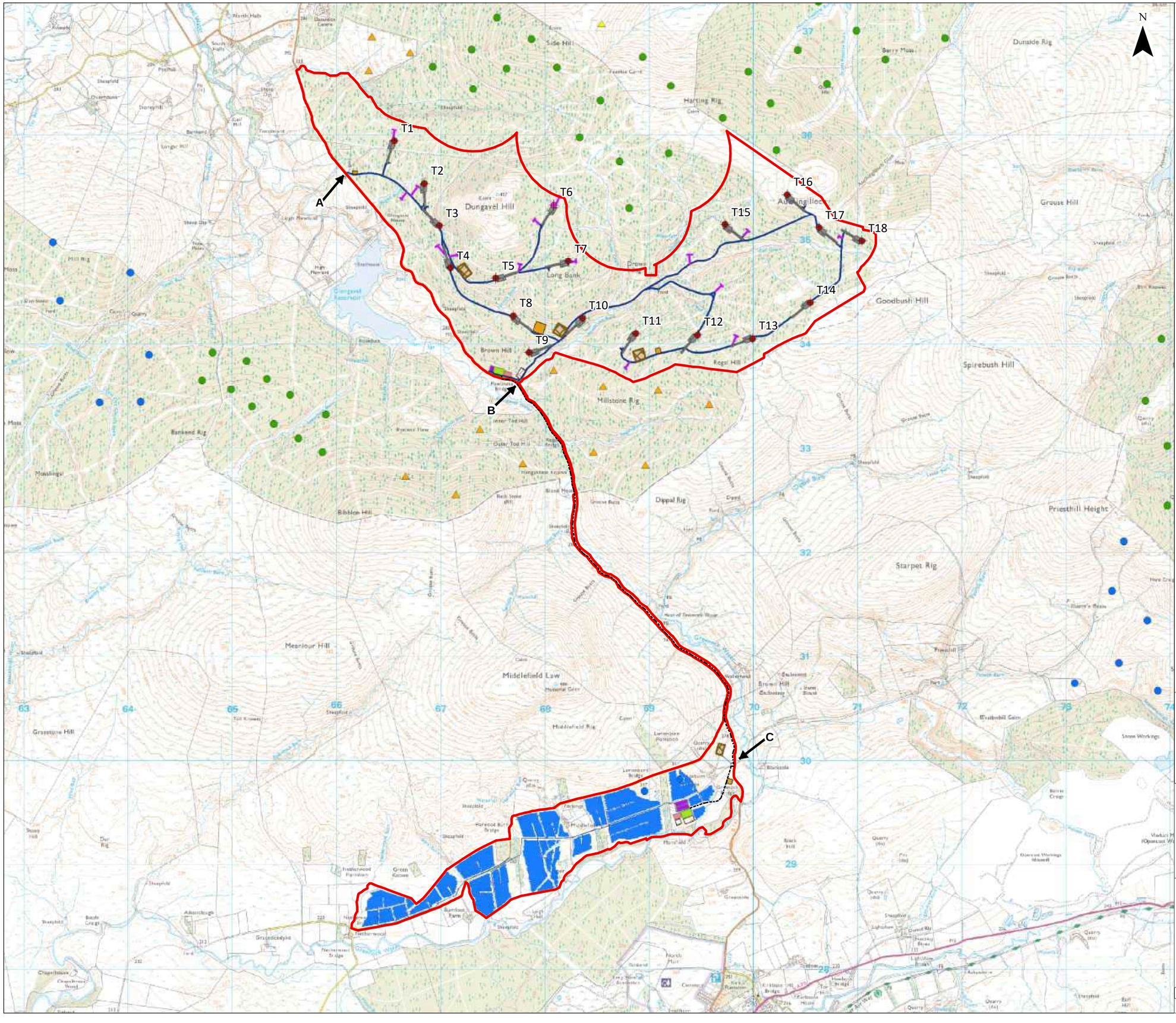
3R Energy

ITPENERGISED PART OF SLR

Hagshaw Energy Cluster - Western Expansion
Phase 1
Gatecheck 1 Report

Figure 1
Site Location and Cumulative Context

Project / Drwg Number:	4188/993				
Date: 22/10/2024	Drawn by: NH	Checked by: AH	Version: V1		



Legend

- Site Boundary
- Turbine Location (230m Tip Height)
- Turbine Location (200m Tip Height)
- Hardstands
- Turning Heads
- Access Tracks
- Construction Compounds
- Borrow Pits
- Forestry Spurs
- Solar Panels
- Solar Transformers
- 33kV Underground Cable
- SPEN Substation
- SPEN Temp compound
- Battery Energy Storage System
- Development Substation
- Access Points

Cumulative Wind Development

- Wind Farm Operational / Under Construction
- Approved Wind Farm
- Wind Farm in Application
- Wind Farm in Scoping

0 0.4 0.8 1.2 1.6 Km

Scale 1:35,000 @ A3

HAGSHAW ENERGY CLUSTER WESTERN EXPANSION

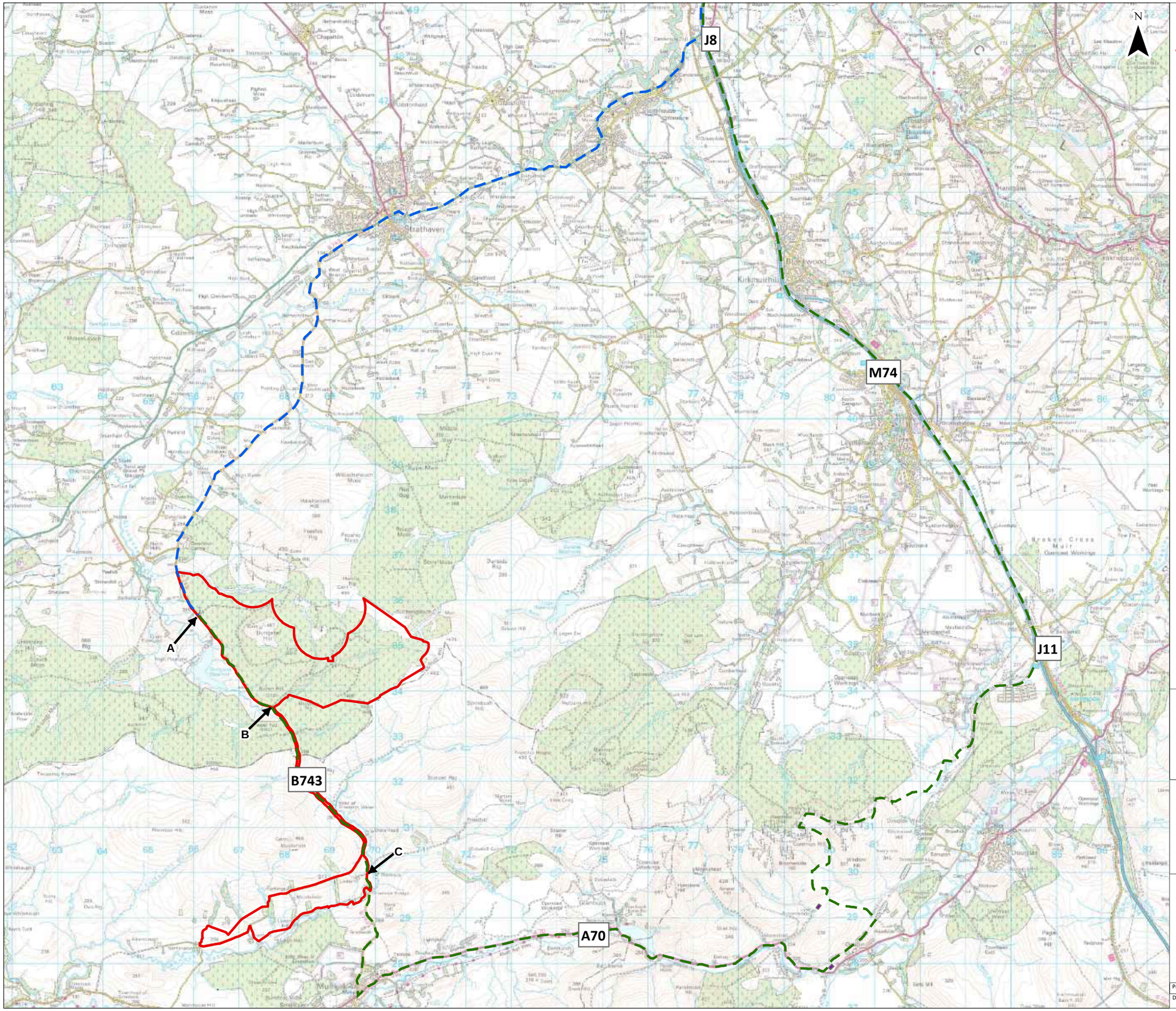
3R Energy

ITPENERGISED PART OF SLR

Hagshaw Energy Cluster - Western Expansion
Phase 1
Gatecheck 1 Report

Figure 2
Proposed Development Layout

Project / Drwg Number:	4188/993		
Date: 29/10/2024	Drawn by: NH	Checked by: AH	Version: V1



Legend

- Site Boundary
- Abnormal Load Access Route Option 1
- Abnormal Load Access Route Option 2
- Site Access Points

0 1 2 3 4 Km

Scale 1:80,000 @ A3

HAGSHAW ENERGY CLUSTER WESTERN EXPANSION

3R Energy

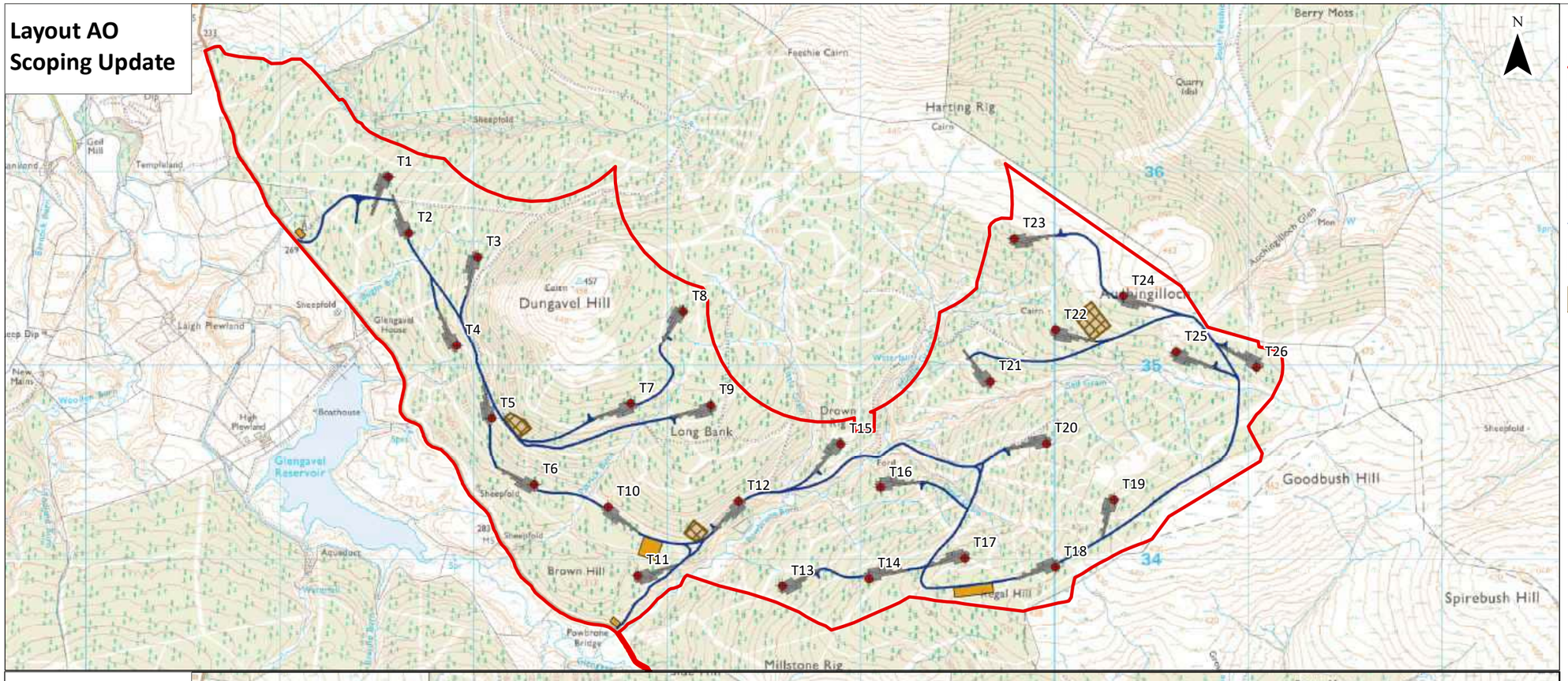
ITPENERGISED PART OF SLR

Hagshaw Energy Cluster - Western Expansion
Phase 1
Gatecheck 1 Report

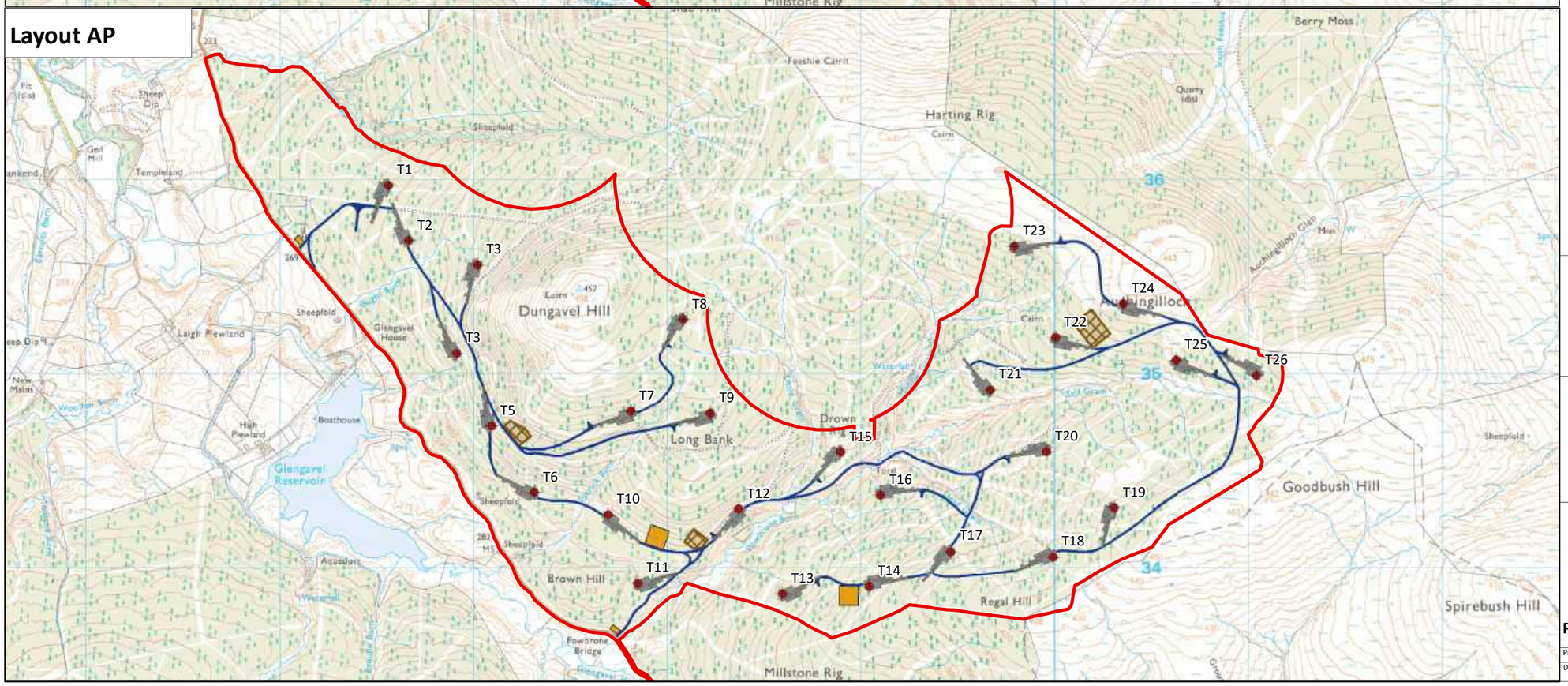
Figure 3
Proposed Abnormal Load Route Options

Project / Drwg Number:	4188/993				
Date: 30/10/2024	Drawn by: NH	Checked by: AH	Version: V1		

Layout AO
Scoping Update



Layout AP



Legend

- Site Boundary
- Turbine Location (230m Tip Height)
- Hardstands
- Turning Heads
- Access Tracks
- Construction Compounds
- Borrow Pits

0 0.3 0.6 0.9 1.2 Km

Scale 1:25,000 @ A3

British National Grid Coordinate System

HAGSHAW ENERGY CLUSTER WESTERN EXPANSION

3R Energy

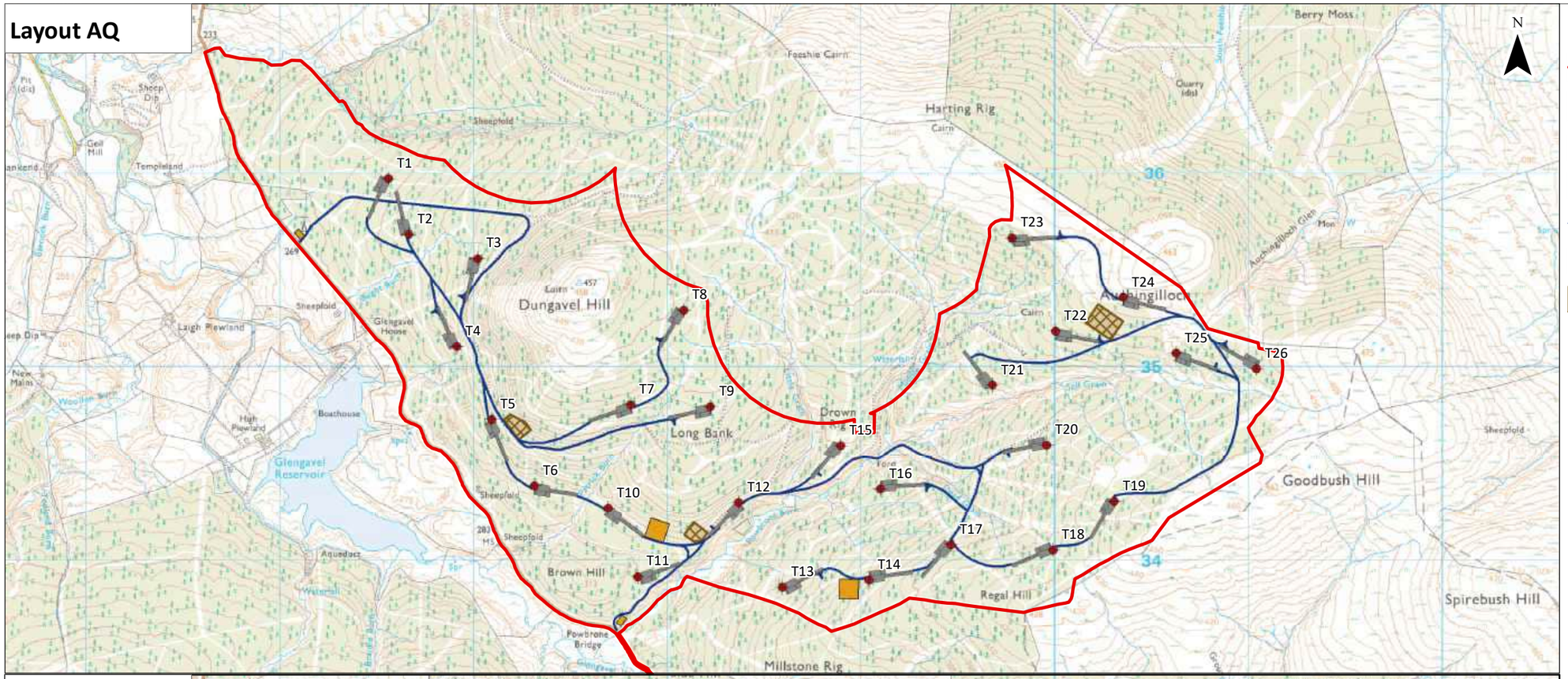
ITPENERGISED PART OF SLR

Hagshaw Energy Cluster - Western Expansion
Phase 1
Gatecheck 1 Report

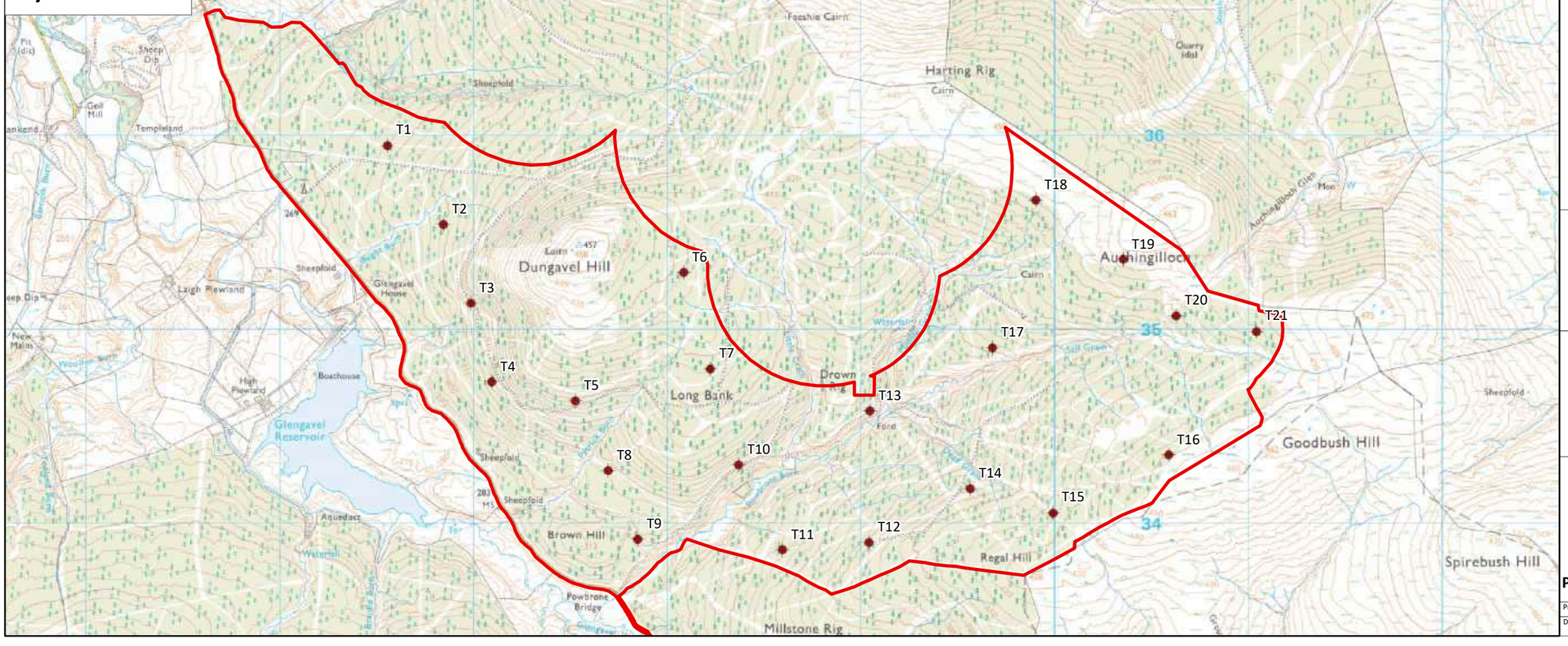
Figure 4
Proposed Development Layout AO & Layout AP

Project / Drwg Number:	4188/993		
Date: 22/10/2024	Drawn by: NH	Checked by: AH	Version: V1

Layout AQ



Layout AR



Legend

- Site Boundary
- Turbine Location (230m Tip Height)
- Hardstands
- Turning Heads
- Access Tracks
- Construction Compounds
- Borrow Pits

0 0.3 0.6 0.9 1.2 Km

Scale 1:25,000 @ A3

HAGSHAW ENERGY CLUSTER WESTERN EXPANSION

3R Energy

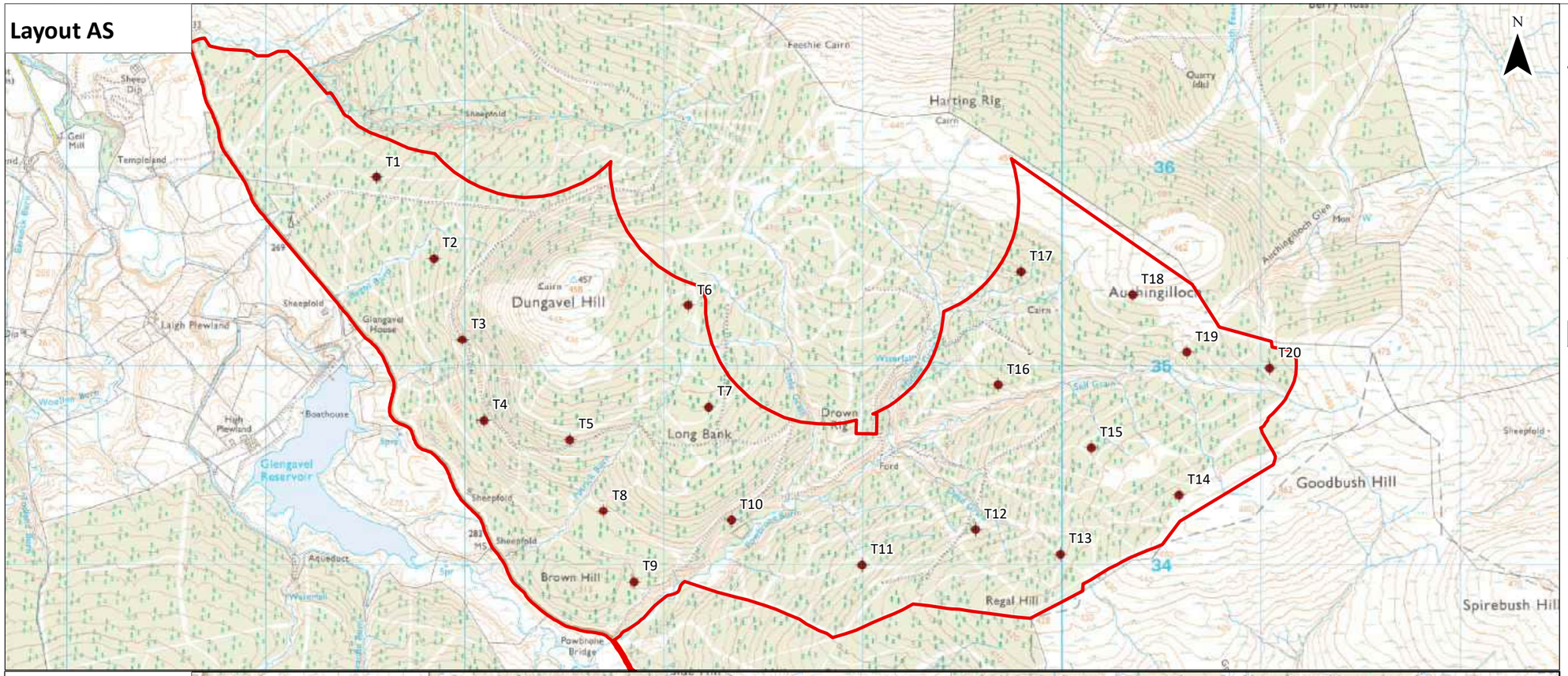
ITPENERGISED PART OF SLR

Hagshaw Energy Cluster - Western Expansion
Phase 1
Gatecheck 1 Report

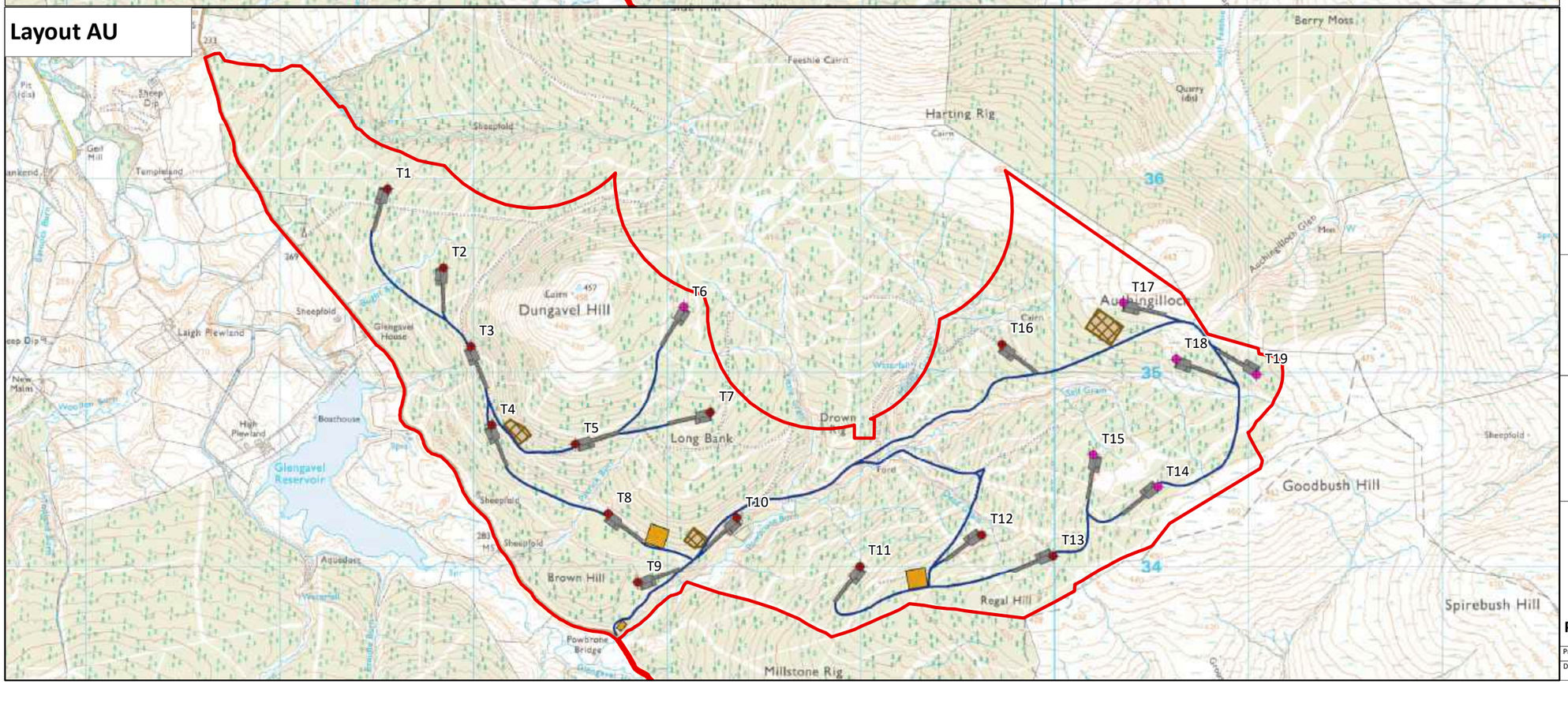
Figure 5
Proposed Development Layout AQ & Layout AR

Project / Drwg Number:	4188/993				
Date:	22/10/2024	Drawn by:	NH	Checked by:	AH	Version:	V1

Layout AS



Layout AU



Legend

- Site Boundary
- Turbine Location (230m Tip Height)
- Turbine Location (200m Tip Height)
- Hardstands
- Turning Heads
- Access Tracks
- Construction Compounds
- Borrow Pits

0 0.3 0.6 0.9 1.2 Km

Scale 1:24,347 @ A3

HAGSHAW ENERGY CLUSTER WESTERN EXPANSION

3R Energy

ITPENERGISED PART OF SLR

Hagshaw Energy Cluster - Western Expansion
Phase 1
Gatecheck 1 Report

Figure 6
Proposed Development Layout AS & Layout AU

Project / Drwg Number:	4188/993		
Date: 22/10/2024	Drawn by: NH	Checked by: AH	Version: V1

Layout AV

Layout AX

N

Legend

- Site Boundary
- Turbine Location (230m Tip Height)
- Turbine Location (200m Tip Height)
- Hardstands
- Turning Heads
- Access Tracks
- Construction Compounds
- Borrow Pits

0 0.3 0.6 0.9 1.2 Km

Scale 1:25,000 @ A3

HAGSHAW ENERGY CLUSTER WESTERN EXPANSION

3R Energy

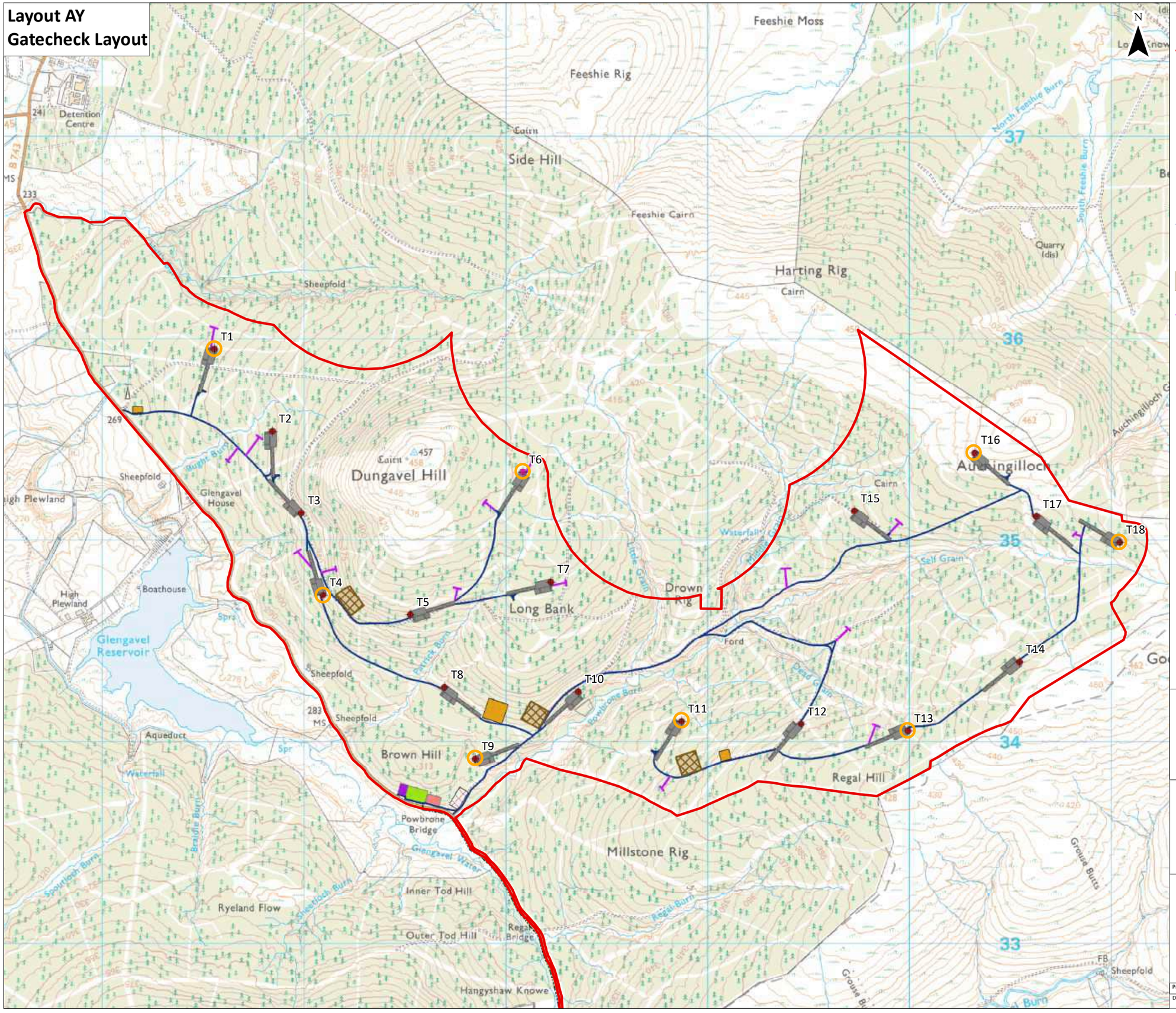
ITPENERGISED PART OF SLR

Hagshaw Energy Cluster - Western Expansion
Phase 1
Gatecheck 1 Report

Figure 7
Proposed Development Layout AV & Layout AX

Project / Drwg Number:	4188/993		
Date: 22/10/2024	Drawn by: NH	Checked by: AH	Version: V1

Layout AY
Gatecheck Layout



Legend

- Site Boundary
- Turbine Location (230m Tip Height)
- Turbine Location (200m Tip Height)
- Turbine fitted with visible aviation lighting
- Hardstands
- Turning Heads
- Access Tracks
- Construction Compounds
- Borrow Pits
- Forestry Spurs
- SPEN Substation
- SPEN Temp compound
- Battery Energy Storage System
- Development Substation

0 0.2 0.4 0.6 0.8 Km

Scale 1:18,000 @ A3

British National Grid Coordinate System

HAGSHAW ENERGY CLUSTER WESTERN EXPANSION
3R Energy
ITPENERGISED PART OF SLR

Hagshaw Energy Cluster - Western Expansion
Phase 1
Gatecheck 1 Report

Figure 8
Proposed Development Layout AY

Project / Drwg Number:	4188/993			
Date: 29/10/2024	Drawn by: NH	Checked by: AH	Version: V1	

Legend

- Site Boundary
- Turbine Location (230m Tip Height)
- Turbine Location (200m Tip Height)
- Hardstands
- Turning Heads
- Access Tracks
- Construction Compounds
- Borrow Pits
- Forestry Spurs
- SPEN Substation
- SPEN Temp compound
- Battery Energy Storage System
- Development Substation

Cumulative Wind Development

- Wind Farm Operational / Under Construction
- Approved Wind Farm
- Wind Farm in Application
- Wind Farm in Scoping

Layout Constraints

- PWS and 100m Buffer
- Dungavel WF HMP
- Kype Muir Ext HMP
- SPA Buffer (100m)
- Road Topple Buffer (260m)
- Protected Species sign
- Heritage Constraint
- Dungavel Hill Carin 500m Buffer
- Watercourse and 50m Buffer
- Residential Property and 500m Buffer

Peat Depth (m)

- 0.5 - 0.99
- 0.99 - 1.49
- 1.490000001 - 1.99
- 1.990000001 - 2.49
- 2.490000001 - 2.99
- 2.990000001 - 3.49
- 3.490000001 - 6.815447807

0 0.25 0.5 0.75 1 Km

Scale 1:22,000 @ A3

HAGSHAW ENERGY CLUSTER WESTERN EXPANSION

3R Energy

ITPENERGISED PART OF SLR

Hagshaw Energy Cluster - Western Expansion
Phase 1
Gatecheck 1 Report

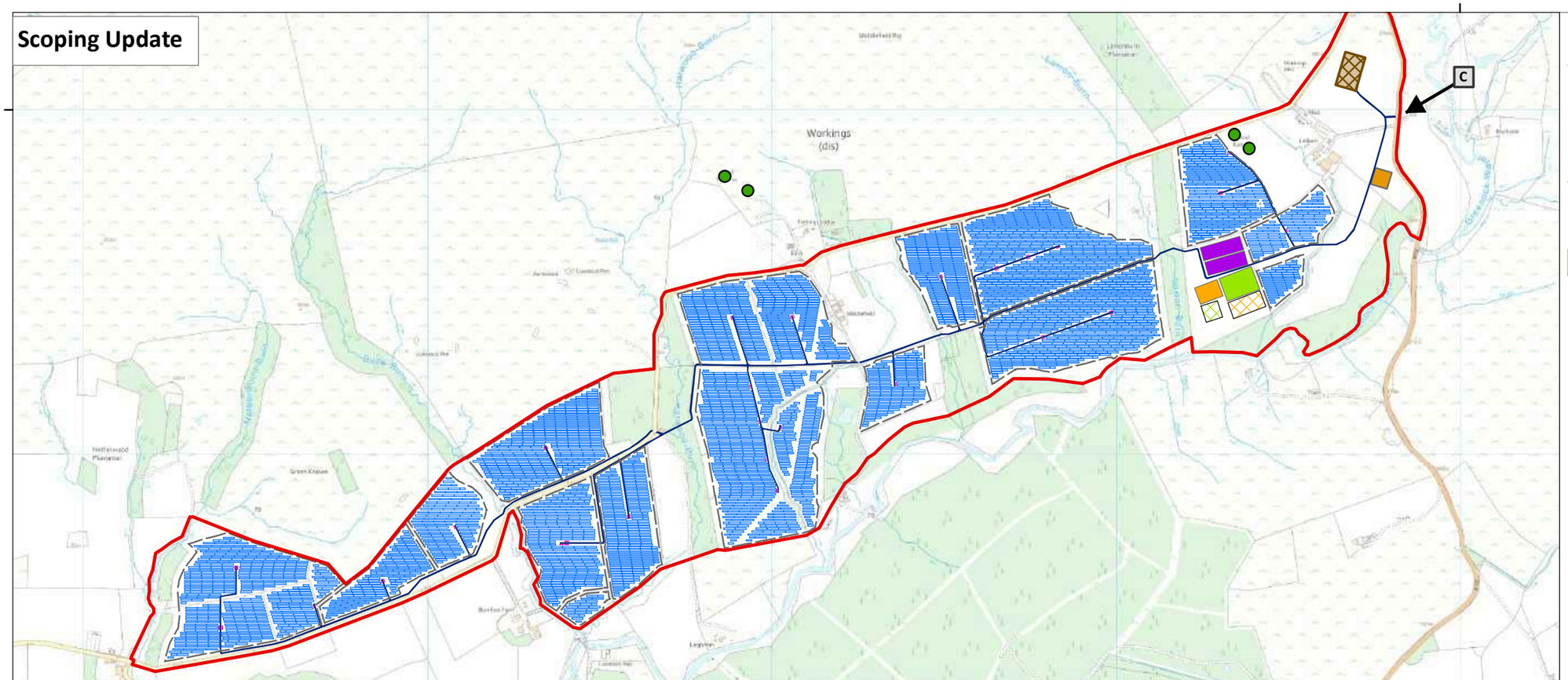
Figure 9
Layout AY and Constraints

Project / Drwg Number:	4188/993		
Date: 30/10/2024	Drawn by: NH	Checked by: AH	Version: V1

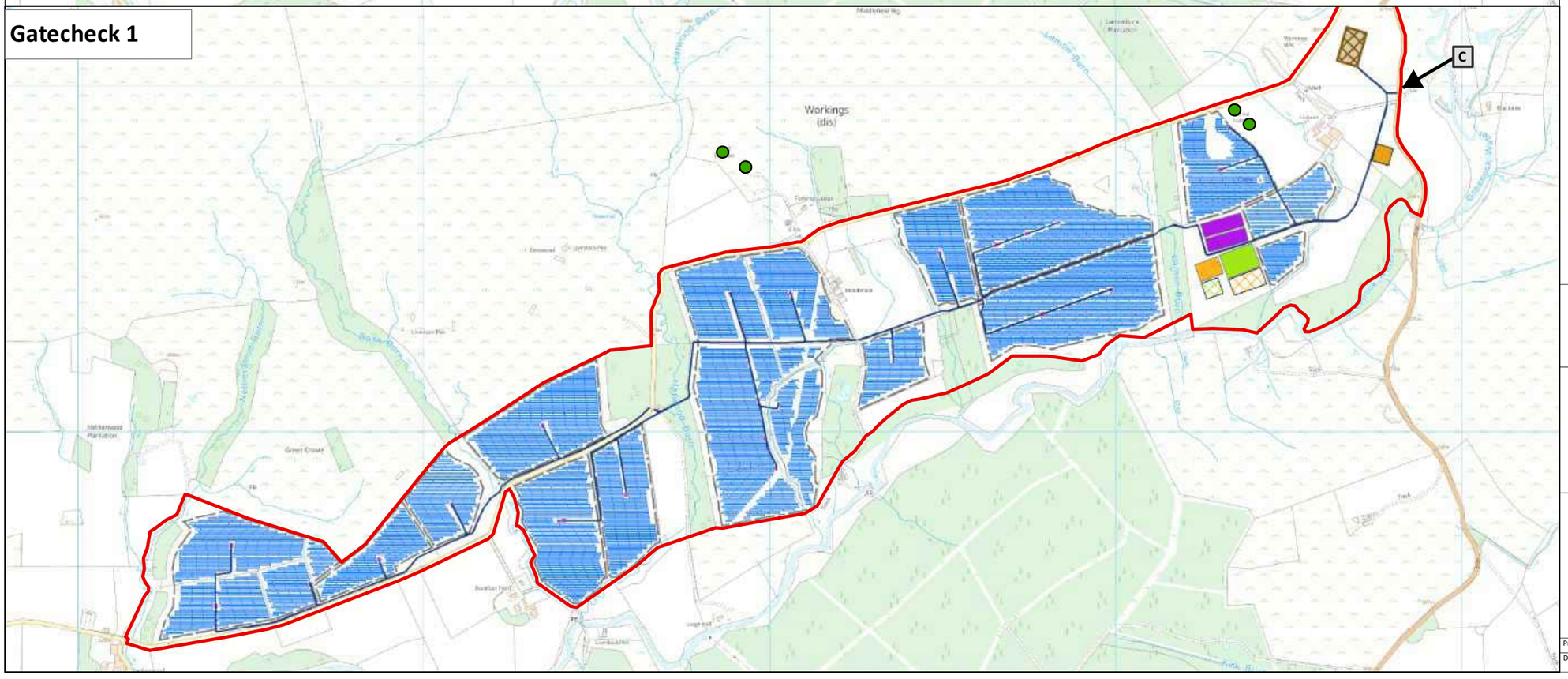
270000

630000

Scoping Update



Gatecheck 1



KEY

- Site Boundary
- Solar Panels
- Solar Transformers
- Solar Access Track
- Solar Fences
- Solar Borrow Pit
- Battery Energy Storage System (BESS)
- SPEN Substation
- SPEN Temporary Compound
- Development Substation
- Development Temporary Compound
- Operational Wind Turbine
- Access Point C off B743

0 0.25 0.5 0.75 km

Scale 1:14,000 @ A3

British National Grid Coordinate System

3R Energy

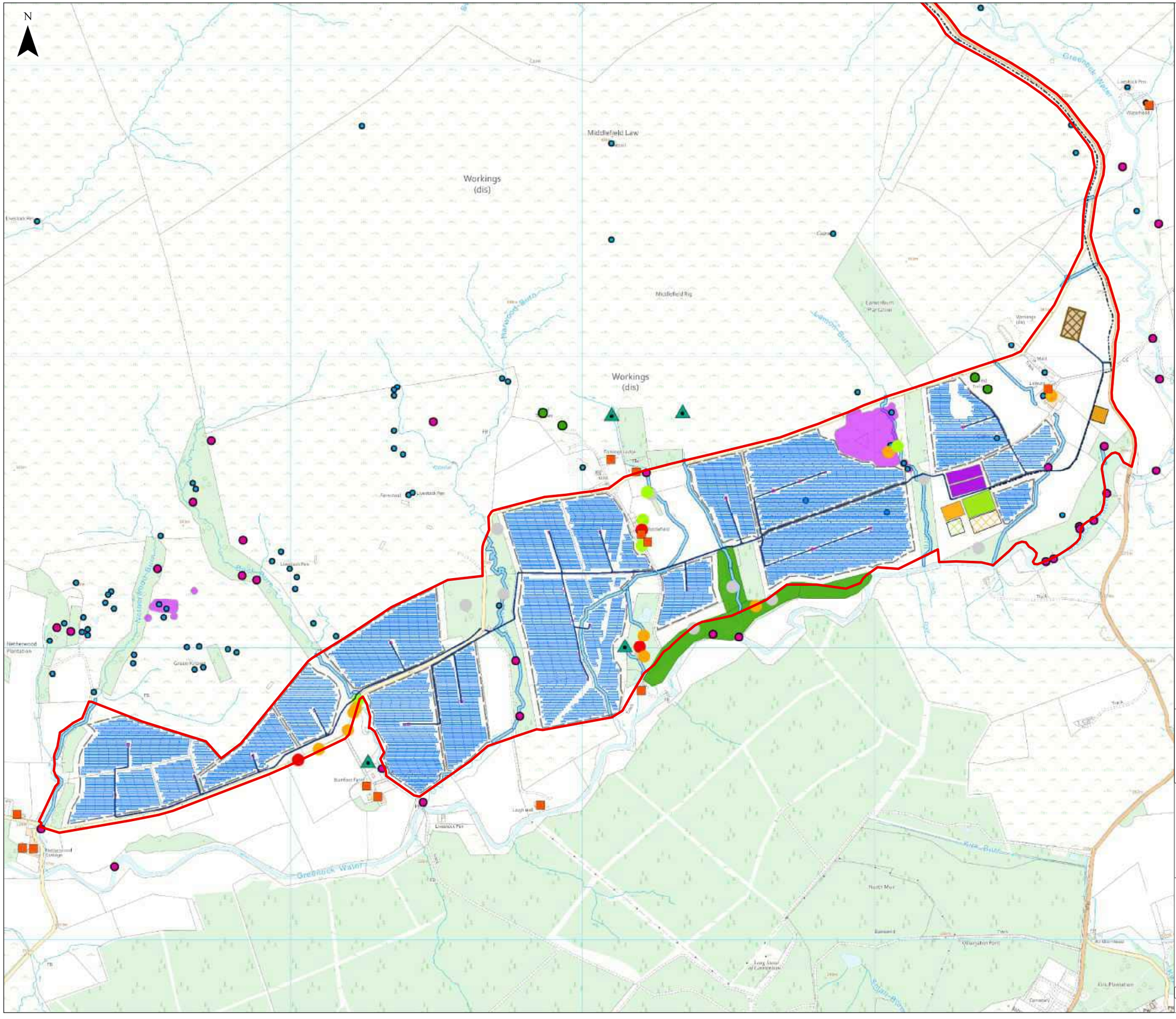
HAGSHAW ENERGY CLUSTER WESTERN EXPANSION

ITPENERGISED PART OF SLR

Hagshaw Energy Cluster - Western Expansion
Phase 1
Gatecheck 1 Report

Figure 10
Solar Layout Scoping Update & Gatecheck

Project / Drwg Number:	4188		
Date: 22/10/2024	Drawn by: NH	Checked by: AH	Version: V1



Legend

- Site Boundary
- Solar Panels
- Solar Transformers
- Solar Access Track
- Solar Fences
- Solar Borrow Pit
- Battery Energy Storage System (BESS)
- SPEN Substation
- SPEN Temporary Compound
- Development Substation
- Development Temporary Compound

Layout Constraints

- Operational Turbine
- Residential Property
- Private Water Supply
- Heritage Constraints
- 5m Watercourse Buffer
- Ancient Woodland Inventory
- Protected Species sign
- Heritage Constraint

Potential Roost Feature (PRF)

- PRF - High
- PRF - Moderate
- PRF - Low
- PRF - Negligible

0 0.15 0.3 0.45 0.6 Km

Scale 1:12,500 @ A3

British National Grid Coordinate System

HAGSHAW ENERGY CLUSTER WESTERN EXPANSION

3R Energy

ITPENERGISED PART OF SLR

Hagshaw Energy Cluster - Western Expansion
Phase 1
Gatecheck 1 Report

Figure 11
Solar Layout and Constraints

Project / Drwg Number:	4188/993				
Date: 22/10/2024	Drawn by: NH	Checked by: AH	Version: V1		

Appendices

Appendix 1 - Proposed LVIA Viewpoints and Updated Combined ZTV

Table A1 – Proposed Viewpoint (VP) Locations

VP Number	Location	OS Grid Reference	Night-time Visualisation	Visibility of Solar Development	Cultural Heritage VP
1	Drumclog	263992, 638834	x		
2	Victory Park, Muirkirk	269388, 627320			
3	River Ayr Way, Muirkirk	269859, 626671		x	
4	Cairn Table	272410, 624235		x	x
5	A70, Nether Wellwood	264483, 625095		x	
6	B743 (east of Nethershield))	258726, 626946	x	x	
7	B705 (Auchlinleck)	255098, 622594			
8	Loudoun Hill	260869, 637928			x
9	A71, bridge crossing Calder Water	266379, 641900	x		
10	Strathaven War Memorial	270448, 644635			x
11	Minor road south-west of Lesmahagow	279097, 638710			
12	Black Hill	283198, 643552			
13	A70 Rigside	287708, 635192			
14	Tinto Hill	295316, 634372			
15	Auchensaugh hill	285330, 627198			

Viewpoint	Location	Day/Night
1	Drumclog	Day & Night
2	Victory Park, Muirkirk	Day
3	River Ayr Way, Muirkirk	Day
4	Cairn Table	Day
5	Nether Wellwood (A70)	Day
6	B743 (east of Nethershield))	Day & Night
7	B705 (Auchlinleck)	Day
8	Loudoun Hill	Day
9	A71, bridge crossing Calder Water	Day & Night
10	Strathaven War Memorial	Day
11	Minor road south-west of Lesmahagow	Day
12	Black Hill	Day
13	A70 Rigside	Day
14	Tinto Hill	Day
15	Auchensaugh hill	Day

KEY

- Site Boundary
- Study Area 35 km
- Proposed Turbines
- Solar Development Area
- Solar Substation/BESS
- Dungavel Substation/BESS

Proposed LVIA Viewpoints

- Day
- Day & Night
- Local Authority Boundary

Cumulative Zone of Theoretical Visibility

- Wind turbine visibility only
- Solar visibility only
- Combined wind and solar visibility
- Solar substation/BESS visibility only
- Combined wind and solar substation/BESS visibility
- Combined solar and solar substation/BESS visibility
- Combined wind, solar and solar subtation/BESS visibility
- Combined wind and Dungavel substation/BESS visibility
- Combined wind, solar and Dungavel substation/BESS visibility
- Combined wind, solar substation/BESS and Dungavel substation/BESS visibility
- Combined wind, solar, solar substation/BESS & Dungavel substation/BESS visibility

0 5 10 km

Scale 1:280000 @ A3

This CZTV has been run with all turbines at 230m to blade tip (except T6 which is 200m), solar panels at 3m and a maximum 7m height for the substations/BESS to illustrate combined visibility. It has been run using OS Terrain 50 height data and does not account for the screening provided by intervening buildings and woodland.

Hagshaw Energy Cluster - Western Expansion Phase I - Gatecheck October 2024

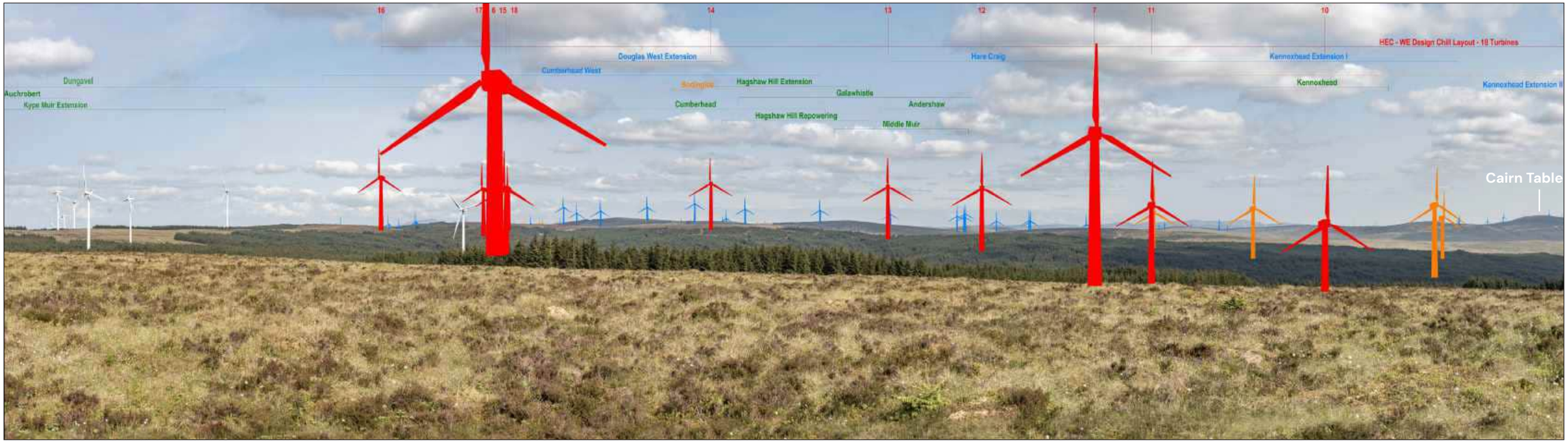
Figure 1
Cumulative Zone of Theoretical Visiblity to 35 km with Viewpoints

Project / Drwg Number:	4188/993				
Date:	10/10/2024	Drawn by:	DG	Checked by:	DT	Version:	V1

Appendix 2 - Dungavel Hill Cairn 360-degree Photowires

Dungavel Hill – 360 Degree Photowires

Sheet A – 90 Degrees Cylindrical Projection



Operational wind farms illustrated with a green umbrella / Consented/Under Construction wind farms illustrated with blue turbines and umbrellas / In Planning wind farms illustrated with orange turbines and umbrellas

Coordinate - 267517,635395

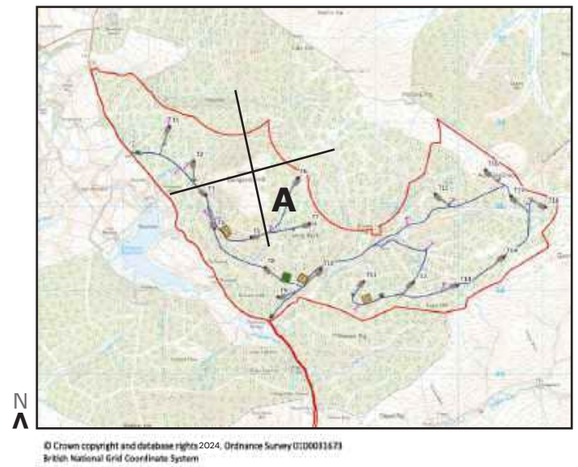
AOD - 454m

Date and time of photography taken - 22.05.2023/16:20

Turbine Parameters: All turbines to be 230m tip height with the exception of T6 which will be 200m.

HEC-WE (Phase 1)
Gatecheck Layout AY

NOTE: Visuals have been produced as photowires and do not account for the screening effect of intervening landscape elements.

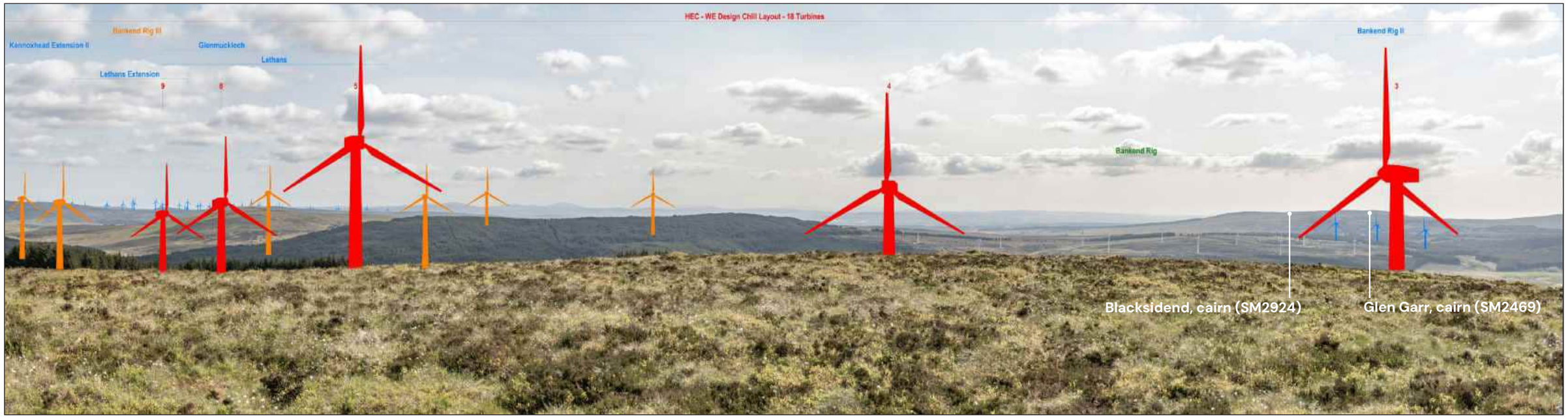


P21-2921

HEC-WE (Phase 1) Gatecheck Layout AY - 18 Turbines

Dungavel Hill - 360 Degree Photowires

Sheet B - 90 Degrees Cylindrical Projection



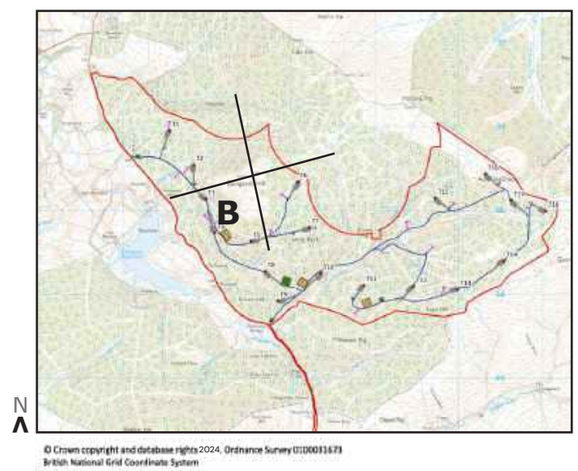
Operational wind farms illustrated with a green umbrella / Consented/Under Construction wind farms illustrated with blue turbines and umbrellas / In Planning wind farms illustrated with orange turbines and umbrellas

Coordinate - 267517,635395

AOD - 454m

Date and time of photography taken - 22.05.2023/16:20

Turbine Parameters: All turbines to be 230m tip height with the exception of T6 which will be 200m.



NOTE: Visuals have been produced as photowires and do not account for the screening effect of intervening landscape elements.

P21-2921

HEC-WE (Phase 1) Gatecheck Layout AY - 18 Turbines

Dungavel Hill - 360 Degree Photowires

Sheet C - 90 Degrees Cylindrical Projection

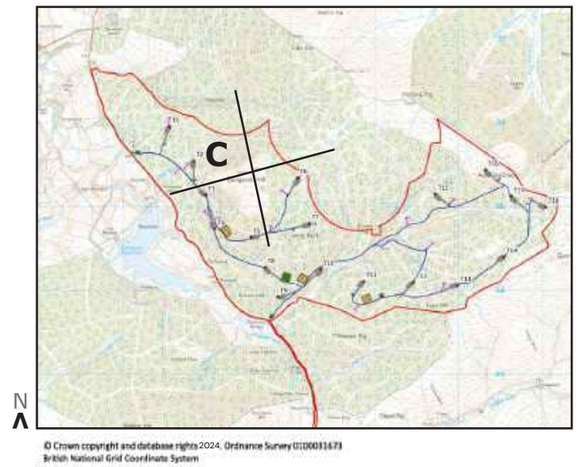
Operational wind farms illustrated with a green umbrella / Consented/Under Construction wind farms illustrated with blue turbines and umbrellas / In Planning wind farms illustrated with orange turbines and umbrellas

Coordinate - 267517,635395

AOD - 454m

Date and time of photography taken - 22.05.2023/16:20

Turbine Parameters: All turbines to be 230m tip height with the exception of T6 which will be 200m.



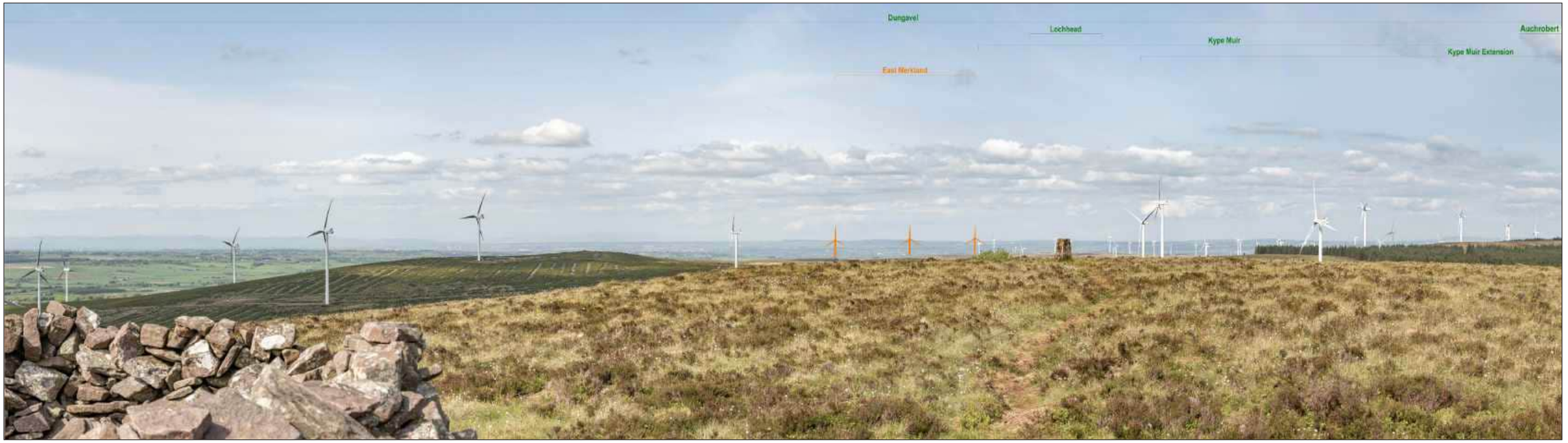
NOTE: Visuals have been produced as photowires and do not account for the screening effect of intervening landscape elements.

P21-2921

HEC-WE (Phase 1) Gatecheck Layout AY - 18 Turbines

Dungavel Hill - 360 Degree Photowires

Sheet D - 90 Degrees Cylindrical Projection

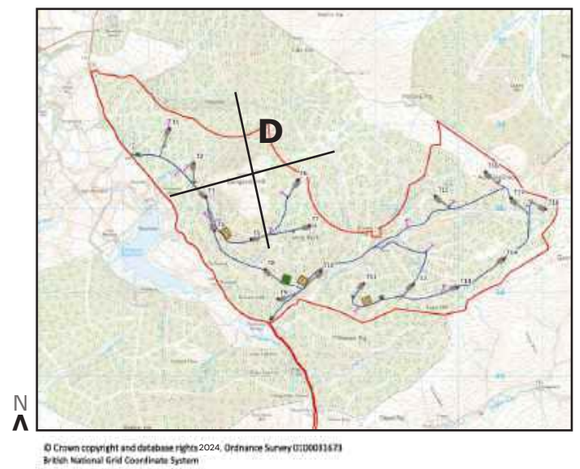


Operational wind farms illustrated with a green umbrella / Consented/Under Construction wind farms illustrated with blue turbines and umbrellas / In Planning wind farms illustrated with orange turbines and umbrellas

Coordinate - 267517,635395

AOD - 454m

Date and time of photography taken - 22.05.2023/16:20

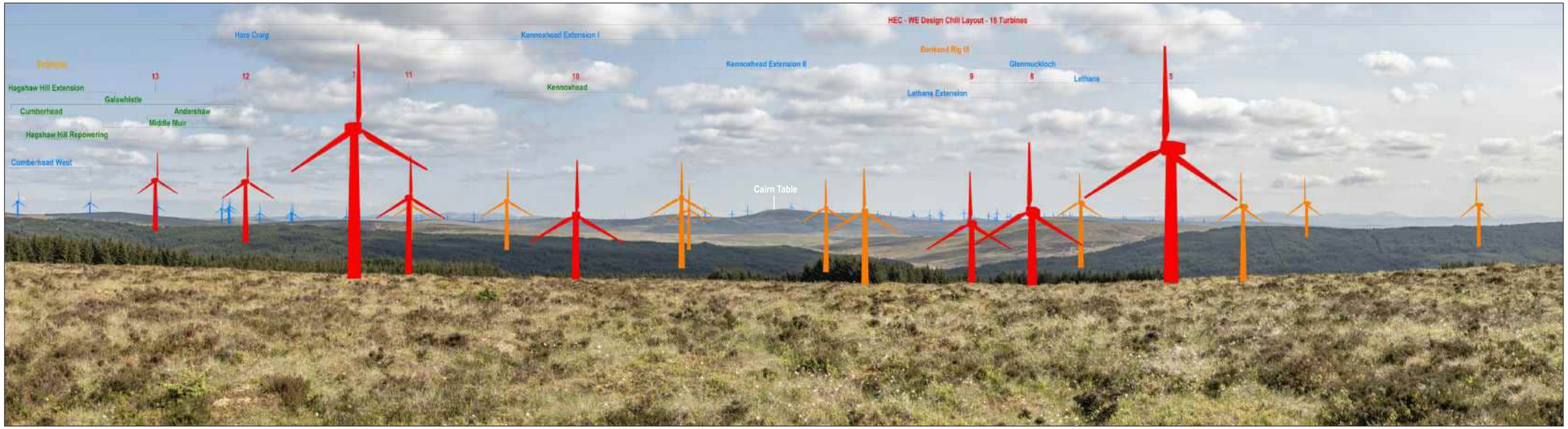


P21-2921

HEC-WE (Phase 1) Gatecheck Layout AY– **18**
Turbines

Dungavel Hill - 90 Degree Photowire with Cairn Table centred in the view

Sheet E - 90 Degrees Cylindrical Projection (note: The proposed HEC - WE Design Chill Layout – 19 Turbines extends beyond the presented 90 degree angle of view)



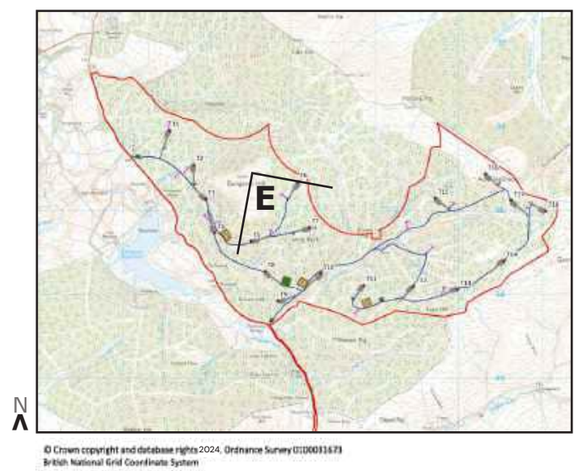
Operational wind farms illustrated with a green umbrella / Consented/Under Construction wind farms illustrated with blue turbines and umbrellas / In Planning wind farms illustrated with orange turbines and umbrellas

Coordinate - 267517,635395

AOD - 454m

Date and time of photography taken - 22.05.2023/16:20

Turbine Parameters: All turbines to be 230m tip height with the exception of T6 which will be 200m.



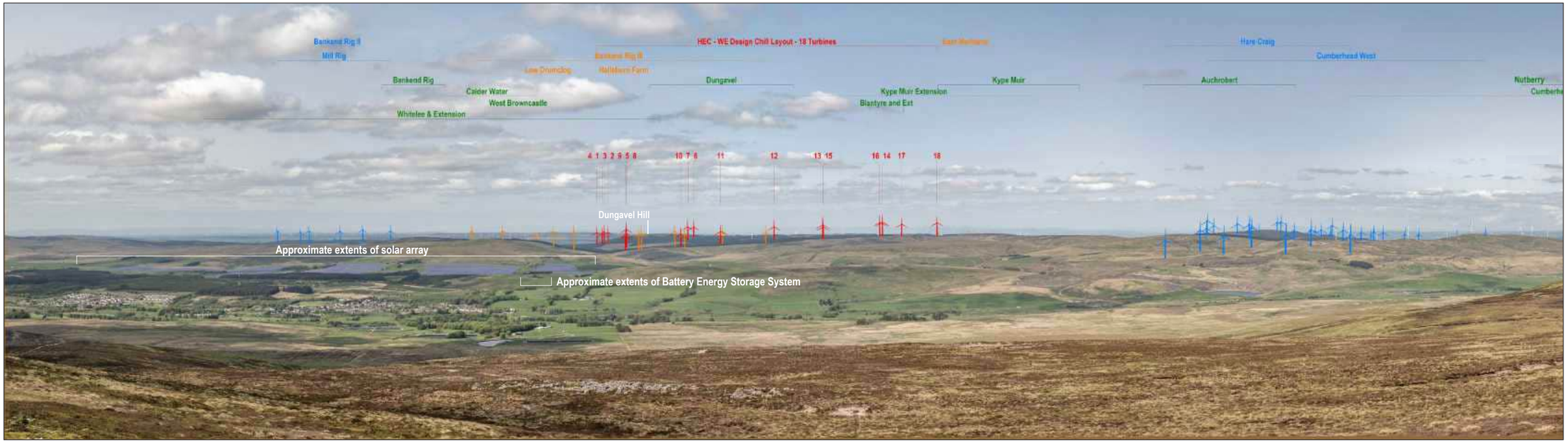
NOTE: Visuals have been produced as photowires and do not account for the screening effect of intervening landscape elements.

P21-2921

HEC-WE (Phase 1) Gatecheck Layout AY **– 18 Turbines**

Cairn Table - 90 Degrees Photowire

90 Degrees Cylindrical Projection



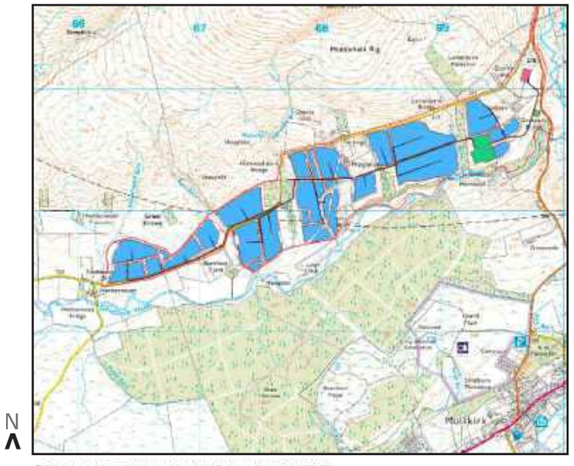
Operational wind farms illustrated with a green umbrella / Consented/Under Construction wind farms illustrated with blue turbines and umbrellas / In Planning wind farms illustrated with orange turbines and umbrellas

Coordinate - 272410,624235

AOD - 586m

Date and time of photography taken - 22.05.2023/14:05

Turbine Parameters: All turbines to be 230m tip height with the exception of T6 which will be 200m.



NOTE: Visuals have been produced as photowires and do not account for the screening effect of intervening landscape elements.

HAGSHAW ENERGY CLUSTER WESTERN EXPANSION

3R Energy

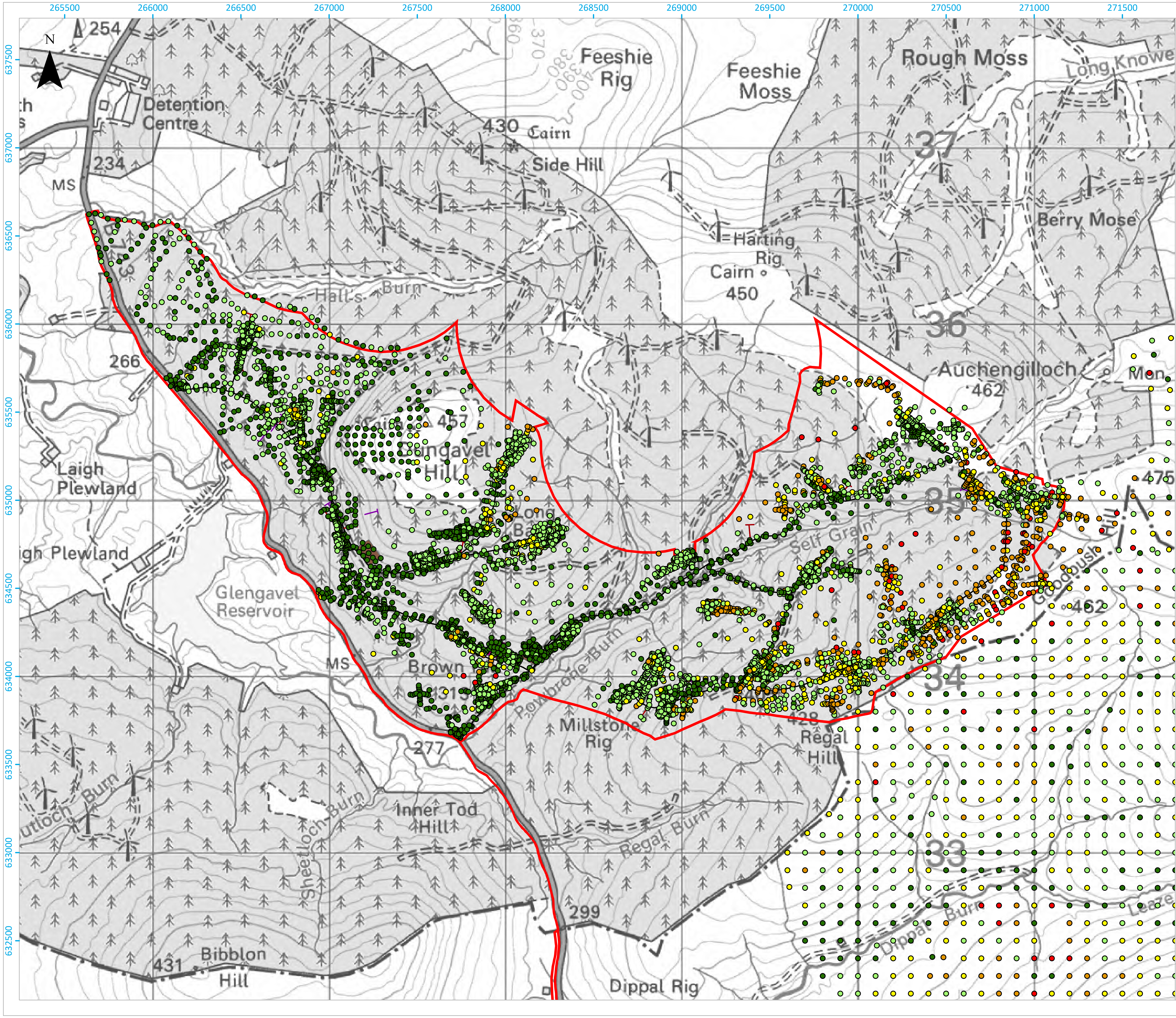
ITPENERGISED

PEGASUS GROUP

P21-2921

HEC-WE (Phase 1) Gatecheck Layout AY **– 18 Turbines**

Appendix 3 - Peat Depth Map with Layout Amendments Overlaid



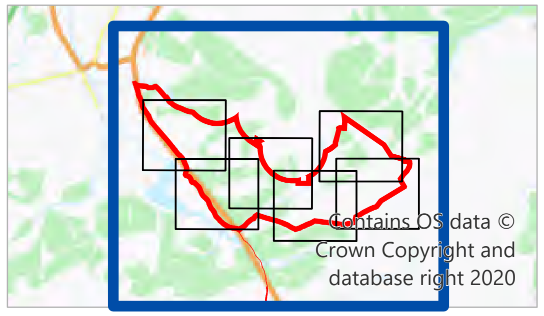
265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
271000
271500
637500
637000
636500
636000
635500
635000
634500
634000
633500
633000
632500
N
Feeshie Rig
Feeshie Moss
Rough Moss
Long Knowe
Detention Centre
Cairn
Side Hill
Harting Rig
Cairn
450
Berry Mose
Auchengilloch
462
Laigh Plewland
Glengavel Reservoir
Brown
Millstone Rig
Regal Hill
Inner Tod Hill
Regal Burn
Bibblon Hill
Dippal Rig
Self Grain
Goodbush Hill
Hall's Burn
Powbrone Burn
Sheetloch Burn

KEY

- Site Boundary
- Turbine
- Hardstands
- Turing Heads
- Borrow Pits
- Compounds
- Forestry Spurs
- Tracks
- Spur Roads

Probe Location Depth (m)

- 0.00- 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50



Coordinate System: British National Grid
Projection: Transverse Mercator

0 0.2 0.4 0.6 0.8 1 Kilometres

1:20,000

3R Energy

ITPENERGISED PART OF SLR

Hagshaw Energy Cluster Western Expansion

Peat Depth Points, Layout 21

Figure 4

Date:	Lead:	Review:	Version:
22/10/2024	BN	DN	1.0

266000 266200 266400 266600 266800 267000 267200 267400

636200 636000 635800 635600 635400 635200 635000

N

Hall's Bur

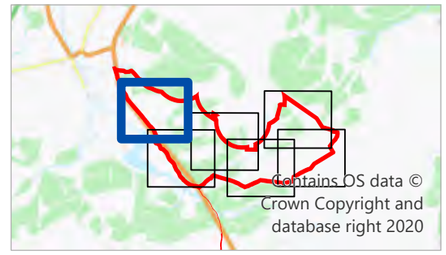
Cairn D

KEY

- Site Boundary
- Turbine
- Hardstands
- Turing Heads
- Borrow Pits
- Compounds
- Forestry Spurs
- Tracks
- Spur Roads

Probe Location Depth (m)

- 0.00- 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50



Coordinate System: British National Grid
Projection: Transverse Mercator

0 0.2 Kilometres

1:5,000

3R Energy

ITPENERGISED PART OF SLR

Hagshaw Energy Cluster Western Expansion

Peat Depth Points, Layout 21

Figure 4

Date:	Lead:	Review:	Version:
22/10/2024	BN	DN	1.0

266600 266800 267000 267200 267400 267600 267800 268000

635000 634800 634600 634400 634200 634000 633800

N

engavel
servoir

MS

Brown Hill

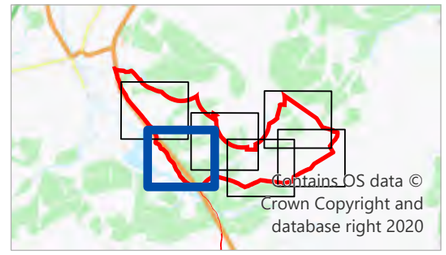
1313

KEY

- Site Boundary
- Turbine
- Hardstands
- Turing Heads
- Borrow Pits
- Compounds
- Forestry Spurs
- Tracks
- Spur Roads

Probe Location Depth (m)

- 0.00- 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50



Coordinate System: British National Grid
Projection: Transverse Mercator

0 0.2 Kilometres

1:5,000

3R Energy

ITPENERGISED
PART OF SLR

Hagshaw Energy Cluster Western Expansion

Peat Depth Points, Layout 21

Figure 4

Date:	Lead:	Review:	Version:
22/10/2024	BN	DN	1.0

267600 267800 268000 268200 268400 268600 268800 269000

635400 635200 635000 634800 634600 634400 634200

N

457

ngavel

Hill

Long

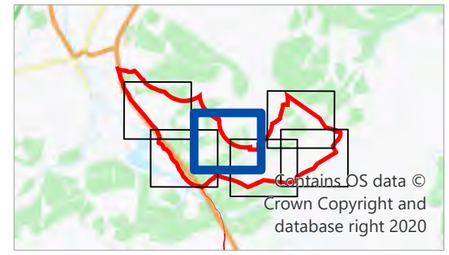
Burn

KEY

- Site Boundary
- Turbine
- Hardstands
- Turing Heads
- Borrow Pits
- Compounds
- Forestry Spurs
- Tracks
- Spur Roads

Probe Location Depth (m)

- 0.00- 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50



Coordinate System: British National Grid
Projection: Transverse Mercator

0 0.2 Kilometres

1:5,000

3R Energy

ITPENERGISED PART OF SLR

Hagshaw Energy Cluster Western Expansion

Peat Depth Points, Layout 21

Figure 4

Date:	Lead:	Review:	Version:
22/10/2024	BN	DN	1.0

268600 268800 269000 269200 269400 269600 269800 270000

634800 634600 634400 634200 634000 633800 633600

N

Self Gra

Burn

405

428

llstone
Rig

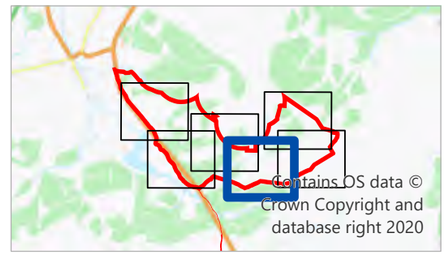
Regal
Hill

KEY

- Site Boundary
- Turbine
- Hardstands
- Turing Heads
- Borrow Pits
- Compounds
- Forestry Spurs
- Tracks
- Spur Roads

Probe Location Depth (m)

- 0.00- 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50



Coordinate System: British National Grid
Projection: Transverse Mercator

0 0.2 Kilometres

1:5,000

3R Energy

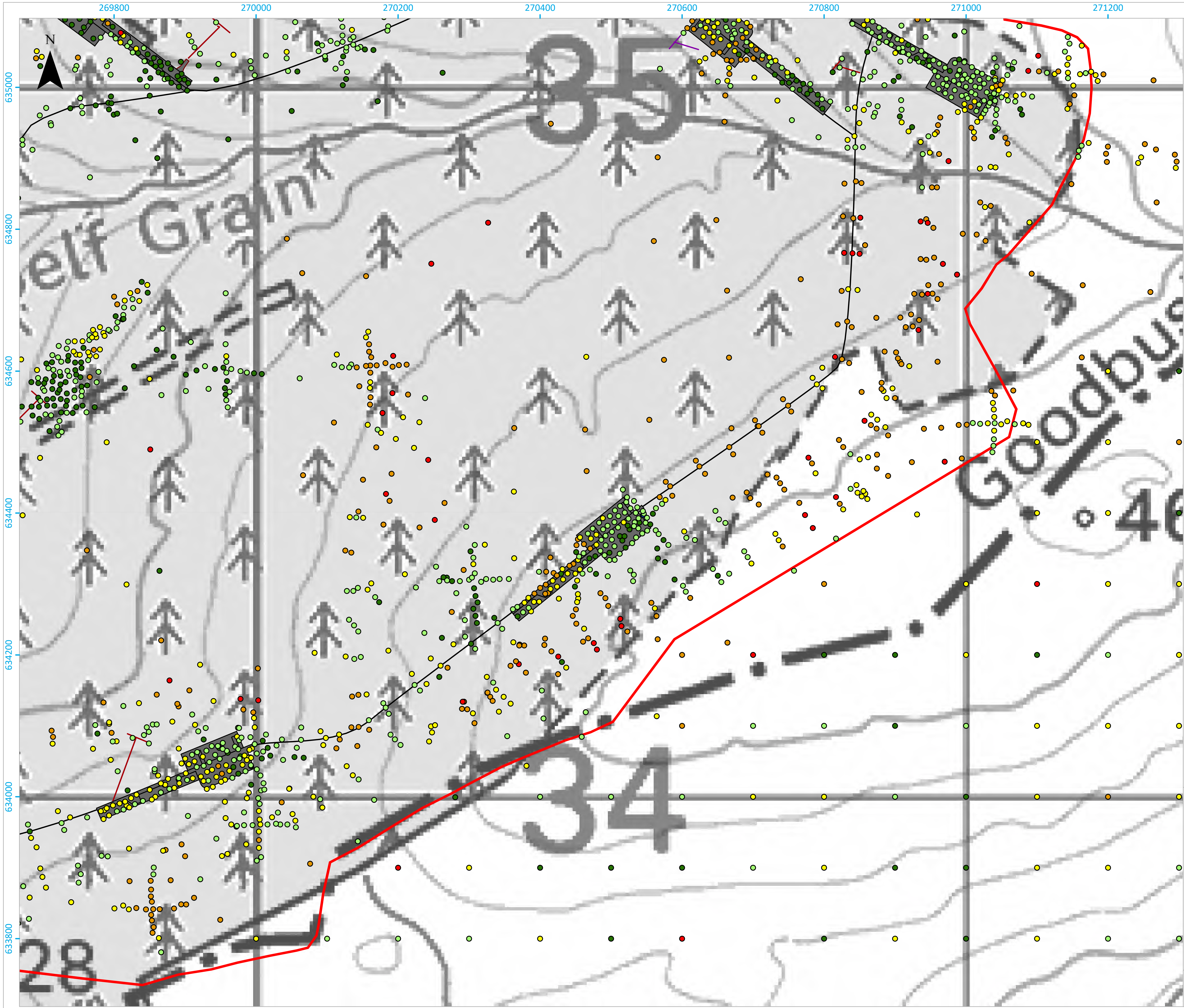
ITPENERGISED
PART OF SLR

Hagshaw Energy Cluster Western Expansion

Peat Depth Points, Layout 21

Figure 4

Date:	Lead:	Review:	Version:
22/10/2024	BN	DN	1.0

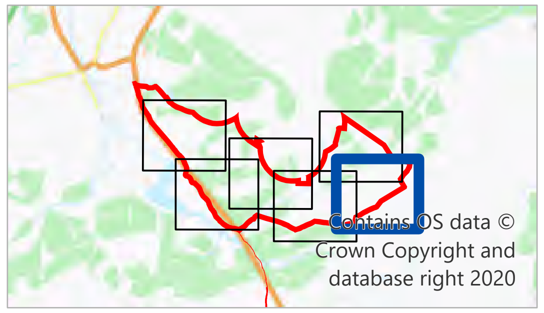


KEY

- Site Boundary
- Turbine
- Hardstands
- Turing Heads
- Borrow Pits
- Compounds
- Forestry Spurs
- Tracks
- Spur Roads

Probe Location Depth (m)

- 0.00- 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50



Coordinate System: British National Grid
Projection: Transverse Mercator

0 0.2 Kilometres

1:5,000

3R Energy

ITPENERGISED PART OF SLR

Hagshaw Energy Cluster Western Expansion

Peat Depth Points, Layout 21

Figure 4

Date:	Lead:	Review:	Version:
22/10/2024	BN	DN	1.0

269400 269600 269800 270000 270200 270400 270600 270800

636000 635800 635600 635400 635200 635000 634800

N

36

Auchengi

462

35

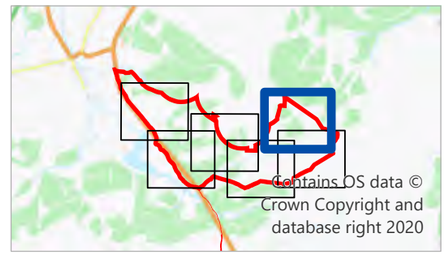
Self Grain

KEY

- Site Boundary
- Turbine
- Hardstands
- Turing Heads
- Borrow Pits
- Compounds
- Forestry Spurs
- Tracks
- Spur Roads

Probe Location Depth (m)

- 0.00- 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50



Coordinate System: British National Grid
Projection: Transverse Mercator

0 0.2
Kilometres

1:5,000

3R Energy

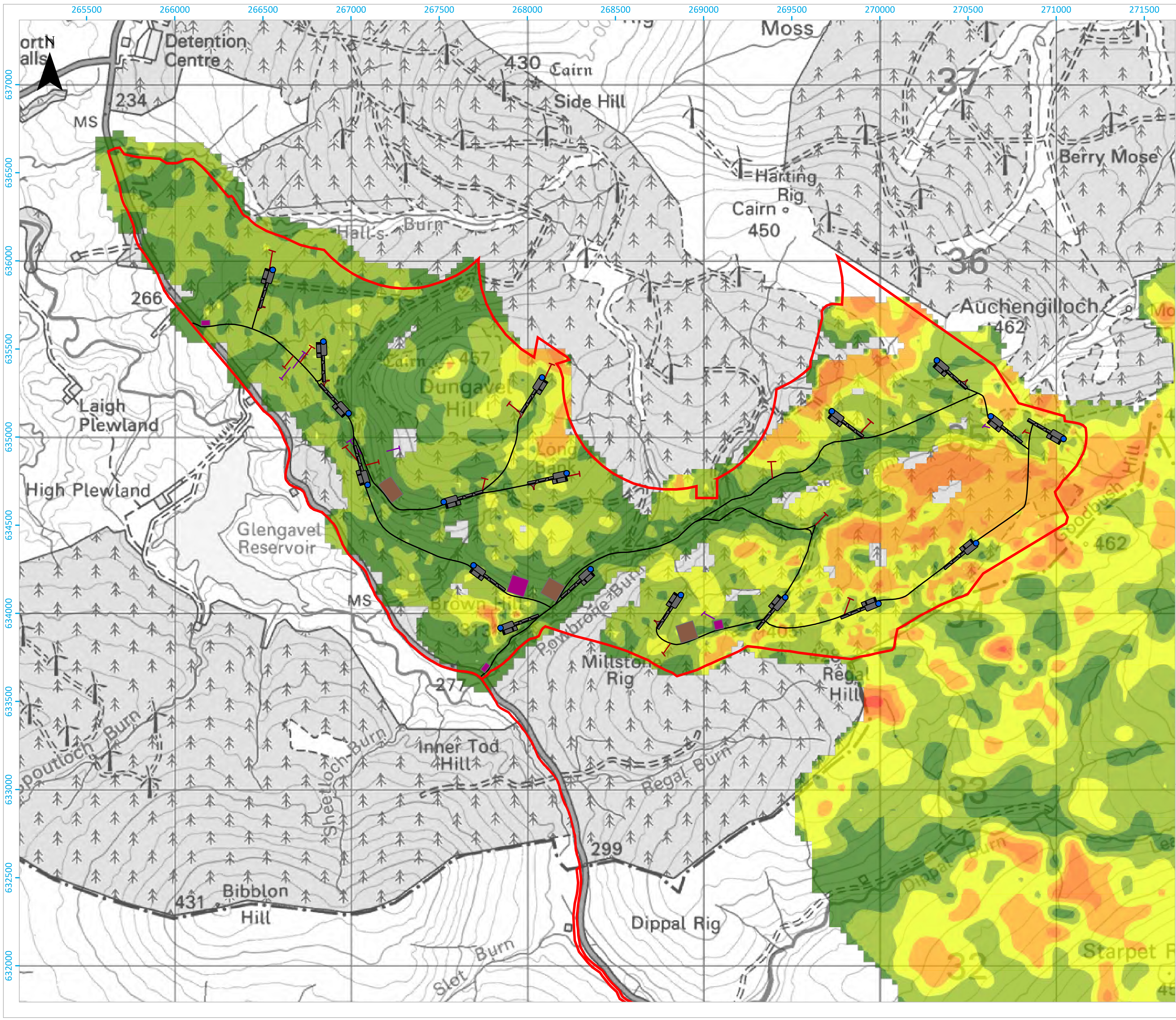
ITPENERGISED
PART OF SLR

Hagshaw Energy Cluster Western Expansion

Peat Depth Points, Layout 21

Figure 4

Date:	Lead:	Review:	Version:
22/10/2024	BN	DN	1.0

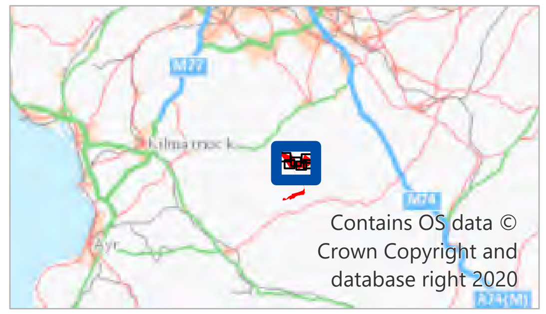

265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
271000
271500
637000
636500
636000
635500
635000
634500
634000
633500
633000
632500
632000
Detention Centre
430
Cairn
Side Hill
Moss
Harting Rig
Cairn
450
Berry Mose
Auchengilloch
462
Laigh Plewland
High Plewland
Glengavel Reservoir
Dungavel Hill
Long Bank
Brown Hill
Millstone Rig
Regal Hill
Inner Tod Hill
Sheeloch Burn
Regal Burn
Bibblon Hill
431
Dippal Rig
Slot Burn
Dippal Burn
Starpet
Hall's Burn
234
266
277
299
MS

KEY

- Site Boundary
- Turbine
- Hardstands
- Turing Heads
- Borrow Pits
- Compounds
- Forestry Spurs
- Tracks
- Spur Roads

Peat Depth (m)

- 0 - 0.5
- 0.51 - 1
- 1.01 - 1.5
- 1.51 - 2
- 2.01 - 3
- 3.01 - 4



Coordinate System: British National Grid
Projection: Transverse Mercator

0 0.5 1 Kilometres

1:20,000

3R Energy

ITPENERGISED PART OF SLR

Hagshaw Energy Cluster Western Expansion

Peat Interpolation, Layout 21
Figure 2

Date:	Lead:	Review:	Version:
22/10/2024	BN	DN	1.0

ITPEnergised is a leading international consultancy delivering expert energy, environmental, engineering, technical advisory and asset management services; facilitating the transition to net zero.

Visit the ITPEnergised group offices in:

Bristol, London, Edinburgh, Glasgow, Buenos Aires, Madrid, Delhi, Beijing, Canberra, Auckland

Sectors:

Onshore Renewables & Storage | Offshore Wind & Marine Renewables | Oil & Gas Transition
Property & Urban Regeneration | Corporate, Industrial & Manufacturing