



Hagshaw Long Duration Electricity Storage

EIA Screening Request

3R Energy

February 2025

Project Quality Control Sheet

ORIGINAL	Author	Checked by	Approved by
Signature	S Queeney	N Leaney	N Leaney
Date	21.02.25	21.02.25	21.02.25
Company	Aardvark EM Ltd	Aardvark EM Ltd	Aardvark EM Ltd

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Grid Co-ordinate: X 282936 Y 632476

Project Manager: Nicholas C Leaney BSc Hons MRICS

Report Author: Sharon E Queeney BSc Hons MRTPI IEMA

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Report Written and Produced By

Aardvark EM Limited, Higher Ford, Wiveliscombe, Taunton, Somerset, TA4 2RL

Telephone: 01984 624989, Facsimile: 01984 623912

Email: environment@aardvarkem.co.uk, Web: www.aardvarkem.co.uk

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Appendix 1: Screening Matrix

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1 Introduction

- 1 Aardvark EM Limited has been instructed on behalf of Hagshaw LDES Ltd (the ‘Applicant’) in respect of the proposed Hagshaw Long Duration Electricity Storage Scheme to request a Screening Opinion under Regulation 8(1) of the Electricity Works (Environmental Impact Assessment) Regulations 2017, as amended.
- 2 The Applicant intends to submit a planning application under Section 36 of the Electricity Act 1989 (as amended).
- 3 The development for which consent will be sought is the construction and operation of a Long Duration Battery Electricity Storage System (‘LDES’), with a storage capacity of up to 6 Gigawatt hours (GWh). The Site is located on Land at the M74 Heat and Power Park (now known as Conexus West), west of Junction 11 of the M74, Coalburn, Lanark, ML11 0RL.
- 4 In accordance with Regulation 8 (2), the Screening Report includes sufficient information on the proposal as follows.
 - a) a description of the location of the development, including a plan sufficient to identify the land;
 - b) a description of the proposed development, including in particular —
 - i. a description of the physical characteristics of the proposed development and, where relevant, of demolition works;
 - ii. a description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected;
 - c) a description of the aspects of the environment likely to be significantly affected by the proposed development; and
 - d) a description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from—
 - i. the expected residues and emissions and the production of waste, where relevant;
 - ii. the use of natural resources, in particular soil, land, water and biodiversity.
- 5 In accordance with Regulation 8 (3) the Screening Report also includes a description of any features of the proposed development, or proposed measures, envisaged to avoid or prevent significant adverse effects on the environment.
- 6 EIA development is defined in the Regulations, in respect of an application, as a proposed development which is either Schedule 1 development, or Schedule 2 development likely to have significant effects on the environment by virtue of factors such as its nature, size or location.
- 7 The Proposed Development constitutes Schedule 2 development in terms of the Regulations. Whilst LDES does not ‘generate’ energy, it is broadly accepted that such development falls under part 3 (a) “installations for the production of electricity, steam or hot water”.
- 8 In adopting a screening opinion as to whether Schedule 2 development is EIA development, the Scottish Ministers must in all cases take into account such of the selection criteria in Schedule 3 of the Regulations as are relevant to the Proposed Development, and the available results of any assessment.

1.1 The Applicant

- 9 The Proposed Development will be owned and operated by Hagshaw LDES Ltd, a subsidiary of Mitchell Ltd, part of the 3R Energy group of companies.
- 10 3R Energy Solutions Ltd (3R Energy) was established in 2009 and has been developing various scales of renewable energy projects ever since, with its head office now 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 330MW of onshore wind projects within the Hagshaw Energy Cluster (with a further 80 MW of energy storage), which together will make a substantial contribution to the local area and to national renewable energy and climate change targets.
- 11 3R Energy was also a founding partner of the award-winning Hagshaw Energy Cluster Development Framework project which represents an ambitious vision for the future of the Hagshaw Energy Cluster and surrounding area, identifying opportunities to enhance and invest in the local environment, communities and place.
- 12 3R Energy is part of a family group of companies which also includes: Mitchell Energy Ltd, Mitchell Farming Partnerships and William Mitchell & Sons (WMS) Ltd, based at Newtonhead Farm Rigside and Hazelside Farm Douglas respectively, which manage the farming assets of the Group. Together the Group:
 - owns and manages 3,500 acres of land in the Douglas Valley;
 - has farmed the land for over 120 years;
 - generates a combined annual turnover of c. £6 m; and
 - employs 15 people as a direct result of its renewable energy and farming operations within the Hagshaw Energy Cluster.
- 13 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 The Development Site

2.1 Location

- 15 The Application Site is located to the southwest of junction 11 of the M74, approximately 1.5km to the south of Coalburn and approximately 1.5km to the north of Douglas.
- 16 The application Site extends to approximately 18 hectares of brownfield land which was part of the former Dalquhandy Opencast Coal Site. The area was not subject to coal extraction but principally used for coal stocking and associated coal dispatch operations.
- 17 The Site now forms part of the Hagshaw Energy Cluster, an established strategic location for large scale renewable energy projects.
- 18 The Site sits wholly within the South Lanarkshire Council administrative area ('the Planning Authority') and within the Douglas Community Council area, close to the boundary with Coalburn Community Council.
- 19 The boundary of the Site is shown edged with a red line on the Boundary Plan accompanying this report (SR51 Site Boundary Plan) contained in Appendix 2.

2.2 Proposed Development

- 20 The provision of LDES will play a crucial role in supporting the continued development of renewable energy and decarbonisation of our electricity network (the National Grid) in line with the Government's Clean Power 2030 Action Plan (CP30 Plan). Since renewable sources like wind and solar are intermittent, LDES stores excess energy when generation is high and releases it when demand increases or generation declines. This ensures a steady and reliable power supply, making renewables more viable as a primary energy source.
- 21 LDES also improves energy security by providing backup power during extreme weather events and grid disruptions. By enabling a more resilient and sustainable energy system, LDES is a key enabler of the transition to a low-carbon economy.
- 22 The development of LDES in the UK is a focus of Government, with the Department for Energy Security and Net Zero (DESNZ) recently (October 2024) consulting on designing a new policy framework to enable investment in LDES. The DESNZ consultation document states:
"Long duration electricity storage (LDES) is a key enabler to a secure, cost-effective and low carbon energy system. LDES can help to decarbonise the system by storing excess renewable generation over six hours or longer, replacing flexibility from fossil-fuelled generation and helping to alleviate constraints on the grid. LDES assets can reduce costs to consumers through lowering their energy bills, and by avoiding the need for electricity grid reinforcement and peak generation plant build."
"Investment in Long Duration Electricity Storage (LDES) again after a hiatus of four decades will make an important contribution to this [CP30] mission by integrating renewables and reducing electricity system costs while supporting energy security."
- 23 The Proposed Development is being advanced quickly to provide near term, long duration energy storage in a critical area. The project neighbours the Hagshaw Energy Cluster of onshore wind projects and is strategically located in the Southern Scotland transmission network zone with its ever-increasing proportion of the UK's onshore wind fleet.

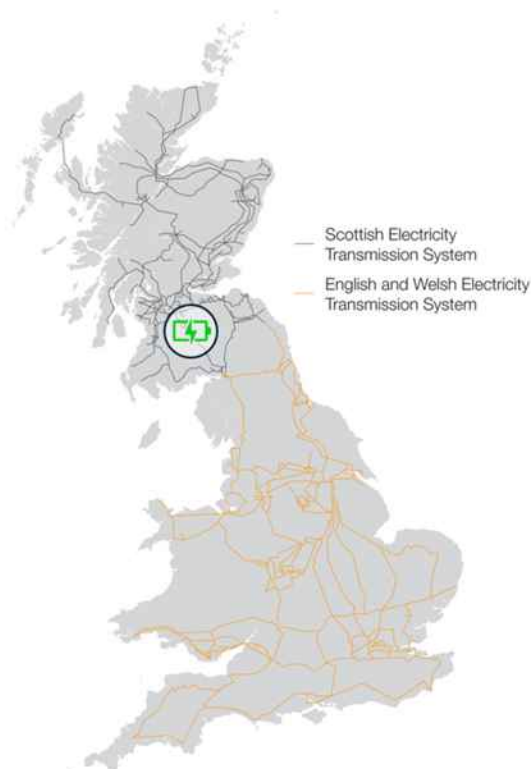


Figure 2.1: Site Location in Context of UK Transmission Network

- 24 The Proposed Development is expected to utilise flow battery technology, with initial designs based on Vanadium Flow Battery technology (VFB), which will provide up to 12 hours of Long Duration Electricity Storage to the National Grid.
- 25 VFB provide a number of important benefits over the standard lithium-ion technology as follows:
- **Long Lifespan** – VFBs can last over 20 years with minimal degradation over time.
 - **Scalability** – Their energy storage capacity is easily increased by expanding the electrolyte tanks.
 - **Deep Discharge Capability** – They can be fully discharged without damaging the battery, providing maximum usable energy.
 - **High Efficiency** – They offer round-trip efficiencies of 70-85%, ensuring effective energy use.
 - **Non-Flammable & Safe** – They use a liquid electrolyte that is non-combustible, reducing fire risks compared to lithium-ion batteries.
 - **Supports Renewable Energy Integration** – They store excess solar and wind energy for long-duration discharge, improving grid reliability.
 - **Low Maintenance** – They require little upkeep since vanadium does not degrade like other battery chemistries.
 - **Environmentally Friendly** – Vanadium electrolyte is reusable and recyclable, making VFBs a sustainable energy storage option.
 - **Stable Performance** – They can operate efficiently in a wide range of temperatures without significant performance loss.

- **Fast Response Time** – They quickly charge and discharge, making them suitable for grid balancing and demand response applications.

2.3 Site Description

- 26 The Site is accessed from the east direct from the M74 motorway via an existing 2km long road that joins the B7078 (Carlisle Road) roundabout at Junction 11 (Poniel) of the M74 motorway.
- 27 The Site lies on an area of gently sloping ground with a generally northwestern aspect consisting of both hardstanding and rough grassland. The current topography results from a combination of hardstanding, along with restored land associated with the Dalquhandy Opencast Coal Mine, a number of small water bodies and a section of a dismantled railway line.
- 28 The Site also includes a small biomass Combined Heat and Power (CHP) facility operated by 3R Energy which will be retained.
- 29 Overhead powerlines run north south along the Site's eastern boundary.
- 30 To the north, a number of small woodland blocks of coniferous trees are located along the minor road which runs from Nethertown of Poniel to Craigend surrounded by semi-improved grassland which is generally used for grazing.
- 31 The western boundary is made up of the Douglas West Windfarm which is currently operational and the Douglas West Windfarm Extension which is under construction.
- 32 To the east and southeast is the Long Plantation which is a designated ancient woodland.

2.4 Environmental Designations

- 33 The Site does not lie within any National or Local Designations, the nearest designations are identified below:
 - **National Park:** The Loch Lomond and Trossachs National Park is located approximately 65km to the north- west of the Site.
 - **Special Landscape Areas:** The Douglas Valley SLA adjoins the southern boundary of the Site.
 - **Scheduled Ancient Monument:** St. Bride's Chapel in Douglas, is located approximately 1.4km to the south of the Site and Thorril Castle is located approximately 3.6km to the southeast of the Site.
 - **Registered Parks and Gardens/Country Parks:** There are no Registered Parks and Gardens or Country Parks within 5km of the Site.
 - **Conservation Areas:** Douglas is located approximately 1.5 km to the south of the Site.
 - **Listed Buildings:** The majority of the listed buildings are associated with Douglas to the south and Millbank and Uddington to the east. The nearest listed building is associated with West Town Statue, at West Toun, approximately 600m to the north of the Site.
 - **Special Protected Areas (SPA):** Muirkirk and North Lowther Uplands Special Protected Area is located approximately 6.8km to the southwest of the Site.
 - **Special Area of Conservation (SAC)** Coalburn Moss Special Area of Conservation is located approximately 2.7km to the north of the Site.
 - **SSSI:** Coalburn Moss SSSI is located approximately 2.7km to the north and Millers Wood SSSI is located approximately 3.2km to the southwest of the Site.

- **Local Nature Reserve:** Clyde Valley Woodland NNR is located approximately 9.8km to the northeast of the Site.

2.5 Residential Receptors

- 34 The closest settlements are Coalburn and Douglas approximately 1.5km to the north and south respectively.
- 35 There are scattered isolated dwellings within proximity to the Site, the nearest includes:
- Westerhouse – Approximately 400m.
 - Craigend Cottage – Approximately 470m.
 - Westoun House – Approximately 680m.
 - Gardens House – Approximately 900m.

2.6 Planning History

- 36 The site and surrounding area has an established planning history permitting development for utility scale energy infrastructure since the cessation of coal extraction from the site in 2004 utilising multiple renewable energy technologies.
- 37 The wider area has been subject to a number of large-scale renewable energy projects which form part of the Hagshaw Energy Cluster (refer to Table 1 below), including projects developed by 3R Energy:

Project	Plan Ref.	Technology	Capacity	Project Status
Douglas West	A	Wind	45 MW	Operational
Douglas West Extension	B	Wind	78 MW	Under Construction
Hagshaw Repowering	C	Wind	84 MW	Under Construction
Cumberhead West	D	Wind	126 MW	Under Construction

Table 1: Consented Schemes

- 38 3R Energy is now working on a new generation of renewable energy projects in the area which have the potential to further contribute to national renewable energy and climate change targets, as well as the local and regional economy. The following table summarises 3R Energy projects under development (refer to Table 2 below):

Hagshaw LDES Screening Report

Project	Plan Ref.	Technology	Capacity	Project Status
HEC-WE Phase 1	E	Hybrid (wind, solar, BESS)	415 MW	Pre-planning with ECU ref ECU00005206
Hagshaw Repowering 2	F	Hybrid (wind, solar, BESS)	140 MW	Pre-planning with ECU ref ECU00000737
Hagshaw LDES	G	LDES	6 GWh	Pre-planning – This application

Table 2: Future Schemes

39 The location of these schemes are illustrated in Figure 2.2 below:

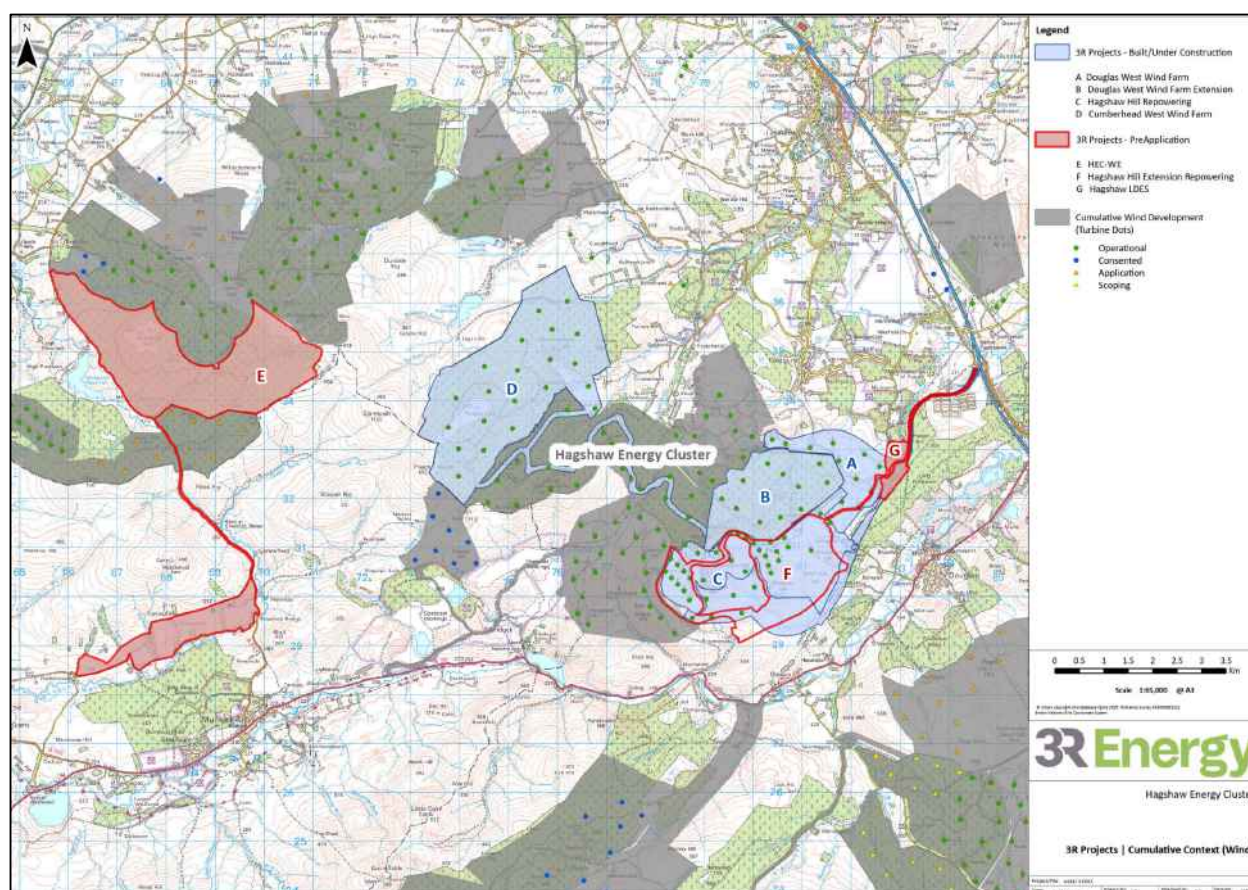


Figure 2.2: Cumulative Context

40 Dalquhandy opencast coal site operated between 1988 and 2004 and has been restored to agricultural uses and more recently to land hosting wind farms.

- 41 Planning permission (CL/15/0273) was granted for 15 wind turbines and a wood fuel drying facility (CHP). A further application, CL/16/0157 was granted permission in 2016 for the CHP and varied in 2024 (P/24/0067/V) to operate as a standalone facility and it is now operational.
- 42 More recently in June 2017 planning permission for a mixed-use development of Class 4 (Business), Class 5 (General Industrial) and Class 6 (Storage and Distribution) uses with associated landscaping and infrastructure such as SuDS, parking and internal roadways was granted (CL/17/0157). This was aligned with the wider allocation in this location as a strategic employment site in the local development plan.
- 43 This application was resubmitted in 2020 (P/20/0772) to allow a further 5-year period to submit matters specified by conditions attached to planning permission CL/17/0157. This was granted in November 2020 and is now the extant planning consent for the Proposed Development Site.
- 44 The extant consent permits the development of the 28ha site comprising 140,000sqm of commercial floorspace up to a height of 15m.

3 Characteristics of Development

- 45 It is proposed to develop a LDES, ancillary infrastructure, and equipment with associated infrastructure. The primary function of the Proposed Development is to provide long duration standby electricity storage capacity into the nearby electricity transmission network at peak times to avoid fluctuations and blackouts, and aid in avoiding transmission losses when electricity is transmitted over long distances.
- 46 These systems complement intermittent sources of renewable energy such as wind, tidal and solar power by providing balancing services for energy production and consumption.
- 47 The key design considerations are.
- Maximisation of the number of electrical hours of storage per hectare in order to make efficient use of the land available;
 - Topography, orientation, appropriate ecology buffer zones;
 - Appropriate and effective landscape and biodiversity planning mitigation and enhancement to secure biodiversity net gain;
 - Protection of local amenity and noise impacts;
 - Minimising impermeable surface areas within the Site where possible; and
 - Sustainable surface water management.
- 48 The layout is still subject to detailed engineering design, but an indicative Site Layout Plan is submitted with this report in Appendix 2. In overview, the Proposed Development is comprised of the construction and operation of:
- Storage containers housing the Long Duration Electricity Storage System which are triple stacked;
 - Inverters or power conversion system;
 - Transformers;
 - Metering Equipment;
 - Cabling and connection;
 - Substation Transformers / Transmission Network Operator Compound;
 - Customer/Step-up Transformer;
 - Security gates and Closed-Circuit Television (CCTV);
 - Vehicular access tracks and roads;
 - Drainage infrastructure; and
 - Landscaping provisions incorporating biodiversity enhancements.
- 49 The main element of the Long Duration Electricity Storage System would be multiple modular battery units, and supporting infrastructure including security gates, CCTV, access tracks, drainage infrastructure and substations. The equipment would be sited on a levelled platform, with appropriate surface water draining. Individual components would likely require concrete plinth type foundations.
- 50 The central components of the Proposed Development are outlined below:

1 *Long Duration Electricity Storage Containers*

The battery containers (similar in appearance to a ubiquitous profiled steel shipping container) and ancillary equipment required onsite, as listed above, are of industrial appearance laid out as shown on the concept site layout plan submitted alongside this screening opinion request.

Each container is approximately 3m in height and will be triple stacked, providing a finished height of approximately 9m (the consented scheme (ref: CL/17/0157) allows for units of up to 15m).

2 *Underground Cable*

The batteries, transformer stations and SP Energy Networks (SPEN) substation will be connected by underground cables laid in a trench excavated to standard dimensions approximately 4500mm wide and 600mm deep minimum in accordance with best practice. There are no overhead cables proposed as part of this scheme.

3 *Substation*

The Proposed Development substation will be connected to the National Grid via underground cables to the new Redshaw electricity transmission substation south of Douglas on the B7078.

The substation compound will include a customer switchroom and associated step-up transformer and the Network Operator's (SPEN) apparatus.

4 *Site Security and Maintenance*

Security fencing will be installed around the boundaries of the Site, consisting of palisade or paladin security fences. CCTV cameras mounted on columns will also be installed in the corners and in the middle of the battery compound to provide 24/7 security of the plant. There is no security floodlighting proposed, however the transmission network operator may require a task orientated emergency light above the door to their substation operated on a PIR system with manual override. Any lighting scheme proposed would be agreed prior to operation, which can be adequately considered within a suitably worded condition.

5 *Landscaping and Biodiversity*

The Proposed Development is designed to minimise groundworks, its physical impact on the landscape, with typically a small proportion of the land directly affected by the footings for the batteries and buildings on site. Between structures, the ground will be finished with gravel to enable surface water infiltration.

The batteries will be contained within a discrete fenced area inside the existing site boundaries.

Key landscaping proposals include:

- Retaining existing vegetation surrounding to the Site;
- Using native tree and scrub species to further strengthen the existing screening and add to the biodiversity value of the Site;
- Provide a buffer from the boundary of the Site at key locations;
- Securing a regular monitoring and maintenance programme of these enhancement features for the life of the consent.

6 *Construction*

The full construction period will be circa 18-24 months however the majority of the construction will be completed in an approximate 12-month period. The initial construction will be related to the civil works and there will then be a period of time to settle before the main construction where plant and material will be brought to site.

During the construction period, it is proposed that construction hours would be as follows:

- Mon –Fri 07:00 –19:00
- Sat 08:00 –13:00

The Site will not be open Sundays or Public Holidays.

Should work be required outside of these times, it would be agreed beforehand in writing with the Council.

A Transport Assessment and Construction Traffic Management Plan (CTMP) will be submitted with the full planning application. The aim of the CTMP is to minimise, and, where possible, avoid potential adverse effects of the construction phase on the highway network and local amenity. The document will contain all the required information for the construction phase (including delivery of any abnormal loads), as well as a package of mitigation measures and it is expected that a planning condition would secure compliance with those commitments.

7 *Operation*

Once operational, the LDES is essentially a passive operation, requiring minimal day to day intervention and even being monitored remotely. Occasional maintenance of the LDES and other infrastructure would be required. Once operational, site visit will comprise 1 or 2 weekly visits for maintenance, operation and security checks.

4 Assessment of Potential Environmental Effects

- 51 Appendix 1 of this report considers the selection criteria for Screening Schedule 2 development as set out in the Scottish Governments Screening Matrix published in 2019.
- 52 Further details are provided below:

4.1 Land Use

- 53 The Proposed Development Site is located within the Hagshaw Energy Cluster Development Framework area and as such the principle of energy infrastructure uses being located within this area has been accepted.
- 54 The Site also has an extant planning consent for industrial development uses and as such the built nature of the development has also been agreed in principle. The proposed scheme sits wholly within the extents of the extant planning permission.
- 55 The closest urban areas are Douglas and Coalburn, both 1.5km from the Development Site boundary and screened by topography and intervening plantation woodland.
- 56 As described in section 2.3 of this report, the Site is brownfield in nature previously being used for coal stocking and associated coal dispatch operations. NPF4 seeks to encourage, promote and facilitate the reuse of brownfield, vacant and derelict land, and to help reduce the need for greenfield development.

4.2 Geology, Hydrogeology and Land Contamination

57 Coal Mining

A Coal Mining Risk Assessment was carried out as part of planning application CL/17/0157 (the Site). This report concluded that *“there are no mining related risks to the proposed development of the M74 Heat and Power Park. The site development lies outwith the area of productive coal measures strata and outside the areas of previous coal extraction”*.

58 Hydrogeology and Geology

The Site area is underlain by strata of the Passage Formation and the upper horizons of the Upper Limestone Formation which are barren of any productive coal measures strata.

Foundations will be designed to ensure that the Proposed Development does not have a detrimental impact on geology or hydrogeology.

59 Land Contamination

Previous uses of coal storage could provide potential sources of contamination into the ground and ground water. A Preliminary Risk Assessment (PRA) will be undertaken to confirm if contamination is likely and any necessary remedial measures.

A potential source of contamination into the ground (and groundwater) during the construction works, is the risk of leakages or spillages due to the handling and storage of diesel fuel, oils, chemicals and construction materials. The likelihood and frequency of occurrence of these incidents is considered to be low and this can be effectively mitigated/managed with appropriate measures within a Construction Environmental Management Plan (CEMP).

The operational phase is contained within battery units and as such will not result in land or ground water contamination.

4.3 Surface Water and Flooding

- 60 A review of SEPA's fluvial flood map shows that the majority of the Site is located outside of the fluvial flood extent. There is a small extent of the northern part of the Site that is shown to be impacted by the areas of high and medium flood risk associated with Poniel Watercourse which runs adjacent to the northern boundary.
- 61 A review of SEPA surface water flood maps for the Site identify that the majority of the Site is not located in an area at risk of surface water flooding. There are small isolated areas of surface water ponding located at the entrance into the Site and within centre of the developable area. The small areas of ponding are likely to be associated with low levels within the site topography and are not associated with a flow path.
- 62 In the western extent of the site is a tributary to the Poniel watercourse, this flows in a northerly direction. The existing drainage arrangement on site was in place to serve the previous quarry use. This drainage arrangement comprises of the southern part of the Site being captured in a perimeter channel, runoff is then routed under the access track that runs through the site via two existing culverts. From here, drainage is routed to a man-made channel which runs through the now restored area of tailing ponds that once existed and has connected to the tributary of the Poniel Water.
- 63 A Flood Risk Assessment (FRA) and Surface Water Drainage Strategy will be prepared and submitted alongside the planning application for the scheme. The FRA will be undertaken to ensure that the Proposed Development is safe and that it will not increase flood risk elsewhere. This will include an assessment of any detailed flood data SEPA hold for the Site and will take into consideration flood depths and extents associated with the added effects of climate change.
- 64 A Site-specific surface water drainage strategy which focuses on the management of surface water runoff will be submitted. This will include taking into consideration the existing and consented drainage arrangements associated with the Site.
- 65 Following the implementation of mitigation measures identified through the FRA and the Surface Water Drainage Strategy, there are not expected to be any residual significant effects from the Proposed Development.

4.4 Ecology

- 66 Section 2.4 of this report identifies the ecological designations in the area. Due to separation distance and lack of functional ecological connectivity, it is unlikely that the Proposed Development would impact these designated sites and their interest features.
- 67 There is potential for Protected Species to be present at the Site, including amphibians, reptiles, fish, otter and water vole. A preliminary ecological appraisal will be undertaken and where necessary, phase 2 surveys for some of these species will be undertaken.
- 68 Whilst Biodiversity Net Gain (BNG) is not yet mandatory in Scotland, the application submission will include an assessment which will be completed to demonstrate how the proposal could potentially enhance and create new habitats within the Site.
- 69 The Proposed Development Site has received planning approval for industrial uses, and as such it can be concluded that any ecological features of importance can be satisfactorily mitigated to ensure that there is no significant adverse impact on flora and fauna as a result of the Proposed Development.

4.5 Archaeology and Heritage

- 70 There are no listed buildings, designation landscapes or scheduled monuments on or close to the Site.
- 71 The brownfield nature of the Site would also suggest that archaeological remains are unlikely. In their consultation response to the extant planning consent proposal, the West of Scotland Archaeology Service ‘advise that it appears unlikely to raise a substantive archaeological issue. This is because the majority of the area that is proposed for development has been subject to extensive levels of previous disturbance associated with opencast mining operations, which is likely to have removed any material associated with earlier phases of occupation that may have been present. As a result of this, I would not consider archaeological work to be required in relation to the current application’.
- 72 It is therefore considered that heritage and archaeological should be scoped out of any forthcoming planning application.

4.6 Landscape and Visual

- 73 The Site is located in Plateau Farmland (LCT 5) and Rolling Moorland (LCT 7) (South Lanarkshire Landscape Character Assessment, 2010). The landscape character is influenced by former mine workings, existing wind farms (Douglas West and Hagshaw Hill wind farms), and Dewar’s Whisky Bond Warehouses. Consented wind farms will further modify the landscape in the future.
- 74 The Site is in a secluded landscape, enclosed by hills or plantation woodland. The extent of the landscape effects of the proposed LDES would be limited to a 1 km wide strip of landscape between Craigend (0.5 km to the north of the Site) and Blackwood Hill (2 km to the south-west).
- 75 The Site and nearby landscape contains core paths, including: SL177 (CL/5729/1) which follows a disused railway along the Site’s eastern edge and crosses into the south-eastern corner of the Site; and Dalquandy Road (CL/5728/2) which crosses the Site from north-east to south-west, heading west into Douglas West wind farm. Further to the south-west of the site, core path CL/3457/1 climbs the hillside from Douglas West to Hagshaw Hill into a wind farm landscape, and is likely to offer views north-east towards the proposed LDES. Views towards the proposed LDES development would all be from landscape which is modified by other development.
- 76 Although some cumulative landscape and visual effects are possible, they are likely to be restricted in extent and would be unlikely to be significant.
- 77 Planning application CL/17/0157 assessed the visual impact of developing an industrial and employment use at the Site and concluded the following:
- “The visual appraisal identified some nine key viewpoints that potentially gain views of The Site. The majority of these are located within a narrow visual corridor from The Site boundary to the M74 carriageway some 4.5km to the north. Receptors were mainly associated with a small number of isolated dwellings, the local road network, a number of footpaths that formed part of South Lanarkshire’s Core and Wider Network Paths, as well as a small section of the M74 Motorway.*
- The main findings from the visual appraisal found that The Site’s development area within the locality was either generally well screened by existing coniferous vegetation patterns, by existing landform features and additionally in the future by extensive areas of recently planted woodland blocks and conifer plantations. These features would also help to mute effects from lighting at night.*

The main visual receptors where effects are unlikely to be able to be mitigated are associated with the Core Paths that pass through the centre of the Site or are in close proximity to the Site. These receptors pass by the Dewar's Whiskey Bond, past the existing CHP Wood Drying Facility, through part of the old opencast mine workings and Hagshaw Hill Wind Farm and associated overhead electricity pylons, as well as in the future through the permitted Douglas West and Dalquhandy Windfarms. These routes are therefore already (in parts) very industrialised in nature and the majority of The Site itself comprises hardstanding or areas previously disturbed by opencast mine workings or ancillary activities.

The additional visual effects associated with the proposed development are therefore both limited in nature and extent and has been assessed as not causing any significant adverse effects to visual receptors in the locality.

As with landscape effects there is also potential for a degree of cumulative visual effects associated with the proposed development, in conjunction with permitted and/or proposed future developments in the locality as described above.

Potential cumulative visual effects are generally associated with users of the Core Paths that pass through The Site. However, as described above the existing disturbed nature of The Site, the generally industrial character of the surroundings, in combination with the physical location and surrounding topographical features, restricts the potential levels of effect. The overall cumulative visual effects are therefore limited and have been assessed as not causing any significant cumulative impacts.

Conclusions

The landscape and visual appraisal therefore concludes that the proposed development would not be out of scale or keeping with the local setting or visual amenity of this relatively industrialised area of South Lanarkshire.

This report therefore concludes that the surrounding landscape, local setting and visual amenity of the area has the capacity to successfully accommodate and assimilate the change associated with the proposals without giving rise to unacceptable levels of adverse landscape or visual effects”.

- 78 The Proposed Development will utilise the same development envelope as that permitted in the extant planning consent and will be smaller in height.
- 79 It can therefore be concluded that, with appropriate mitigation, the surrounding landscape is likely to be able to accommodate the Proposed Development in this location without resulting in significant adverse landscape or visual effects.

4.7 Noise

- 80 The Site is not within a Noise Action Plan and Important Areas designation.
- 81 As identified in section 2.5 of this report, there are two of residential receptors which have been identified within 500m of the Site, that have the potential to be sensitive to nuisance related noise effects.
- 82 The Proposed Development will be designed to ensure that any noise generated by the LDES will be mitigated to an acceptable level.
- 83 The construction phase has the potential to result in the following noise and vibration effects:
- Increased ambient noise and vibration and associated nuisance generated by the physical components of the works;

- Increased ambient noise and vibration resulting from the operation of construction plant and machinery; and
 - Increased road traffic noise from construction related traffic generation.
- 84 Any construction activities likely to result in considerable noise emissions will be limited to daytime works only.
- 85 Further, control measures relating to noise and vibration will be developed in line with best practice guidance and legislation. These measures should be detailed within a CEMP that will be produced by the contractor. With those measures in place, no significant effects as a result of the construction phase of the Proposed Development are anticipated.
- 86 In relation to noise generated from construction related traffic, the temporary increase in traffic generation associated with the construction phase is not envisaged to be significant due to the scale and location of the Proposed Development, and therefore it is not anticipated that the construction phase will generate significant noise and vibration effects. Implementation of a CTMP will also reduce the potential for significant noise and vibration effects to occur as a result of construction traffic.
- 87 When considering the above, it is considered unlikely that significant noise and vibration effects will arise as a result of the Proposed Development.
- 88 A noise assessment will be completed and submitted alongside the application to ensure that noise-related impacts arising as a result of the Proposed Development are limited and suitable mitigation is implemented.

4.8 Air Quality

- 89 There are no Air Quality Management Areas (AQMA) within 2km of the Site.
- 90 The construction works have the potential for give rise to the following air quality effects:
- Dust emissions and associated nuisance generated by the construction works and particularly by the earthworks;
 - Additional emissions to the atmosphere from the operation of the construction plant and machinery; and
 - Additional emissions to the atmosphere from construction-related traffic generation.
- 91 With the implementation of appropriate, best practice mitigation measures, it is considered unlikely that significant adverse effects to air quality as a result of the Proposed Development will arise. Mitigation measures will be incorporated into a CEMP, developed by the Contractor prior to the commencement of construction works.
- 92 With regard to emissions from construction-related traffic, the temporary increase in traffic generation associated with the works is not envisaged to be significant. As such, road traffic emissions will unlikely be significantly affected by this temporary addition of traffic to the local road network.
- 93 The Proposed Development is not anticipated to generate significant air quality effects during the operational phase.

4.9 Climate Change

- 94 Scotland's Energy Statement and Just Transition Plan sets a number of objectives to tackle climate change, these include:

- To significantly scale up renewable energy production to secure a just transition away from fossil fuels;
 - To secure continued and increased investment in the net zero energy economy; and,
 - To deliver fairer, more secure energy system that is no longer reliant on volatile international commodity markets.
- 95 In 2019, Scotland's electricity and gas networks vision to 2030 was published, and confirmed that:
- “Our electricity and gas networks link together a diverse range of energy sources, and this will continue to be one of the most important roles that they play - especially as we move still further towards a decentralised energy system, and the greater demand for sources of flexibility that we expect that to create”.*
- 96 The Proposed Development provides an important support role for the development of renewable energy and is therefore vital to achieving the Scottish Government and UK Government's Net Zero objectives whilst maintaining energy security. The Climate Change Plan (updated) 2018 – 2032, recognises that by 2032 storage facilities will contribute towards the negative emissions technology mix. Whilst the 2017 Ofgem report states that *“storage can open up many possibilities, helping to integrate low carbon generation, reduce the costs of the operating the system, and help avoid or defer costly reinforcements to the network”.*
- 97 NPF4 gives significant weight to tackling the global climate and nature crisis (Policy 1) and Policy 2 seeks to respond to the Climate Change emergency through the consideration of Climate Mitigation and adaptation.
- 98 The Proposed Development seeks to support the decarbonisation of the energy system (supporting renewable energy) and contribute to biodiversity. The drainage strategy will account for a 38% climate change uplift and therefore contributes towards the areas Climate Change Resilience Goals.
- 99 The Proposed Development is designed to tackle Climate Change in Scotland and the UK.

4.10 Socio-economic

- 100 The Hagshaw Energy Cluster projects that 3R Energy has developed to date, which are all now operational or under construction, together will deliver:
- A saving of over 430,000 tonnes of carbon dioxide (CO₂) entering the atmosphere each year;
 - Green electricity for over 240,000 average households in Scotland;
 - £1.6 m to local Douglas Valley communities every year – which is £4,383 every day or £48 m (indexed) over 30 years; and
 - Over 1,800 job years of employment in Scotland through the construction and development phases of the projects.
- 101 The Proposed Development will provide further investment in the local area, progressing the vision of the Hagshaw Energy Cluster and supporting the development of renewable energy.
- 102 A community benefit fund will also be provided for local community projects.
- 103 The Proposed Development will provide construction-related jobs for local people within the area. The anticipated normal workforce will be 10 -15 on site per day, maximum would be 25 – 30 depending on the phase of construction.

4.11 Transport

- 104 The Site is accessed via a 2km long private road that joins the B7078 (Carlisle Road) roundabout at junction 11 (Poniel) of the M74 motorway.
- 105 The private access road continues into the Proposed Development Site and exits the Site to the southwest, providing access to the adjacent windfarms. There are culverts beneath the road within the Site to allow the free flow of two onsite drains.
- 106 The majority of the construction will be undertaken over a 12 month period comprising civil works and installation of the LDES infrastructure. It is anticipated there will be on average 40 HGV deliveries a day over the construction period with peak periods for civils works and delivery of the plant to Site. The only anticipated indivisible abnormal load will be the crane used for the delivery of the transformer and EHV equipment for the Site. The usual safeguarding measures and notification of the local highways authority will be undertaken.
- 107 A temporary construction compound will be set up in the Site for welfare facilities and materials lay down as well as parking and HGV turning/manoeuvring.
- 108 Once operational, site visits will comprise 1 or 2 weekly visits for maintenance, operation and security checks by car or vans. HGVs will be used when a requirement for replacement plant or equipment.
- 109 All traffic will be routed via the M74 and as such, no adverse effects are considered likely on the local highway network as a result of the Proposed Development.

4.12 Waste

- 110 The Proposed Development has the potential to generate some waste during construction activities, such as any unusable excavated materials, and remnants of steel and wood. Although the estimated quantities are unknown at the time of writing this report, it is considered unlikely that waste arising from the construction of the Proposed Development would be significant.
- 111 A Site Waste Management Plan (SWMP) will be prepared for the construction stage of the Proposed Development to ensure efficient use of resources, and to minimise waste generated throughout construction phase. The SWMP will also outline good practice and management measures for the waste generated during construction, addressing opportunities for recycling and reuse.
- 112 No wastes are anticipated from the operational phase of the Proposed Development.

4.13 Risk to Human Health and Safety and of Accidents and/or Disaster

- 113 For the duration of the Proposed Development, there are various risks to workers. Risks are those that are commonly associated with working with machinery and large / heavy quantities of materials. The development will be built and operated in accordance with all relevant safety standards and maintained as such.
- 114 Vanadium Flow Batteries' are chemically and thermally robust, and safe even when exposed to external fire. Independent testing to the UL9540A standard has shown decisively that these batteries have no risk of thermal runaway and as such do not represent a risk of fire.
- 115 Notwithstanding the above, the Planning Application will still address fire risk and the hazards of fire for the development, the surrounding environment and nearby properties.

116 Potential effects to human health due to air pollution associated with the Proposed Development are unlikely to be significant.

117 Overall, no significant risk to human health and safety are likely as a result of the Proposed Development.

4.14 Cumulative Development

118 The planning application will include a cumulative assessment of the Proposed Development and identified surrounding schemes.

119 These will include the energy developments associated with the Hagshaw Energy Cluster (as set out in section 2.6 of this report).

120 There are number of Nationally Significant Energy projects in close proximity to the Proposed Development Site. Those within 5km are identified in Figure 4.1 below:

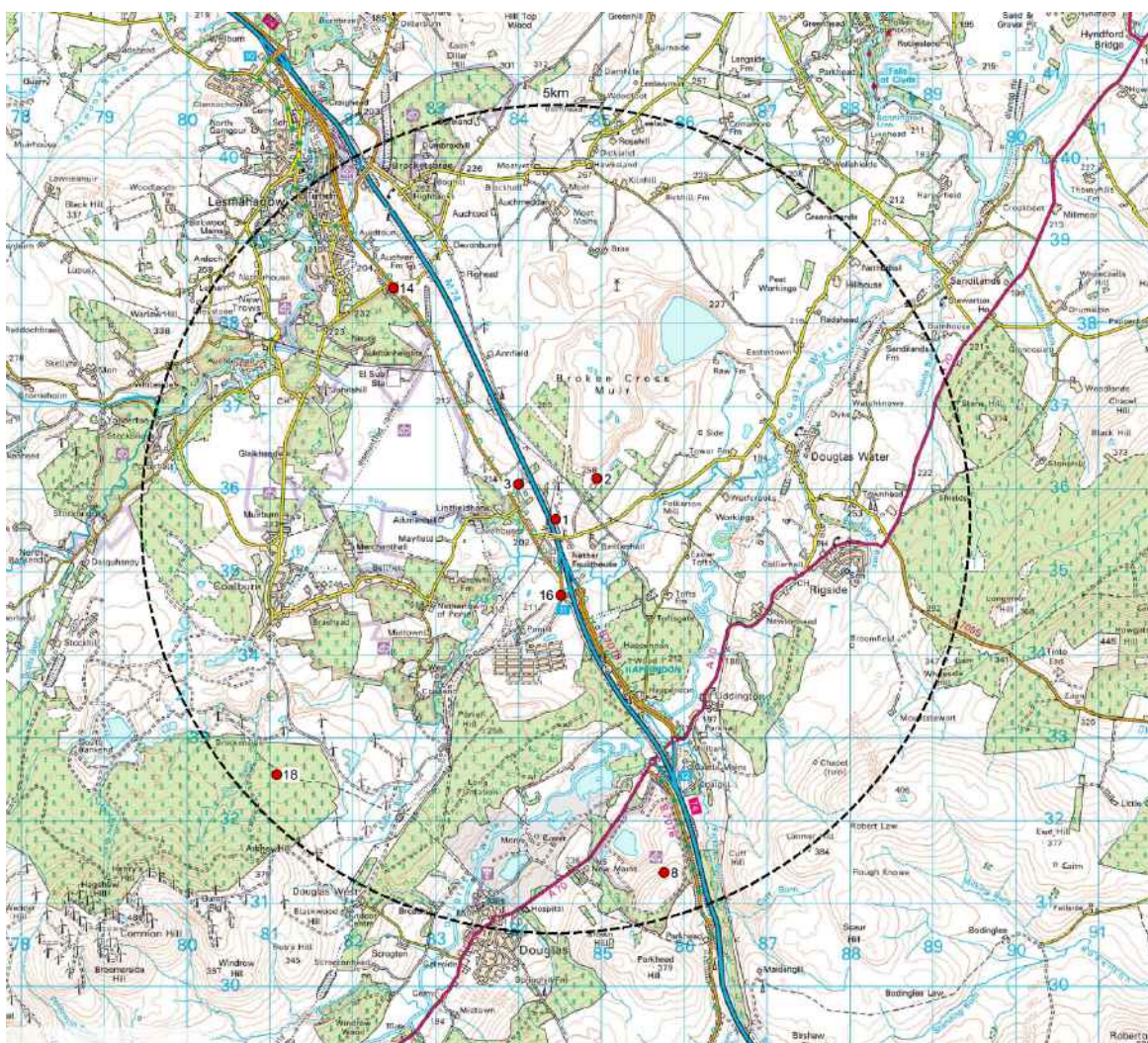


Figure 4.1: Nationally Significant Energy Projects within 5km of Proposed Development (Approximate Location)

121 These are cross referenced in Table 3 below:

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Map Ref	ECU Ref.	Name	Location	Description
1	00006063	High Netherfauld I BESS	Land 390M NNW Of High Netherfauld House Farm Tower Road, Douglas	Erection of Battery Energy Storage System (BESS) (502.5MW) Screening Request
2	00004698	Coalburn II Energy Storage Facility	Land at Broken Cross Open Cast Mine, Tower Road, Douglas, ML11 9PB	BESS scheme 1GW Consented Development
3	00000348	Coalburn BESS	Land north of Birkhill, Cairnhouses Road, Douglas, MLL 0RS	BESS scheme 500 MW Consented Development
8	00005194	Haspielaw BESS	Approx Grid NS 85753 31375	Battery Energy Storage System (200MW) Screening complete: non-EIA
14	00004799	Carlisle Road Battery Energy Storage System	Coalburn Substation ML11 0JU	Battery Energy Storage System Development (50 MW) Consideration
16	00005019	M74 West Renewable Energy Park	ML11 0RL	Renewable energy park including up to 22 wind turbines and a battery energy storage system Consultation
18	00001836	Douglas West Windfarm Extension	Approx NS 81079 32559	Erection of 13 wind turbines (78MW) & 20 MW BESS Consented Development

Table 3: Cumulative Energy Schemes

- 122 There are no transboundary nature impacts as this development falls only within the South Lanarkshire Administrative Area.
- 123 Overall, it is considered unlikely that the Proposed Development would result in any cumulative effects with other known developments.

5 Recommendations and Mitigation

5.1 Construction Phase

- 124 It is proposed that a Construction Environmental Management Plan (CEMP) be implemented to ensure the construction phase of the Proposed Development does not result in any significantly adverse effects to the environment. The Contractor will be responsible for the implementation of the CEMP, in order to ensure that no significant effects on the environment arise.
- 125 The CEMP will include best practice environmental management control measures for the duration of the Proposed Development, such as measures to reduce noise, dust emissions, light emissions, and to avoid any incidents involving contaminated run-off and risk of potential water contamination to the adjacent stream due to accidental spills and leakages.

Topic	Mitigation / Recommendation
Geology, Hydrogeology and Land Contamination	<p>Standard construction management measures relating to preventing contamination will be detailed in the CEMP. These may include, however are not limited to:</p> <ul style="list-style-type: none"> • Emergency spill kits / procedures in place • Regular inspections of machinery onsite • A suitable buffer between location for storage of excavated spoil and construction material and the watercourses/surface drain present on site or adjacent to the site.
Surface Water and Flooding	<p>A Flood Risk Assessment and Drainage Strategy are to be completed for the Proposed Development and implemented. These will also inform the need for any specific measures related to flooding and drainage within the CEMP.</p>
Ecology	<p>Adoption of best practice measures.</p> <p>Appropriate consideration to habitat and species present on site and within the surrounding landscape, through implementation of measures such as:</p> <ul style="list-style-type: none"> • Avoidance of vegetation removal; • Bat sensitive lighting strategy; • Timing of works to avoid breeding bird season (February – August); and, • Any necessary replanting should be carried out with vegetation and tree species native to Region. <p>Opportunities to enhance the site should be explored appropriately through a Biodiversity Net Gain assessment.</p> <p>Completion of a Habitats Regulations Assessment, to assess the effects of the Proposed Development on the designated European sites.</p>
Landscape and Visual	<p>The Landscape and Visual Impact Assessment will inform the need for specific visual screening measures within the CEMP.</p> <p>Measures within the Landscape Ecological Management Plan will also inform measures and procedures within the CEMP.</p>

Noise	<p>Standard construction management measures relating to noise will be detailed in the CEMP which may include the following, but is not limited to:</p> <ul style="list-style-type: none"> • The use of construction techniques that reduce the incidence of noise; • The use of modern, low noise emission plant and machinery; and • Switching off plant and machinery when not in use. <p>The noise assessment will inform the need for any specific mitigation in the CEMP, along with the CTMP which will also inform measures relating to construction traffic noise and vibration.</p>
Air Quality	<p>Dust emissions will be managed by standard construction management measures which will be further detailed in the CEMP. These may include, however are not limited to:</p> <ul style="list-style-type: none"> • The use of modern, low emission plant and machinery where possible; • Turning the plant and machinery off when not in use; • Avoidance of dust generating activities during dry or windy weather; and • Damping down of dusty surfaces and processes where dust may be generated.
Transport.	HGV routing and timing of deliveries will be controlled via a CTMP.
Waste	Completion of a Site Waste Management Plan to ensure an efficient use of resources, and to minimise waste generated.

Table 4: Mitigation Measures

5.2 Operational Phase

126 Whilst there are no significant adverse effects to note from the assessment of the characteristics and environmental context of the Site and Proposed Development, it is proposed that a Landscape and Ecological Management Plan be developed and implemented for the operational phase of the Proposed Development. This would ensure the management of features implemented in line with the Biodiversity enhancement proposals, and sufficient screening of the Site to effectively limit impacts to the local landscape character.

6 Conclusion

127 With the implementation of the proposed mitigation measures and recommendations presented in this report, and the additional reports to be completed as part of the planning application, the Proposed Development is not likely to result in significant effects on the environment by factors such as its nature, size or location.

128 As such, the Proposed Development is not considered to constitute an EIA development.

129 Therefore, the application is seeking written confirmation from the ECU that an EIA is not required, and that the planning application does not need to be accompanied by an Environmental Statement.

Appendix 1: Screening Checklist

EIA SCREENING CHECKLIST

TITLE AND ADDRESS OF PROPOSAL

Decision: ~~EIA required~~/EIA not required (Delete as appropriate)

Section 1: Project Information

Please Describe	
Address or location of proposed development	Land at the M74 Heat and Power Park (now known as Conexus West), west of Junction 11 of the M74, Coalburn, Lanark, ML11 0RL
Site area (hectares)	Approximately 18 hectares
Brief description of the proposed development	Long Duration Electricity Storage
Type of Application (please tick)	<input type="checkbox"/> Application for planning permission
	<input type="checkbox"/> Application for planning permission in principle
	<input type="checkbox"/> Application for the approval of matters specified in conditions
	<input checked="" type="checkbox"/> Other permissions – please state: _____ Planning Application is submitted under Section 36 of the Electricity Act 1989 (as amended) to the Energy Consents Unit of the Scottish Government

Section 2a: Single Stage Consent Application (complete where relevant)

Yes/No – Please Describe	
Is the proposed development of a type listed in Column 1 of Schedule 2?	Schedule 2 – The development falls under part 3 (a) “installations for the production of electricity, steam or hot water”
Is the proposed development to be located within a ‘sensitive area’?	No
Does the proposed development meet any of the relevant thresholds and / or criteria in Column 2 of Schedule 2?	Yes – It is over 0.5 hectares

Section 3: Selection Criteria for Screening Schedule 2 Development

There are two stages to this section of the checklist:

- First, identifying the potential impacts of the proposed development based upon the characteristics of the development and its location.
- Secondly, considering whether significant environmental effects are likely based upon the characteristics of the potential impacts.

The selection criteria in this section meet the requirements of the Town and Country Planning (Environmental Impact

Selection Criteria	Yes/No	Briefly describe potential impact	Is this likely to result in a significant effect? Please explain
1. Characteristics of the Development			
(a) Size and design of the development			
Will the proposed development be out of scale with the existing environment?	No	The application Site is subject to a planning consent for the M74 Heat and Power Park, comprising Class 4(Business), 5 (General Industrial) and 6 (Storage and distribution) with associated landscaping, service facilities, internal roadways, SUDS and other ancillary work.	The scale of the Proposed Development will not exceed the development envelope of the consented scheme.
(b) Cumulation with other existing and/or approved development			

Selection Criteria	Yes/No	Briefly describe potential impact	Is this likely to result in a significant effect? Please explain
Will the proposed development lead to further consequential development or works?	No	The Proposed Development will operate as a stand-alone scheme but will support the surrounding energy infrastructure if required.	<p>The Proposed Development is located within the Hagshaw Energy Cluster Development Framework Area.</p> <p>This LDF is a Non-Statutory Plan which guides the development of large scale renewable energy projects in the Hagshaw Cluster Area.</p> <p>This framework has been adopted by East Ayrshire Council and South Lanarkshire Council.</p>
Are there potential cumulative impacts with other existing development, approved developments or developments the subject of valid applications?	Yes	<p>There are three windfarm projects currently under-construction (Douglas West Extension Hagshaw Repowering and Cumberhead West).</p> <p>In addition to the above there are a number of other BESS schemes in the locality.</p>	<p>As set out above, the application Site is part of a wider M74 Heat and Power Park and within the wider Hagshaw Energy Cluster Area and as such there are a number of energy uses which will be assessed as part of the cumulative scheme.</p> <p>The Proposed Development is considered as ancillary technology to the larger renewable energy schemes and as such is in keeping with the surrounding area.</p>

Selection Criteria	Yes/No	Briefly describe potential impact	Is this likely to result in a significant effect? Please explain
Should the application for the proposed development be regarded as an integral part of a more substantial project? If so, can related developments which are subject to separate applications proceed independently?	No	<p>Whilst part of the development site was previously included in early proposals for the Hagshaw Energy Cluster Western Expansion (HEC-WE), this area of the site was identified for hydrogen development to be determined by South Lanarkshire Council. The Site no longer forms part of the HEC-WE proposals.</p> <p>The Proposed Development is not part of the HEC WE application.</p>	The application will be submitted and assessed on its own merits.
(c) Use of natural resources, in particular land, soil, water and biodiversity			

Selection Criteria	Yes/No	Briefly describe potential impact	Is this likely to result in a significant effect? Please explain
Will the proposed development use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or are in short supply?	Yes	<p>The construction phase will use natural resources.</p> <p>VFB are reusable and recyclable.</p> <p>The operational phase seeks to enable greater production of renewable energy.</p>	<p>The construction phase will result in the temporary use of materials during construction however, these are not considered to be significant.</p> <p>The equipment will be transported to the Site as a complete unit.</p> <p>The Proposed Development seeks to reduce carbon by enabling renewable energy growth.</p>
(d) Production of waste			
Will the construction, operation or decommissioning of the proposed development produce wastes?	Yes	<p>A small quantity of waste will be produced during the construction and decommissioning phases.</p> <p>No wastes are anticipated during the operational phase.</p>	<p>Where possible wastes produced during the construction and decommissioning phases will be reused or recycled.</p> <p>No waste is anticipated during the operational phase of the development.</p> <p>No significant adverse effects are anticipated.</p>
(e) Pollution and nuisances			

Selection Criteria	Yes/No	Briefly describe potential impact	Is this likely to result in a significant effect? Please explain
Will the construction, operation or decommissioning phases of the proposed development release pollutants or any hazardous, toxic or noxious substances to the air?	No	Battery Storage Plants do not emit to air.	No, there will be no emissions to air.
Will the construction, operation or decommissioning of the proposed development lead to risk of contamination of land or water from releases of pollutants?	No	<p>The construction phase involves earth works and provision of a concrete slab which will be managed appropriately.</p> <p>The Batteries and ancillary equipment will be transported to the site as one unit.</p> <p>The operational phase of the development will not emit any pollution to land or water.</p>	No, there will be no risk to ground or water as part of the construction, operation or decommissioning

Selection Criteria	Yes/No	Briefly describe potential impact	Is this likely to result in a significant effect? Please explain
Will the construction, operation or decommissioning phases of the proposed development cause noise, vibration or the release of light?	Yes	<p>The operational phase will have PIR light sensors which will only be used during emergency maintenance.</p> <p>The battery units will not generate vibration impacts during operation.</p> <p>The battery units and inverters have the potential to generate noise.</p>	<p>The Proposed Development Site has been designed to ensure that noise emissions are minimised.</p> <p>The Proposed Development seeks to use vanadium flow batteries which substantially quieter than Lithium-Ion batteries as they require less cooling.</p> <p>The planning application will include an assessment of the noise impact of the scheme and can be controlled via a suitably worded condition.</p> <p>The Site will not be substantially lit and as such there will not be a significant adverse impact from scheme lighting.</p>
(f) Risk of major accidents and/or disasters which are relevant to the development concerned, including those caused by climate change, in accordance with scientific knowledge			
Will there be any risk of accidents during construction, operation or decommissioning of the proposed development which could affect the environment or human health?	No	The Proposed Development proposes to utilise vanadium flow batteries that are among the safest storage technologies on the grid.	<p>Vanadium Flow Batteries' are chemically and thermally robust, and safe even when exposed to external fire.</p> <p>Independent testing to the UL9540A standard has shown decisively that these batteries have no risk of thermal runaway.</p> <p>There are no other key risks associated with Battery Storage Facilities.</p>

Selection Criteria	Yes/No	Briefly describe potential impact	Is this likely to result in a significant effect? Please explain
(g) Risk to human health			
Will the construction, operation or decommissioning phases of the proposed development involve the use, storage, transport, handling or production of substances or materials which could be harmful to human health?	No	n/a	n/a

Schedule 3 Selection Criteria	Yes/No	Briefly describe potential impact	Is effect likely to result in a significant effect? Please explain
Location of the Development			
(a) Existing and approved land use			
Are there existing and/ or approved land uses in the locality of the proposed development site which could be affected by the proposed development?	No	<p>The Site is well screened from the two closest settlements of Douglas and Coalburn by a combination of intervening ridgelines and forestry plantations.</p> <p>The closest residential property is Westerhouse approximately 400m from the developable area.</p> <p>The wider area is made up of warehousing units, a CHP and wind turbines.</p>	<p>The application Site has planning consent for industrial units and is surrounded by warehousing and energy related units.</p> <p>The Proposed Development is therefore considered to be suitable for the proposed location.</p> <p>The planning application will assess the impact on the Site and surrounding land uses and, where necessary, suggest suitable mitigation measures.</p>
(b) Relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground			

Are there any areas on or around the location of the proposed development and its underground which contain important, high quality or scarce resources which could be affected by the proposed development?	Yes	To the east is a designated ancient woodland.	No, the woodland and surrounding area will be protected and enhanced.
(c) Absorption capacity of the natural environment			
Are there any areas on or around the application site that are protected under international or national legislation for their ecological, landscape, cultural heritage or other value which could be affected by the construction, operation or decommissioning of the proposed development?	Yes	Long Plantation is located along the east and south eastern boundary.	The plantation is a designated ancient woodland. The Proposed Development will not impact on this woodland and suitable buffer distances will be provided to ensure all canopies and root protection areas are protected.
Are there any other areas on or around the location which are important or sensitive for reasons of their ecology which could be affected by the proposed development? Particular attention should be paid to the following areas: wetlands, riparian areas, river mouths; (ii) coastal zones and the marine environment; (iii) mountain and forest areas; (iv) nature reserves and parks.	Yes	<p>The nearest nature conservation sites are as follows:</p> <p>Coalburn Moss Special Area of Conservation and SSSI is located 2.7km to the north and was selected for its bog-moss habitat.</p> <p>Millers Wood SSSI is 3.2km to the southwest and was selected for its woodland habitat.</p> <p>Birkenhead Burn SSSI is located 7km to the northwest and was selected for fish species.</p>	Due to separation distance and lack of functional ecological or hydrological connectivity, it is unlikely that the Proposed Development would impact these designated sites and their interest features.

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		<p>Kennox Water SSSI is 7.3km to the southwest and as selected for geological interest features.</p> <p>Tinto Hills SSSI is 9km to the northeast and selected for its upland habitats.</p> <p>Clyde Valley Woodland NNR is located 9.8km to the north east and was selected for its woodland habitats.</p>	
Are there any areas on or around the location which are used by protected, important or sensitive species of fauna or flora which could be affected by the proposed development?	Yes	Previous work associated with the Hagshaw western expansion have identified potential for badger, pine martin, water vole and otter.	The appropriate surveys will be undertaken and, if required, measures introduced to ensure any species present are protected.
Are there any groundwater source protection zones or areas that contribute to the recharge of groundwater resources which could be affected by the proposed development?	No	n/a	n/a
Are there any areas on or around the location of the proposed development where environmental quality standards are already exceeded which could be affected by the proposed development?	No	n/a	n/a

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Are there any areas on or around the location which are densely populated which could be affected by the proposed development?	No	The closest settlements are Coalburn and Douglas approximately 1.5km north and south respectively.	These settlements are well screened by intervening topography and woodland plantation.
Is the proposed development in a location where it is likely to be visible to many people?	No	The Site will be screened by topography and intervening woodland planting.	The planning application will be supported by a Landscape and Visual Impact Assessment. Viewpoint locations will be agreed with South Lanarkshire Council prior to undertaking the assessment.
Are there any routes or facilities on or around the location which are used by the public for access to recreation or other facilities, which could be affected by the proposed development?	Yes	There are two aspirational core paths along eastern and northern edges of the Site.	These Core Paths already transverse through consented industrial and energy infrastructure. The Proposed Development has planning consent for industrial uses. It is therefore concluded that the existing context and backdrop of these paths will not change as a result of the Proposed Development. The impact on the aspirational core paths will be assessed within the Landscape and Visual Impact Assessment and any path diversions appropriately identified.
Are there any areas of local landscape or scenic value on or around the location which could be affected by the proposed development?	Yes	Douglas Valley Special Landscape Area adjoins the southern boundary of the Site.	The majority of the SLA is screened from the Proposed Development by intervening topography and landscape. The area already has consent for industrial uses and as such the context of this area is already considered to be industrial.

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			It can therefore be concluded that there will not be any significant adverse impact on this designation.
Are there any areas of features of historic, cultural or archaeological value on or around the location which could be affected by the proposed development?	No	<p>There are no registered battlefields or parks and gardens in close proximity to the Development Site.</p> <p>The nearest listed building is associated with West Town Statue, at West Toun, approx. 600m to the north of the Site and the next closest is associated with the Category B Birkhill Farm and stable wingat Cairnhouses, approx. 2.5km to the north of the development area.</p> <p>The Proposed Development Area is part of a former opencast mine and as such archaeological remains are considered unlikely.</p>	Due to the distances and intervening screening and topography, impacts on heritage assets are considered unlikely.
Is the proposed development location susceptible to earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions?	No	<p>The Application Site forms part of the former Dalquhandy Opencast Coal Site which operated between 1988 and 2004.</p> <p>The Proposed Development Site was not subject to coal</p>	<p>A Preliminary Risk Assessment (PRA) will be undertaken and submitted alongside the planning application to ensure that any coal mining risk is managed appropriately.</p> <p>A Flood Risk Assessment and associated drainage strategy will be undertaken to ensure</p>

		<p>extraction but instead were principally used for coal stocking and associated coal dispatch operations. There are some redundant building foundations located within the western extent of the Site and to the east of the Site where the coal Disposal Point (DP) was sited.</p> <p>The Proposed Development is not located in an area of flood risk.</p>	<p>that the Proposed Development will not represent a flood risk on or off site.</p>
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Schedule 3 Selection Criteria

3. Characteristics of the Potential Impact

(a) Magnitude and special extent of the impact (for example geographical area and size of the population likely to be affected)

Will the effect extend over a large geographical area, affecting many people and resulting in social changes, e.g. in demography, traditional lifestyles, employment?

No, any potential effects will be localised in magnitude.

(b) Nature of impact

Is the development located within or close to any other areas which are protected under international, EU, or national or local legislation for their ecological, landscape, cultural or other value, which would be significantly affected by the development?

No, the Proposed Development is not located in or in close proximity to any areas of protection.

(c) Transboundary nature of the impact

Will there be any potential for transboundary impact?

No, Battery Storage Schemes do not create any transboundary effects, with the exception of landscape. Any landscape impacts

are likely to be localised in nature.

(d) Intensity and complexity of the impact

Is there a risk that environmental standards will be breached?

No, Battery Storage Facilities do not emit any potential pollutants

(e) Probability of the impact

Is there a high or low probability of a potentially highly significant effect?

There is a low probability of the Proposed Development having a highly significant effect.

(f) Expected onset, duration, frequency and reversibility of the impact

Will the effect be permanent, continuous or irreversible?

Any impacts during construction or decommissioning will be temporary.

Impacts associated with landscape may be permanent (for the lifetime of the project) but will be mitigated against.

(g) Culmination of the impact with the impact of other existing and/or approved development

Will the Project have cumulative effects, due to its proximity to other existing or planned Projects with similar effects?

No, the impact of the Proposed Development will be localised and screened by intervening topography and plantation woodland.

The Proposed Development is part of a wider energy cluster which it will form part of.

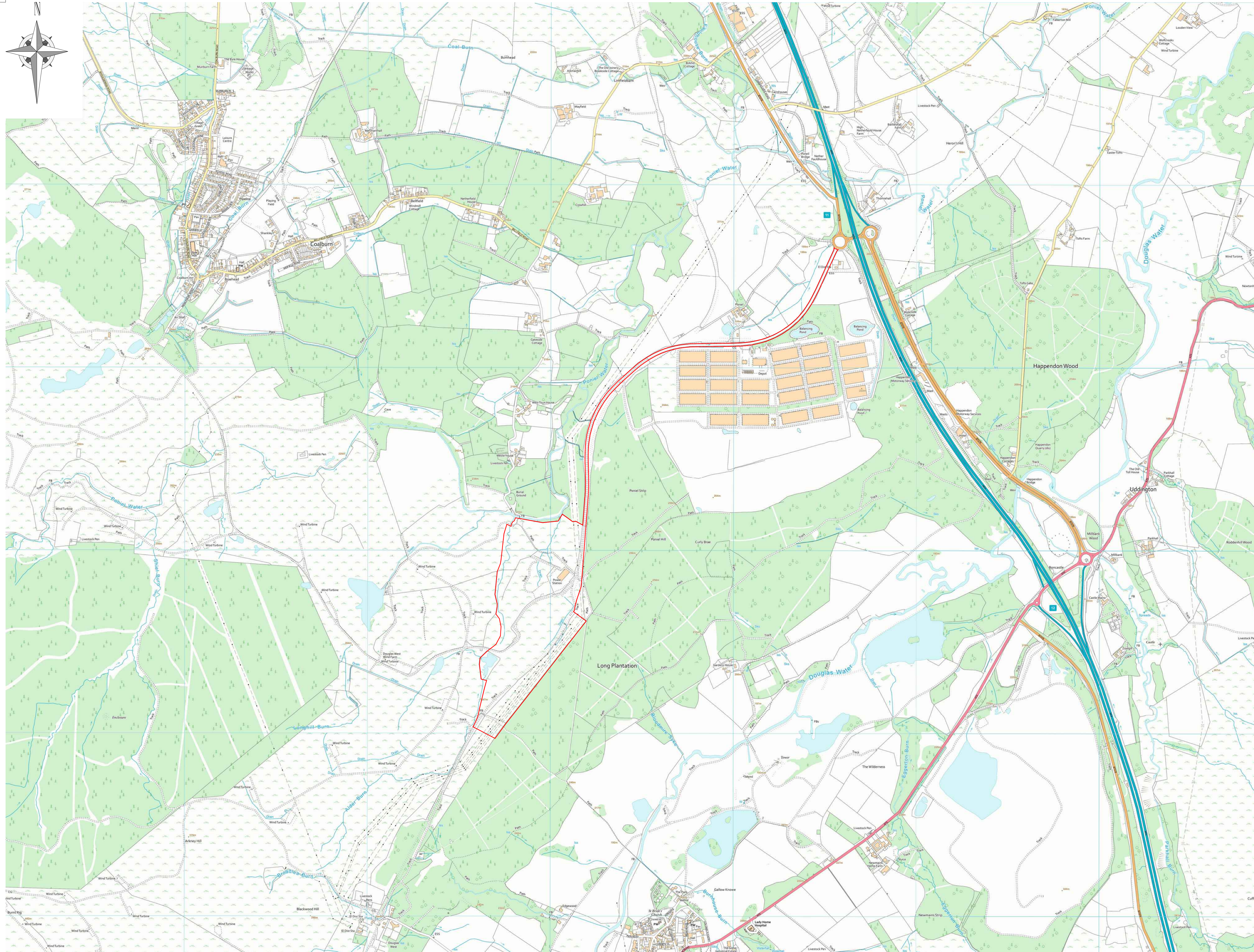
(h) Possibility of effectively reducing the impact

Will there be any significant adverse effects on any aspect of the environment during the construction and operational phases of the development, has the developer included mitigation measures to avoid, prevent, repair or reduce the potential impact?

The Proposed Development will not have a significant adverse effect on the environment during the construction or operational phases of the Proposed Development.

EIA is required / EIA is not required (*Delete as required*)

Appendix 2: Plans



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Revisions:				
Revision	Date	Revision Notes	Drawn	Inspected
01	20.02.25	First Issue	JC	TP

LEGEND:

PLANNING APPLICATION BOUNDARY

Status:

PLANNING

Project:

Hagshaw LDES

Client:



AARDVARK EM Limited
Higher Ford, Wiveliscombe
Somerset TA4 2RL

Tel: +44 (0) 1984 624989
Mob: +44 (0) 7833 796284

Drawn by:



CADmando Design & Draughting Solutions Ltd
Unit B, The Courtyard, Severn Drive, Tewkesbury Business
Park, GL20 8GD

Drawing Title:

Site Location Plan

Drawn:

Checked:

First Issued:
20.02.2025

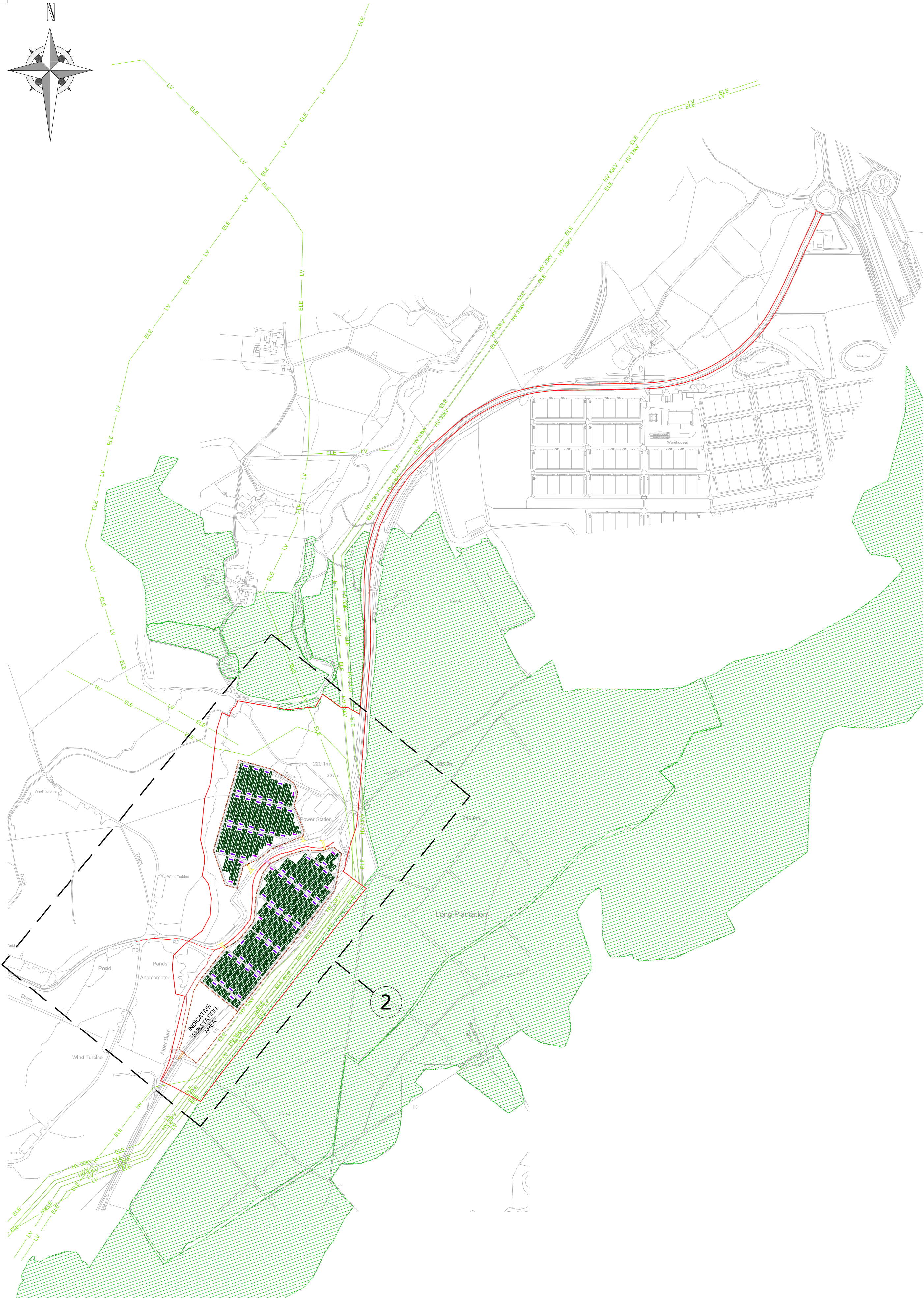
Project Code:

Drawing Number:

Sheet Size:

Scale:

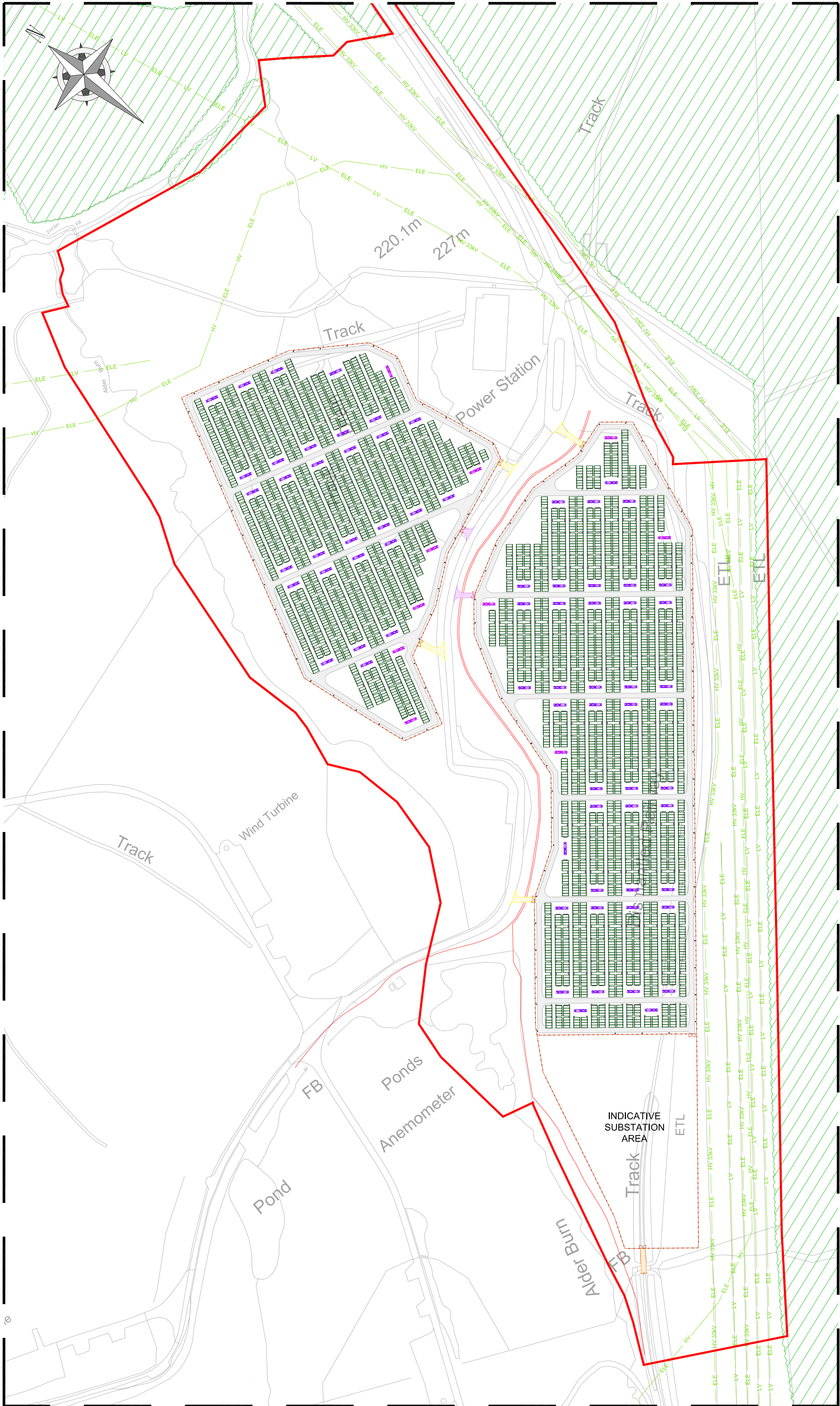
Revision: 01



1

HAGSHAW - INDICATIVE SITE LAYOUT PLAN

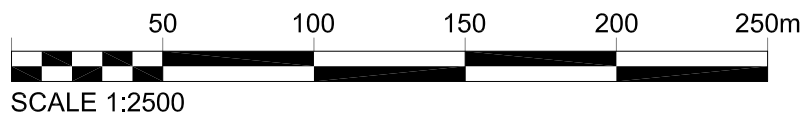
Scale: 1:7500@A1



2

LDES SITE DETAIL

Scale: 1:2500@A1



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Revisions:				
Revision	Date	Revision Notes	Drawn	Inspected
01	20.02.25	First Issue	JC	TP
02	21.02.25	Minor Site Amendments	JC	TP

LEGEND:	
	PLANNING APPLICATION BOUNDARY
	DNO ACCESS
	SITE ACCESS
	INTERNAL ACCESS
	EMERGENCY ACCESS
	PERIMETER FENCELINE
	SPT CABLE
	ELE - LV - ELE - LV - EXISTING OH LV LINE
	ELE - HV - ELE - PROPOSED KENNOXHEAD OH LINE
	ELE - HV 33kV - ELE - EXISTING OH 33kV LINE
	EXISTING VEGETATION

SITE INFRASTRUCTURE:	
	TRIPLE STACKED BATTERY
	SINGLE PCS INVERTER
	DOUBLE PCS INVERTER
	STRING CONTROL UNIT
	DC COMBINER
	AC DISTRIBUTION PANEL
	CCTV CAMERA

Status:

PLANNING

Project:

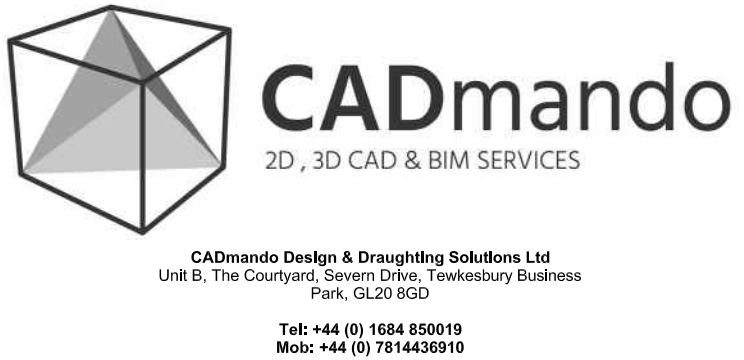
Hagshaw LDES

Client:



AARDVARK EM Limited
Higher Ford, Wiveliscombe
Somerset TA4 2RL
Tel: +44 (0) 1984 624989
Mob: +44 (0) 7833 796284

Drawn by:



Drawing Title:

Indicative Site Layout Plan

Drawn:	JC	Checked:	TP	First Issued:	20.02.2025
Project Code:	AEM047	Drawing Number:	PL-01		
Sheet Size:	A1	Scale:	A:N	Revision:	02