



FUTURESECOLOGY

JT Energy Storage Ltd. (Windel Energy)

BESS Egremont, Cumbria

SHADOW HABITAT REGULATIONS ASSESSMENT (sHRA): Stage 2

APPROPRIATE ASSESSMENT

Report Reference Number: FE496 sHRA01

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Futures Ecology Ltd

Carrwood Park, Swillington Common Farm, Selby Rd, Leeds LS15 4LG

Company Number: 12125083

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REV	Issue Status	Author or Reviewer	Name & Qualifications	Position	Date
-	Draft 1	Author	A. Eales BSc (Hons)	Ecology Director	07.08.2025
		Reviewer	j. Eales BSc	Managing Director	

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1.0 INTRODUCTION

- 1.1 The following report has been prepared by Futures Ecology Ltd. on behalf of JT Energy Storage Ltd. (Windel Energy) in support of a planning application to Cumberland Council to construct and operate a c.30MW Battery Energy Storage system (BESS) with associated infrastructure, landscaping and buried cable route. The Site is located on land to the East of Dalzell Street, near Woodend CA24 3LF
- 1.2 This report provides information for the Competent Authority (Cumberland Council) ('the Council') to carry out a Habitat Regulations Assessment in relation to the River Ehen SAC / SSSI with regard to a proposed development project.
- 1.3 This assessment is part of the ecology scope of works Futures Ecology were commissioned to provide and, as such, this report should be read in conjunction with the following reports:
- Ecological Impact Assessment (Futures Ecology Ltd., FE496/EcIA01, July 2025)
 - Biodiversity Impact Assessment (Futures Ecology Ltd., FE496/BIA01, May 2025)
 - Wintering Bird Report (Futures Ecology Ltd., FE496/WBS01, May 2025).

SITE CONTEXT

- 1.4 The Site comprises land to the east of Dalzell Street between the villages of Bigrigg, Cleator and Moor Row (NGR: E: 300842, N: 513769). The larger settlements of Egremont, Cleator Moor and Whitehaven are all located within a 5km radius of the Site. The Lake District National Park boundary lies approximately 2.7km to the north-east. The Site is wholly located within the administrative boundary of Cumberland Council.
- 1.5 The Site boundary including the underground cable route to the point of connection at Woodend substation measures 1.18ha. The proposed cable route will follow Dalzell Street southwards to the point of connection at Woodend substation.
- 1.6 The Site area, excluding the cable route, wherein the Proposed Development will be located will be approximately 0.58ha. The Site area for the triangular field to the northern portion of the Site to be used for BNG purposes is 0.32ha.
- 1.7 The Site comprises pasture land, which has most recently been used for the grazing of livestock. The Site is split across two fields, separated by an access track. The Site boundaries are demarcated by hedgerow and scattered trees.
- 1.8 Access to the site is via the existing track taken from Dalzell Street, a local road. Dalzell Street connects with the A5086 and the A595, approximately 1-1.25km to the south of the Site.
- 1.9 The Site is adjoined to the eastern boundary by National Cycle Route 72, a long-distance route, which connects Ravenglass, Cumbria with South Shields, Tyne & Wear. To the north and south of the Site is agricultural land. To the western boundary is Dalzell Street.
- 1.10 Habitats in the main BESS Site comprise semi-improved grassland with some scattered scrub, a short treeline, and a dry ditch. The cable route is entirely hardstanding. The main

BESS Site lies directly west of a narrow stretch of woodland along an embankment, through which the long-distance National Cycle Route 72 passes.

- 1.11 Landscape immediately around the Site comprises mostly agricultural land, and beyond are the small rural villages of Moor Row (c. 480m northwest), Cleator (c. 675m east), and Bigrigg (c. 732m west).

DEVELOPMENT PROPOSALS

- 1.12 Proposals comprise the clearance of the arable land to facilitate the construction of a 30MW Battery Energy Storage System (BESS) development with associated ancillary structures, hardstanding, landscape screening and biodiversity enhancements. A buried cable route will be installed along Dalzell Street to the point of grid connection at the existing Woodend Substation to the south of the Site.
- 1.13 Surface water from the main BESS Site will be connected to the onsite ditch D1a, which may be linked hydrologically to the River Keekle via offsite ditch D1b.
- 1.14 The construction phase is estimated to be 6 months. Construction hours would be controlled by planning condition and are currently expected to take place between the hours of 08:00 to 18:00, on weekdays and Saturdays. No construction related activity would take place on Sundays or bank holidays. Any works outside of these hours would be limited to emergency works, unless otherwise agreed in writing with the Council.
- 1.15 A temporary construction lay down area will be created during the construction phase, to the west of the proposed substation compound to facilitate ease of access. The compound will house containerised office cabins, mobile welfare units, canteens, storage and waste skips, parking areas and space for storage, download and turning area.
- 1.16 The compound will be surrounded by temporary security fencing, this is typically Heras style fencing, which is secured with precast concrete blocks rather than posts knocked into the ground.
- 1.17 Temporary lighting of the compounds may be necessary during construction hours in winter months, using mobile lighting towers but will be limited to the construction hours outlined above.
- 1.18 On completion of the main construction works, the compound area will be fully restored and landscaped.
- 1.19 A temporary wheel washing facility would be installed on site to prevent transfer of soil onto nearby public roads and discharging into highway drains, if found to be necessary.
- 1.20 For the purpose of this impact assessment, the Site is considered to constitute two elements. See below for further details regarding the Proposed Development.

BESS Site

- 1.21 Two fields separated by an access track comprising the main BESS construction area and associated landscape buffers within the southern field, and the biodiversity enhancement area in the northern field.

- 1.22 Construction within the BESS construction area will have permanent effects on the baseline habitats and as such, the area has been considered in relation to short-term construction phase impacts as well as long-term / permanent effects of the Proposed Development.

Cable Route

- 1.23 The installation of a buried cable to the point of grid connection. This will be within land comprising entirely hardstanding.
- 1.24 It is anticipated that following completion of the installation works no habitats are to be permanently impacted and all will be reinstated to their baseline condition within 2 years of completion. As such, this element of the scheme has been considered in relation to temporary / construction phase impacts.

OBJECTIVES

- 1.25 This document provides information to determine whether any of the proposals would result in a Likely Significant Effect (LSE) both alone and in-combination with other plans or projects on the integrity of the designated site. Where an LSE is anticipated, further assessment in the form of an Appropriate Assessment is provided. The assessment will determine whether the proposal, alone or in-combination, will result in an adverse effect on the integrity of the designated site following the implementation of mitigation measures.

2.0 HABITAT REGULATIONS ASSESSMENT

LEGISLATIVE CONTEXT

The Conservation of Habitats and Species Regulations 2017 (as amended)

- 2.1 Under Regulation 63 of Habitat Regulations it states that:
- 1) *A competent authority, before deciding to undertake, or give any consent, permission, or other authorisation for, a plan or project which;*
 - a) *Is likely to have a significant effect on a European site or European offshore marine site (either alone or in combination with other plans or projects), and*
 - b) *Is not directly connected with or necessary to the management of that site, must make an appropriate assessment of the implications of that site in view of that site's conservation objectives.*
 - 2) *A person applying for any such consent, permission or other authorisation must provide such information as the competent authority may reasonably require for the purposes of the assessment or to enable them to determine whether an appropriate assessment is required.*

- 3) *The competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time the authority specify.*

POLICY

Copeland Local Plan

- 2.2 The new Cumberland Local Plan is currently in production, as such, all planning decisions are made in accordance with the Copeland Local Plan (2021-2039)¹ adopted in 2024. Policy N1: Conserving and Enhancing Biodiversity and Geodiversity

Where harm remains to a National Site Network, Ramsar site, or functionally linked land, or Site of Special Scientific Interest, development will only be approved where it can be demonstrated that there are imperative reasons of overriding public interest. In such cases, compensatory measures must ensure the overall public interest. In such cases, compensatory measures must ensure the overall coherence of the network of European or National Sites as a whole is protected.

3.0 METHODOLOGY – THE HRA PROCESS

- 3.1 This shadow HRA has been undertaken following guidance provided by (EC, 2001)², (Natural England, 2021)³ and (DEFRA, 2023) which summarises the process into four distinct stages that should be followed in order for a Competent Authority to discharge their duties. The four stages are as follows:

- Stage One: Screening - also known as the Test of Likely Significant Effect (TOLSE). If the Competent Authority cannot screen out a likely significant effect LSE either alone or in combination with other plans or projects. An appropriate assessment will be required.
- Stage Two: Appropriate Assessment - the Competent Authority will only agree to project / plans that will not affect the Integrity of a European Site also known as the "Integrity Test". Any mitigation is also considered at this stage of the process.
- Stage Three: Where a proposal fails the integrity test, the competent authority can allow proposals if 3 legal tests are passed:
 - i) There are no feasible alternative solutions that would be less damaging or avoid damage to the site.
 - ii) The proposal needs to be carried out for imperative reasons of overriding public interest.

¹ Copeland Borough Council (2024) Copeland Local Plan (2021 – 2039) accessed August 2025

https://www.copeland.gov.uk/sites/default/files/attachments/copeland_local_plan.pdf

² European Commission Environment DG (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC Oxford.

³ Natural England (2023) Habitat Regulations Assessments: Protecting a European Sites accessed June 2025

<https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site#follow-hra-principles>

- iii) The necessary compensatory measures can be secured.
- 3.2 Due regard has also been given to the conclusions of the Local Plan Update Habitat Regulations Assessment (HRA) (ERYC, 2025) commissioned by East Riding of Yorkshire Council which summarised in the East Riding Local Plan Update 2020 – 2039 Strategy Document (April 2025)⁴.
- 3.3 HRAs are required for all developments and strategic plans that have the potential to impact upon internationally designated sites. The assessment follows a precautionary approach in considering the effects of development projects or plans on the qualifying features of any European site. As such, where uncertainty exists as to whether any effects are likely to be significant the project or plan will be subject to stage 2.
- 3.4 The integrity of a European Site is defined as; "The coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and / or the levels of populations of the species for which it was designated." (Natural England, 2021)⁵.

STAGE 1 - SCREENING

- 3.5 The Screening stages identifies likely impact pathways resulting from the development proposals and their likely effects on a nearby European Site(s).
- 3.6 Each development impact is considered, and its pathway assessed to understand the likelihood of that impact resulting in an LSE.
- 3.7 When screening in / out European sites and their features of interest, it needs to be established whether there is a pathway between the likely development impact and the possible effect it may have on the qualifying features of the European Sites. Where no pathway is identified from the proposed development, they are therefore not considered further in the assessment.
- 3.8 Where a pathway is identified the screening methodology considered the sensitivity of qualifying features in question and where an LSE is identified the impact is considered further in stage 2.
- 3.9 If it is considered that there are no LSE as a result of the impact pathway identified either alone or in combination with other plans or projects, the proposed development may proceed.

STAGE 2 - APPROPRIATE ASSESSMENT

- 3.10 An appropriate assessment is required when a project or plan:
- Is likely to have a significant effect on a European site either alone or in combination with other projects or plans; and
 - Is not directly connected with or necessary to the management of the site.

⁴ East Riding of Yorkshire Council (2025) East Riding Local Plan Update 2020 – 2039 Strategy Document Accessed June 2025
<https://www.eastriding.gov.uk/images/pages/local-plan-update/LPU%20-%20Strategy%20Document%20Update%20Adopted%202025.pdf>

⁵ Natural England (2023) Habitat Regulations Assessments: Protecting a European Sites accessed June 2025
<https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site#follow-hra-principles>

- 3.11 Stage 2 considers the LSE in more detail as well as appropriate mitigation measures to offset any adverse impacts on the integrity of the European Site. If there is no certainty that there is no adverse impact Stage 3 is required.
- 3.12 The methods used to inform Stage 2 are determined by the likely effects, qualifying features, conservation objectives and conservation status of the European Sites potentially affected. Section 4 below details the European Site within the Zone of Influence of the proposed development and the sites qualifying features.
- 3.13 For the purpose of this assessment the development proposals have not been considered beyond Stage 2.

CONSULTATIONS

- 3.14 Comments were received from Natural England during consultation with Copeland Borough Council in relation to planning application Ref: 4/25/2180/0F1.

As construction will be taking place in close proximity to the River Ehen Special Area of Conservation, a Construction Environmental Management Plan (CEMP) will need to be secured through condition to detail the pollution prevention measures that will be implemented during the works. Appropriate pollution prevention guideline measures would include material and machinery storage, biosecurity and the control and management of noise, fugitive dust, surface water runoff and waste to protect any surface water drains and the river from sediment, and pollutants such as fuel and cement.

4.0 RELEVANT DESIGNATED SITES

QUALIFYING FEATURES

- 4.1 There are four internationally designated sites within 10km of the application site, those being;
- The River Ehen SAC / SSSI is located c.115m of the Cable Route and 815m of BESS Compound in the west,
 - Solway Firth SPA is situated at its closest point (the main BESS area) 6.22km northwest of the Site boundary.
 - Lake District High Fells SAC is situated at its closest point (the main BESS area) 8.6km northeast of the Site boundary,
 - River Derwent & Bassenthwaite Lake SAC is situated at its closest point (the main BESS area) 8.6km northeast of the Site boundary.
- 4.2 Consultation with MAGIC online resource confirms that the Site lies within the Impact Risk Zone (IRZ) for River Ehen (Ennerdale Water to Keekle Confluence) SSSI. Given that part of the proposals comprise installation of cabling to connect the BESS scheme to the National Grid the proposals do fall within a category that would require local authority consultation with Natural England due to their potential impact, this being:

- Pipelines and underground cables, pylons and overhead cables (excluding upgrades and refurbishment of existing network).

4.3 With the exception of the River Ehen SAC / SSSI the remaining European protected sites were screened out of Likely Significant Effects (LSE) in the Stage 1 Screening Assessment included within the Ecological Impact Assessment (EclA) (Futures Ecology Ltd. FE496 EclA01) as well as consultation with the local authority and Natural England.

The River Ehen is fed by Ennerdale Water and flows 20km before discharging into the Irish Sea. It is designated as a Special Area of Conservation (SAC) under the Habitat Regulations and also considered a nationally important Site of Special Scientific Interest (SSSI). The designated stretch of river, between Ennerdale Water and the confluence with the River Keekle supports outstanding populations of freshwater pearl mussel *Margaritifera margaritifera*. A summary of the Sites' qualifying features are provided in Table 1 below.

Table 1 - Summary of Qualifying Features for River Ehen SAC / SSSI

Site Name	Designation	Proximity to Site (approximate)	Description
River Ehen	SAC; SSSI	110m southeast	The River Ehen is a relatively small, oligotrophic river. It supports the largest population of freshwater pearl mussels (<i>Margaritifera margaritifera</i>) in England, a species critically dependent on the presence of Atlantic salmon (<i>Salmo salar</i>) and trout for its life cycle. The river's clear, nutrient-poor waters and well-oxygenated gravel beds provide ideal habitats for these mussels and spawning grounds for salmonids.

CONSERVATION OBJECTIVES AND THREATS / PRESSURES

4.4 Table 2 provides a summary of the conservation objectives for the River Ehen SAC / SSSI. An evaluation of the threats and pressures facing the Sites' integrity is also provided.

Table 2 – Summary of Conservation Objectives and Known Threats and Pressures upon The River Ehen SAC / SSSI.

Site	Conservation Objectives	Threats and Pressures as listed on The Lower Derwent Valley Site Improvement Plan (SIP) ⁶
SAC ⁷	Ensure that the SAC is maintained or restored as appropriate, and to ensure the SAC contributes to achieving the Favorable Conservation Status (FCS) of its qualifying features by maintaining or restoring; -The extent and distribution of the habitats of qualifying species. -The structure and function of the habitats of qualifying species.	The SIP for the River Ehen SAC / SSSI. The following are listed as pressures or direct threats to the SAC: • Water Abstraction – Affect water levels resulting reduced flow and draught events. This can effect feeding, respiration and breeding. • Low Breeding Success / Poor Recruitment – Limited recruitment on the Ehen to sustain the population long-term. • Siltation – From tributaries, bank erosion, runoff from fields and road drains. Fine sediment settles over mussel

⁶ River Ehen Site Improvement Plan accessed August 2025 <https://publications.naturalengland.org.uk/publication/6203335036108800>

⁷ European Site Conservation Objects for the River Ehen Special Area of Conservation. Site Code UK0030057 accessed August 2025 <https://publications.naturalengland.org.uk/publication/4544671464292352>

Site	Conservation Objectives	Threats and Pressures as listed on The Lower Derwent Valley Site Improvement Plan (SIP) ⁶
	-The supporting processes on which the habitats of the qualifying species rely. -The populations of qualifying species, and -The distribution of qualifying species within the site.	beds and gravel for juvenile mussel and salmon spawning. Can reduce availability of oxygen. • Water Pollution – Diffuse Water Pollution from Agriculture (DWPA). The silt and fine sediment from DWPA can smother mussel beds. Nutrient enrichment from slurry and fertilizers can accelerate plant growth decreasing oxygen. Discharge from septic tanks, sewage overflow and road drains. The silt and fine sediment smothers mussel beds and spawning gravels. Nutrient enrichment from septic tanks accelerate plant and algae growth leading to decreases in oxygen. • Inappropriate Weirs Dams and Other Structures – Weirs alter the hydromorphology and natural geomorphology of the river having a negative effect both up and down stream. Freshwater mussels rely on healthy salmon populations which the presence of weirs can impact their lifecycle. • Agricultural Management Practices – Unmanaged riparian woodland can cause blockages and obstacles in the river damaging mussel beds. Unfenced bankside habitat are damaged by overgrazing and poaching causing erosion, siltation and nutrient increase. • Invasive Species – Himalayan balsam and Japanese knotweed are found along the river. These species dominate the vegetation and leave bare soil susceptible to erosion during winter. • Forestry and Woodland Management – Causes run-off into Ennerdale Water affected water quality. • Public Access / Disturbance – Recreational disturbance leading to effects on interest features through trampling, disturbance and pollution. • Transportation and Service Corridors – Maintenance of access tracks, roads, pipelines and drainage has to be undertaken on a regular basis to prevent collapse and erosion causing fine sediment to enter the SAC.

5.0 STAGE 1: SCREENING OF LIKELY SIGNIFICANT EFFECTS

- 5.1 The following assessment has had regard to the most up-to-date proposal plan Site Layout Plan (Sol Architecture, April 2025, Plan reference: 030.301.05). Mitigation, including any inherent mitigation which may be considered to be part of biodiversity net gain provision, has not been considered in the Stage 1 assessment.
- 5.2 The Proposed Development was subject to a Stage 1 Screening Assessment or 'Test of Likely Significant Effect' to assess the potential for impact pathways having an effect on the qualifying features of the European Sites.
- 5.3 The ecological pathways have been identified based on those typically associated with developments of this nature, from the information detailed within the conservation objectives and SIP and based on recommendations from Natural England and Copeland Borough Council's recommendations.

- 5.4 The Proposed Development is not required for the management of The River Ehen SAC / SSSI and is not being primarily undertaken for the benefit of nature conservation.
- 5.5 The application Site comprises a BESS Compound c.0.58ha with a further field c.0.32ha will be used for on-site delivery of biodiversity net gain measures. Both fields comprise pasture grassland used for grazing livestock. The Site is located on land to the east of Dalzell Street between the villages of Bigrigg, Cleator and Moor Row. A Cable Route is proposed to connect the BESS facility to the National Grid Woodend Substation which will be c.0.9 km in length along Dalzell Street within the existing carriageway.
- 5.6 The Site was first assessed on 23rd February and a follow up survey was undertaken on 15th April, 2025.

ECOLOGICAL PATHWAYS SCREENED OUT

- 5.7 Following the case of *People Over Wind C-323/17* (Court of Justice of European Union, 12 April 2018). The screening stage is to be completed in the absence of mitigation measures for the proposed development, and based upon whether risk of a significant impact can be excluded based upon current scientific knowledge.
- 5.8 Tabel 3 provides details potential impact pathways that have been screened out as well as the justification for doing so for the River Ehen SAC / SSSI.

Table 3 – Summary of ecological impacts screened out for further assessment in relation to the River Ehen SAC / SSSI.

Impact Pathway	Assessment	Screening Conclusion
Direct Habitat Loss / Damage to SACs/SPAs	The River Ehen SAC / SSSI does not run through the application site. No qualifying habitats of the River Ehen SAC / SSSI occur within the application site. All construction works are over 110m.	No Likely Significant Effect
Air Quality (During Construction Phase)	Pollution and contamination incidents associated with construction work are not anticipated as the construction area is over 50m from the European sites (IAQM, 2014) ⁸	No Likely Significant Effect
Air Quality (Post Development)	An increase in vehicle traffic could increase nitrogen deposition. However, pollution from road traffic is unlikely to be significant beyond 200m from the road itself (The Design Manual for Roads and Bridges DMRB ⁹ and Natural England, 2018) ¹⁰ . Furthermore, the Site will be unmanned, monitored remotely by CCTV and will only require a single maintenance visit per week (i.e. 1 vehicle). The DMRB and Natural England guidance also highlight the need for further assessment where changes to the road network or traffic volumes might increase daily traffic flows by 1,000 Average Annual Daily Traffic (AADT). Given the expected levels of traffic associated with the proposed development, any additional traffic is likely to be imperceptible.	No Likely Significant Effect

⁸ Institute of Air Quality Management (IAQM) (2014) Guidance on the assessment of dust from demolition and construction Version 1.1. Published February 2014. <https://iaqm.co.uk/text/guidance/construction-dust-2014.pdf>

⁹ Design Manual for Roads and Bridges <https://www.standardsforhighways.co.uk/dmr>

¹⁰ Natural England (2018) Natural England's approach to advising competent authorities on the assessment of road traffic emissions under Habitat Regulations. <http://publications.naturalengland.org.uk/publication/4720542048845824>

Impact Pathway	Assessment	Screening Conclusion
Noise / Light / Visual Disturbance on SACs qualifying (During Construction Phase)	Application site considered sufficiently distanced from SAC to rule out potential disturbance of SACs qualifying features	No Likely Significant Effect
Recreational Pressure / Visitor Disturbance on qualifying features associated with the SACs/SPAs	There is not expected to be an increase in recreational pressure once the Proposed Development is complete due to the nature of the development. The Site will remain under private ownership and therefore outside the public realm.	No Likely Significant Effect

ECOLOGICAL PATHWAYS SCREENED IN

- 5.9 The following table summarises the potential impact pathways identified that have been screened in, and the results of their screening assessment.

Table 4 – Summary of Impact Pathways and HRA Screening Conclusions for the River Ehen SAC / SSSI

Impact Pathway	Assessment	Screening Conclusion
Water Quality (During Construction)	The application Site is potentially hydrologically linked to the SAC via drainage ditches. Pollution and contamination incidents associated with hydrological effects.	A low risk of effect, therefore, cannot be fully screened out without implementation of some mitigation measures. Stage 2: Appropriate Assessment Required.
Water Quality (Post Development)	Pollution and contamination from surface water runoff following development is considered unlikely. Further potential contamination from fire water. No changes in hydrology are expected as the entirety of the Site will maintain surface water discharge at greenfield run-off rate. Potential for hydrocarbon run off from vehicles visiting site.	A low risk of effect, therefore, cannot be fully screened out without implementation of some mitigation measures. Stage 2: Appropriate Assessment Required.

POTENTIAL IN-COMBINATION EFFECTS

- 5.10 A review of the Copeland Borough Council Planning Portal identified a small number of homeowner applications and small-scale residential schemes in the past five years. Given the small scale of the identified projects and that they all occur within existing residential areas, no potential in-combination effects are anticipated in relation to these proposals.

SCREENING CONCLUSION

- 5.11 As a result of the Stage 1 screening assessment one potential impact pathways has been identified that has the potential for an adverse effect on the integrity of the European site:
- Potential Water Quality impacts during the construction and operational phases.

6.0 STAGE 2: APPROPRIATE ASSESSMENT

- 6.1 The AA is undertaken under the assumption that a series of mitigation measures will be undertaken and relevant to the development proposals.
- 6.2 The following provides a summary of mitigation measures proposed as part of the proposed development and have been designed to address potential effects on the European site as well as ecological features within the application site.
- A Construction Environmental Management Plan (CEMP) will be produced and implemented throughout all construction activities. The CEMP will be produced by the Ecological Consultant prior to the start of works and will specify a range of measures to avoid / control impacts on the natural environment.
 - Habitat Management & Monitoring Plan (HMMP) setting out the long-term Site management requirements of the Biodiversity Net Gain provision.
 - Construction phase surface water management plan, to control surface water runoff discharge rates and water quality during the construction phase.
 - Flood Risk Assessment and Drainage Strategy KRS Enviro May 2025 (Ref: KRS.0536.014.R.001.C)
 - Drainage Addendum KRS Enviro July 2025 (Ref July 2025).

IMPACT PATHWAYS

- 6.3 This section provides details of the impact pathways identified during the screening stage and mitigation measures proposed to ensure no adverse effects on the integrity of the designated sites.

Water Quality (Construction Phase) in Relation to River Ehen SAC / SSSI

- 6.4 To avoid potential adverse effects to the integrity of the designated site during the construction phase a CEMP will be implemented. The CEMP will adhere to current Pollution Prevention Guidance (PPG)¹¹, Government Guidance¹² and industry standards¹³ with measures put in place during the construction phase to ensure pollution, dust, sediment and erosion control are adequately managed such that there will be no detrimental impact on the designated site.
- 6.5 This mitigation will be secured by condition and will include the following measures:

¹¹ Pollution Prevention Guidelines PPG1: Understanding Your Environmental Responsibilities (July 2013)

Pollution Prevention Guidelines PPG6: Working at construction and demolition sites (March 2021)

Pollution Prevention Guidelines PPG7: The Safe operation of refuelling facilities (July 2011)

Pollution Prevention Guidelines PPG8: Safe Storage and disposal of used oils (February 2004)

Pollution Prevention Guidelines PPG13: Vehicle washing and cleaning (July 2007)

Pollution Prevention Guidelines PPG21: Incident Response Planning (March 2009)

Pollution Prevention Guidelines PPG22: Dealing with Spills (April 2011)

¹² <https://www.gov.uk/guidance/storing-oil-at-a-home-or-business>, May 2015.

<https://www.gov.uk/guidance/manage-waste-on-land-guidance-for-land-managers>, May 2014.

¹³ BS 8582:2013 Code of Practice for surface water management for development sites

Silt/Sediment & Erosion Control

- Excavated material will either be stored appropriately, away from ditches/watercourses and any temporary surface water management system (e.g. temporary lagoon) to be used elsewhere on the wider site or it will be removed from site to a licensed facility.
- To limit the volume of runoff reaching the exposed ground, runoff diversion and interception devices will be placed upstream. This will help control sediment in surface water run off leaving Site or entering drainage. Silt bunds will be placed downstream of exposed ground to intercept any runoff.
- In the event of exceptional rainfall (i.e. severe weather event during excavation works) and the need to dewater excavations, this will be undertaken in line with Environment Agency Regulatory Position Statement - Temporary dewatering from excavations to surface water, all discharges will be pumped through site drainage to remove sediments, emergency arrangements will be to hire in a silt filtration unit.
- The placement of gully guards (or standard protection, straw and terram) in all gullies during construction to be inspected replaced/cleaned when necessary.

Pollutants / Hydrocarbons

- Fuel stored onsite will be stored in double bunded fuel tanks. Spill kits will be readily available if required.
- In the event of spillage onsite, the material should be contained (using an absorbent material such as sand or soil or commercially available booms). Sorbents will be used to soak up a spill and stop it spreading on hard surfaces. Using sorbents generates waste and this method will only be used on small spills, or where a spill has been contained to stop any further spread. All used sorbents will be disposed of at an accredited site for disposal.

Dust Prevention

- Where necessary, wheel washing will also be provided during excavation works to minimise potential for sediments to enter local drainage from site plant and vehicles in this area.
- Where necessary, provision of a road sweeper onsite and adjacent road network during periods of inclement weather (to be continually assessed by site management).
- Use of dust barriers on temporary fencing,
- Apply water to suppress dust during tasks such as breaking concrete or using cutting tools.

6.6 Given the temporary nature of the works associated with the grid connection and the rate of excavations no significant noise impacts are anticipated that require mitigation.

6.7 The CEMP will include detailed monitoring prescriptions for each vector discussed within the document.

- 6.8 As such, given the implementation of the above mitigation measures, no adverse effect on the integrity of the SPA is anticipated as a result of the proposal with regard to water quality in the construction phase.

Water Quality (Post Development) in Relation to the River Ehen SAC / SSSI

- 6.9 Surface water run-off will be dealt with by the following means:
- Permeable surfaces – crushed permeable stone and grass
 - Surface water attenuation storage in the form of underground crate system attenuation tank and a swale,
 - Runoff rates would be restricted to Greenfield Runoff Rate 1.00l/s to the drainage ditch to the south-east of the Site.
- 6.10 From calculations included within the FRA (KRS Enviro, July 2025) it is considered that the proposed surface storage such as the swale and underground crate attenuation tanks will provide sufficient attenuation storage volume for the proposed site. 1l/s will be used as the limiting discharge rate before discharge off Site to the watercourse and therefore will not have an adverse impact on the surface water bodies in the vicinity of the Site.
- 6.11 Given the minimal site presence during the operational phase, the risk of hydrocarbon pollutants entering the surface water system from visiting vehicles are negligible. As such, no associated mitigation is required.
- 6.12 Given the nature of energy storage within the proposed development there is a potential risk of fire which could lead to adverse effect from contaminated fire water entering the River Ehen SAC / SSSI.
- 6.13 In the event of a fire, an automated penstock pollution containment device will be activated to isolate the drainage system. The firewater will then be tested on Site and either treated and released or tankered off-site as necessary. The permeable areas will be lined with an impermeable geotextile.
- 6.14 The implementation of the CEMP, through condition, together with integrated control measures outlined above will ensure that impacts related to changes in hydrology will be neutral during both construction and operational phases of the development.
- 6.15 As such, given the implementation of the above mitigation measures, no adverse effect on the integrity of the SAC is anticipated as a result of the proposal with regard to water quality in the operational phase.

IN-COMBINATION EFFECT

- 6.16 With the implementation of appropriate mitigation measures detailed within a CEMP and Drainage Strategy, no in-combination effects are anticipated with regards to water quality.
- 6.17 With the implementation of appropriate mitigation detailed within a CEMP no in-combination effects are anticipated in relation to the SAC itself.

7.0 CONCLUSION

- 7.1 The completed sHRA concluded that a LSE to the conservation objectives of the River Ehen SAC / SSSI could not be ruled out in relation to water quality both during construction and operational phases of qualifying features associated with the SAC. As such, a Shadow Appropriate Assessment (sAA) was undertaken taking into account of the approach set out in 'People over Wind', whereby mitigation was only evaluated at this stage.
- 7.2 The completed sAA demonstrates that with the implementation of mitigation measures, adverse effects on the integrity of the qualifying features of the designated sites would be avoided both alone and in-combination with other projects.
- 7.3 Furthermore, it is considered that the proposed mitigation measures (listed below) can be effectively secured through suitably worded conditions to ensure that the effects of the proposal are adequately mitigated and the proposal would, therefore, have no adverse effect on the integrity of the Lower Derwent Valley SPA/SAC/RAMSAR and River Derwent SAC sites:
- Construction Environment Management Plan (CEMP);
 - Construction phase surface water management strategy;
 - Surface Water Drainage Design;
 - Landscaping Strategy;
 - Habitat Management and Monitoring Plan (HMMP).
- 7.4 As the development proposals will not adversely affect the integrity of the SAC / SSSI site the proposals are compliant with the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended).