Preliminary Ecological Appraisal

Cleator Battery Storage

18/07/2022

Disclaimer

Neo Environmental Limited shall have no liability for any loss, damage, injury, claim, expense, cost or other consequence arising as a result of use or reliance upon any information contained in or omitted from this document.

Neo Environmental Ltd	
Head Office - Glasgow: Wright Business Centre, 1 Lonmay Road, Glasgow. G33 4EL **T** 0141 773 6262 **E:** info@neo-environmental.co.uk	
Warrington Office: Cinnamon House, Crab Lane, Warrington, WA2 0XP. **T:** 01925 661 716 **E:** info@neo-environmental.co.uk	**Rugby Office:** Valiant Suites, Lumonics House, Valley Drive, Swift Valley, Rugby, Warwickshire, CV21 1TQ. **T:** 01788 297012 **E:** info@neo-environmental.co.uk
Ireland Office: Johnstown Business Centre, Johnstown House, Naas, Co. Kildare. **T:** 00 353 (0)45 844250 **E:** info@neo-environmental.ie	**Northern Ireland Office:** 83-85 Bridge Street, Ballymena, Co. Antrim, BT43 5EN. **T:** 0282 565 04 13 **E:** info@neo-environmental.co.uk

Prepared For:

Renewable Energy Systems (RES) Ltd

Prepared By:

Thomas Hill MEnv (Hons)

	Name	Date
Edited By:	Dara Dunlop	18/07/2022
Checked By:	Daniel Flenley	18/07/2022
	Name	**Signature**
Approved By	Paul Neary	

Contents

1. EXECUTIVE SUMMARY

1.1. A Preliminary Ecological Appraisal (PEA) has been undertaken for a battery capacity expansion development on lands circa 50 metres West of the A5086 at Woodend, Cumbria. This is being carried out in order to assess the potential impacts for protected/notable ecological features from the Proposed Development, within the relevant zones of influence (ZoI). Baseline information within the Preliminary Ecological Appraisal comprises of a desk-based assessment and a UK Habitat survey which has been outlined within the relevant sections of this report.

1.2. The desk-based assessment identified two Special Areas of Conservation (SACs), one Special Protection Areas (SPAs), five Sites of Special Scientific Interest (SSSIs). In addition, there are two County Wildlife Sites (CWS). Five of these are connected hydrologically with the Application Site and therefore have the potential to be impacted by the Proposed Development.

1.3. A total of nine habitat types were noted during the UK Habitat survey undertaken on the 16th of May 2022. During the site visit the habitats were assessed for their potential to support protected and notable species present within the local area.

1.4. From the current survey findings, it is considered that the Proposed Development is unlikely to have significant impacts on local wildlife. Mitigation measures have been outlined within this report to reduce any potential impacts for local ecology.

2. INTRODUCTION

BACKGROUND

2.1. Neo Environmental Ltd has been appointed by RES to undertake a Preliminary Ecological Appraisal (PEA) for a proposed expansion of battery storage at Woodend (the "Proposed Development") on lands circa 50 metres West of the A5086 at Woodend (the 'Application Site').

DEVELOPMENT DESCRIPTION

2.2. The proposed development comprises the addition of batteries to the West and South of the existing battery storage to allow additional battery duration to the 10MW system in place. The site may also add an additional 5MW of energy capacity to the site, within the same redline area.

SITE DESCRIPTION

2.3. The Application Site comprises 0.60Ha of land located 1.56km North of Egremont, c. 50 metres West of the A5086 at Woodend. The site sits at an elevation of 67m in the East which rises to 74m in the West though the topography is very uneven over the peaks and troughs of the land.

2.4. The area immediately surrounding the subject site is an area characterised by primarily agricultural land uses interspersed with small stands of woodland, however there are residential villages locally nearby to the North, South, and West. Also of local note are River Ehen and Longlands Lake which is located 150m and 200m to the Southeast of the Application Site respectively.

SCOPE OF THE ASSESSMENT

2.5. A Preliminary Ecological Appraisal was completed at the Application Site to inform the submission of a planning application for a proposed residential development. The aims of this report are to:

- Determine the main habitat types within and immediately adjacent to the Application Site in relation to the Proposed Development footprint;
- Identify any actual or potential habitat or species constraints pertinent to the development of the Application Site and to identify how the Proposed Development can avoid, mitigate and, if necessary, compensate for impacts on these actual or potential constraints;
- Identify potential opportunities for the Proposed Development to enhance and add to the biodiversity resource within the site.

2.6. This allows for the identification of potential ecological impacts and the compilation of appropriate mitigation measures where applicable.

STATEMENT OF AUTHORITY

2.7. The assessment has been managed by an ecologist registered with the Chartered Institute of Ecology and Environmental Management (CIEEM). All work has been carried out in line with the relevant professional guidance; CIEEM's Guidelines for Preliminary Ecological Appraisal[1], Ecological Impact Assessment[2], and Report Writing[3].

2.1. Thomas Hill, who wrote the report, has four years of experience as an ecologist in a mixture of field and office-based work. Thomas has experience in many surveys and assessments including Phase 1 habitat surveys, bat, badger, otter and water vole alongside other protected species surveys. He has worked on projects of varying scales, from simple residential extension developments up to national scale transport infrastructure projects. Thomas is currently working towards CIEEM membership.

2.2. Daniel Flenley, who completed the fieldwork and reviewed the document, has 16 years of ecology experience including undertaking surveys and writing associated reports. A full member of the Chartered Institute of Ecology and Environmental Management ("CIEEM") and Association of Environmental Clerks of Works ("AECoW"), he has experience in undertaking and managing a range of surveys and assessments including Ecological Impacts Assessments, extended Phase 1 habitat surveys and ornithological and protected species surveys, for over 550 projects. These include a variety of development types such as energy, commercial, industrial and transport infrastructure. Daniel holds a great crested newt ("GCN") class licence and has worked as an accredited agent under bat and amphibian mitigation and reptile survey licences.

[1] CIEEM (2017) Guidelines for Preliminary Ecological Appraisal.
[2] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Costal and Marine.
[3] CIEEM (2017) Guidelines for Ecological Report Writing.

3. LEGISLATION AND PLANNING POLICY CONTEXT

International Agreements

3.1. International agreements relevant to the Proposed Development is outlined within Table 2-1 below.

Table 2--1: Relevant International Agreements

Directive	Main Provisions
Bern Convention	The Bern Convention[4] came into force in 1982, with the principal aims to ensure conservation and protection of wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species) listed in Appendix III.
Bonn Convention	The Bonn Convention[5] came into force in 1985. Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix I of the Convention), concluding multilateral Agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix II), and by undertaking cooperative research activities.
Ramsar Convention	The Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention)[6] came into force in 1975. It is an international treaty for the conservation and wise use of wetlands.

National Legislation

Wildlife & Countryside Act 1981 / Conservation of Habitats and Species Regulations 2017

3.2. The Wildlife and Countryside Act 1981[7] (as amended), formerly used to implement EU legislation, has more recently been strengthened by the Conservation of Habitats and Species

[4] Available at: https://www.coe.int/en/web/bern-convention

[5] Available at: https://www.cms.int/en/convention-text

[6] Available at: https://www.ramsar.org/about-the-convention-on-wetlands-0

[7] Parliament of the United Kingdom, 1981. Wildlife and Countryside Act 1981 (as amended). Available at: http://www.legislation.gov.uk/ukpga/1981/69

Regulations 2017. This consolidates and amends existing national legislation, making it an offence to:

"Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;

Intentionally kill, injure or take any wild animal listed under Schedule 5 of the Act; intentionally damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 of the Act; disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;

Pick or uproot any wild plant listed under Schedule 8 of the Act."

Environment Act 2021

3.3. This Act introduced a legally binding target on species abundance for 2030, aiming to reverse declines of key wild species. It creates a requirement for 10% net biodiversity gain as part of development projects, and for a series of Nature Recovery Strategies to cover England. The new Act makes minor amendments to the 1981 Act and 2017 Regulations (see above). It expands measures taken against illegal deforestation, enshrines a legal duty for water companies to reduce adverse impacts from storm overflow discharge, and gives statutory effect to conservation covenants. To assist in the above, it also creates an Office for Environmental Protection.

3.4. The Environment Act supersedes the former UK Post-2010 Biodiversity Framework and UK Biodiversity Action Plan ("BAP"). While certain provisions of the Act are only likely to enter force later in 2022 and 2023, some are already current. The Natural Environment and Rural Communities Act 2006

3.5. The Natural Environment and Rural Communities (NERC) Act[8] places a duty on planning authorities to have due regard for biodiversity and nature conservation during operations. This aims to ensure that biodiversity is a key consideration in the local planning process.

3.6. Section 41 of the NERC Act lists a number of habitats and species of principal importance for the conservation of biodiversity in England.

Hedgerows Regulations 1997

3.7. Under the Hedgerows Regulations 1997, certain hedgerows[9] are classified as 'Important' based on factors such as the presence of a certain number of woody native plant species. Subject to certain exceptions, the removal of an 'Important' hedgerow is prohibited.

[8] Available at https://www.legislation.gov.uk/ukpga/2006/16/contents
[9] Available at https://www.legislation.gov.uk/uksi/1997/1160/contents/made

3.8. 'Removal' includes uprooting all or part of the hedgerow, as well as any acts that could lead to the hedgerow's destruction. Removal is permitted under Section 6 of the Act under a small number of exemptions, including:

"[…] for carrying out development for which planning permission has been granted or is deemed to have been granted, except development for which permission is granted by article 3 of the Town and Country Planning General Permitted Development Order 1995 in respect of development of any of the descriptions contained in Schedule 2 to that Order other than Parts 11 (development under local or private Acts or orders) and 30 (toll road facilities)."

Protection of Badgers Act

3.9. The Protection of Badgers Act 1992[10] makes it illegal to kill, injure or take a badger or to intentionally or recklessly interfere with a badger sett. Sett interference includes disturbing badgers whilst they are occupying a sett or obstructing access to it.

Planning Policy

National Planning Policy Framework (2021)

3.10. The National Planning Policy Framework ("NPPF")[11] sets out the government planning policies for England and how they should be applied. With regards to ecology and biodiversity, Chapter 11 "Conserving and Enhancing the Natural Environment", paragraph 170, states that planning policies should:

- Minimise impacts on, and provide net gains in, biodiversity where possible.
- Recognise the wider benefits of natural capital and ecosystem services.

3.11. Under these aims, paragraph 171 stresses the need to plan for natural capital at a catchment or landscape scale, linked to national and local targets. Paragraph 175 sets out the principles that local planning authorities should apply when determining planning applications:

- Refuse planning permission if significant harm cannot be avoided, adequately mitigated, or, as a last resort, compensated for;
- Encourage opportunities to incorporate biodiversity in and around developments, especially where this can secure measurable net gains for biodiversity;

[10] Parliament of the United Kingdom (1992). Protection of Badgers Act 1992. Available at: http://www.legislation.gov.uk/ukpga/1992/51/contents

[11] Department for Housing, Communities and Local Government (2021). National Planning Policy Framework

- Permission should not normally be permitted where an adverse effect on a nationally designated Site of Special Scientific Interest is likely;
- Refuse planning permission if development will result in the loss or deterioration of irreplaceable habitats, such as ancient woodland and ancient or veteran trees, unless there are wholly exceptional circumstances e.g. when the benefits of the development clearly outweigh the loss or deterioration.

Copeland Borough Council Local Plan 2021-2038[12]

3.12. The Plan sets out an overall strategy for the proper planning and sustainable development of the borough and consists of a written statement and accompanying plans and maps

3.13. Chapter 15 of the Plan refers to the county's natural heritage and contains a number of key policies (outlined below), which aim to protect and enhance biodiversity within the borough:

Strategic Policy DS1PU: Presumption in Favour of Sustainable Development

"The Council will take a positive approach to sustainable development by approving applications without delay where they accord with the Development Plan (and where relevant, any neighbourhood plan), unless material considerations indicate otherwise."

Strategic Policy N1PU: Conserving and Enhancing Biodiversity and Geodiversity

"Potential harmful impacts of any development upon biodiversity and geodiversity must be identified and considered at the earliest stage Proposals must demonstrate, to the satisfaction of the Council, that the following mitigation hierarchy must have been undertaken: Avoidance (…) Mitigation (…) Compensation (…) Compensation is a last resort and will only be accepted in exceptional circumstances."

Strategic Policy N3PU: Biodiversity Net Gain

"All development, with the exception of that listed in the Environment Act must provide a minimum of 10% biodiversity net gain over and above existing site levels, following the application of the mitigation hierarchy set out in Policy N1PU above. This is in addition to any compensatory habitat provided under Policy N1PU. (…)"

[12] Available from : https://www.copeland.gov.uk/sites/default/files/attachments/localplanpublicationdraft.pdf

Policy N5PU: Protection of Water Resources

"New development must seek to protect or improve the quality of surface and groundwater water resources, including designated coastal Bathing Waters and Shellfish Waters downstream. (…)"

Policy N13PU: Woodlands, Trees and Hedgerows

"Existing trees and hedgerows which contribute positively to the visual amenity and environmental value of their location will be protected. Developers are encouraged to incorporate tree planting and hedgerows into new developments where possible and appropriate. (…)"

3.14. The Local Plan also highlighted a Sustainability Appraisal Scoping Report which provided the following objectives relevant to this application:

- ENV1 – Biodiversity – To conserve and enhance biodiversity in Copeland
- ENV3 – Water Resources – To maintain and enhance the water quality of Copeland's inland and coastal water and coasts and to sustainably manage water resources
- ENV6 – Energy – Increase energy efficiency in the built environment, and promote the use of energy from renewable sources.

Biodiversity Action Plans

3.15. The UK Biodiversity Action Plan (UKBAP; 1994)[13] was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. Lists of national Priority species and habitats were produced with all listed species/habitats having specific action plans, defining the measures required to ensure their conservation.

3.16. While the UKBAP has since been superseded by the Environment Act 2021 (see above), regional and local BAPs have been produced to develop plans for species/ habitats of nature conservation importance at regional and local levels.

3.17. The county of Cumbria does not have a current Local Biodiversity Action plan. The closest equivalent, as confirmed by Cumbria County Council and Cumbria Wildlife Trust, is "Cumbria Local Nature Recovery Strategy – Pilot"[14] (2020). This, amongst other things, details the more than 300 species of priority in the UK which have been recorded in Cumbria or have possibility to be reintroduced.

[13] Available at https://data.jncc.gov.uk/data/cb0ef1c9-2325-4d17-9f87-a5c84fe400bd/UKBAP-BiodiversityActionPlan-1994.pdf

[14] Available at: Cumbria Local Nature Recovery Strategy – Pilot Scheme | Cumbria County Council

GUIDANCE DOCUMENTS

BS 42020:2013 Biodiversity[15]

3.18. The British Standards Institute has published BS 42020:2013 Biodiversity. Code of Practice for Planning and Development, which offers a coherent methodology for biodiversity management. This document seeks to promote transparency and consistency in the quality and appropriateness of ecological information submitted with planning applications and applications for other regulatory approvals.

3.19. BS 42020:2013 cites CIEEM EcIA Guidelines as the acknowledged reference on ecological impact assessment. These guidelines are consistent with the British Standard on Biodiversity, which provides recommendations on topics such as professional practice, proportionality, pre-application discussions, ecological surveys, adequacy of ecological information, reporting and monitoring.

CIEEM Guidelines

3.20. The Chartered Institute of Ecology and Environmental Management (CIEEM) have produced guidelines for Preliminary Ecological Appraisal (PEA)[16].

3.21. 'Preliminary Ecological Appraisal (PEA) is the term used to describe a rapid assessment of the ecological features present, or potentially present, within a site and its surrounding area (the zone(s) of influence in relation to a specific project (usually a proposed development))'.

3.22. The key objectives of a PEA are to:

- Identify the likely ecological constraints associated with a project;
- Identify any mitigation measures likely to be required, following 'Mitigation Hierarchy';
- Identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA); and
- Identify the opportunities offered by a project to deliver ecological enhancement.

[15] BS 42020:2013 Biodiversity. Code of practice for planning and development

[16] CIEEM Guidelines for Preliminary Ecological Appraisal. Available at; https://cieem.net/wp-content/uploads/2019/02/Guidelines-for-Preliminary-Ecological-Appraisal-Jan2018-1.pdf

4. METHODOLOGY

ZONE OF INFLUENCE

4.1. The Zone of Influence (ZoI) is the area encompassing all potential ecological impacts from a proposed scheme and is informed by the habitats present within the site and the nature of the proposals. Due to the small-scale nature of the proposal, it is considered that the ZoI's outlined in **Table 4-1** below are appropriate for the gathering of information for the desk study.

Table 4-1: Zone of Influence for ecological features

ECOLOGICAL FEATURE	Zone of Influence (ZoI)
International/European statutory designations	15km or wherever hydrological influence extends, whichever is further
National statutory designations	5km or wherever hydrological influence extends, whichever is further
Protected and Priority Species	2km
Extended phase one habitat survey	50m

DESK STUDY

4.2. A desk-based assessment was undertaken to collate available ecological information for the Application Site and the surrounding area. This included a search of international statutory designated sites within a 15km radius, and statutory designated sites within a 5km radius of the Proposed Development, including; Special Protection Areas ("SPA"), Special Areas of Conservation ("SAC"), Ramsar Sites, Sites of Special Scientific Interest ("SSSI"), National Nature Reserves ("NNR") and Local Nature Reserves ("LNR"). The description of each of these sites was obtained utilising the Multi-Agency Geographic Information for the Countryside (MAGIC) website[17].

[17] Software available at - https://magic.defra.gov.uk/

4.3. A data search was conducted though the Cumbria Biodiversity Data Centre (CBDC) to obtain information regarding protected/notable species within 2km of the Application Site boundary.

FIELD SURVEY

UK Habitat Survey

4.4. A UK habitat survey was undertaken on 16th May 2022 by Daniel Flenley BSc (Hons). This survey covered all land within the Application Site, and a 50m buffer around the entire Site (the "Ecological Survey Area").

4.5. Survey work was carried out in accordance with UK habitat survey guidance; habitats were mapped electronically in the field in order to produce a habitat map.

4.6. This habitat classification method provides a standardised system to record and map semi-natural vegetation and other wildlife habitats to assess the potential importance for nature conservation.

Species Scoping Survey

4.7. A Species Scoping Survey was carried out to identify the presence of protected species, or the potential of the Application Site to support protected species. The aim of the survey was to provide an overview of the Site and to determine whether any further survey work was required.

WEATHER CONDITIONS

4.8. Table 4-2 describes the weather conditions at the time of survey giving temperature (°C), wind speed (mph), cloud-cover (percentage) and precipitation.

Table 4-2: Weather conditions at time of survey

Survey Date	Temperature (°C)	Wind Speed (mph)	Cloud-cover (%)	Precipitation
16.05.2022	20	<5	60	None until 6pm

LIMITATIONS

4.9. Results of the assessment undertaken by Neo Environmental are representative of the time that surveying was undertaken.

4.10. The absence of records returned during the data search does not necessarily indicate absence of a species/habitat from an area, but may instead indicate they under-recorded within the search area.

4.11. The UK habitat survey and species scoping survey do not aim to produce a full botanical or faunal species list or provide a full protected species survey but, enables competent ecologists to ascertain an understanding of the ecology of the Site in order to:

- Broadly identify the nature conservation value of a site and preliminary assess the significance of any potential impacts on habitat/species recorded; and/or
- Confirm the need and extent of any additional specific ecological surveys that are required to identify the true nature conservation value of a site.

EVALUATION METHODS

4.12. The evaluation of ecological receptors is based upon the CIEEM guidelines[18] which suggests that the value or potential value of an ecological resource or feature (for example a habitat type, species or ecosystems) should be determined within a geographical context (e.g. rare at a local level). Attributing a value to a receptor, which is also a designated site, is generally precise, as the designations themselves provide an indication of value.

[18] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Costal and Marine.

5. BASELINE CONDITIONS

DESIGNATED SITES

5.1. The Proposed Development does not lie within or adjacent to any designated environmental sites.

5.2. Within 15km of the Application Site boundary there are three Special Areas of Conservation (SAC) and one Special Protection Areas (SPA). Within 5km of the Application Site boundary there are five Sites of Special Scientific Interest (SSSI). Each of these sites are outlined in **Table 5-1** below, and detailed within **Figure 2** of **Appendix A**. There is not believed to be any more than negligible hydrological influence beyond the 15km study area.

5.3. There are an additional two SSSIs within the zone of influence of the site. However, as they are designated for geological reasons, they are beyond the purview of this report.

5.4. The site descriptions are derived from the original site citations available from JNCC[19], MAGIC[20].

Table 5-1: Statutory Designated Sites

Site Code	Site Name	Qualifying Features	Distance (km), Direction	Connectivity
SAC				
UK0030057	River Ehen SAC	• Breeding population of freshwater pearl mussel (*Margaritifera margaritafera*)	0.12 Southeast	Hydrological
UK0012960	Lake District High Fells SAC	• A variety of habitats including: - Dry and wet heaths.	7.66 East	None

[19] Available at https://sac.jncc.gov.uk/

[20] Available at https://magic.defra.gov.uk/magicmap.aspx

		- Alpine and boreal heaths. - Juniperus communis formations. - Alpine and boreal grassland; and - Blanket bogs.		
UK0030032	River Derwent and Bassenthwaite Lake	• Oligotrophic to mesotrophic standing water • A variety of species including: - Atlantic Salmon (*Salmo salar*) - Brook Lamprey (*Lampetra planeri*) - Marsh fritillary butterfly (*Eurodryas aurinia*) - Otter (*Lutra lutra*) - River Lamprey (*Lampetra fluviatilis*) - Sea Lamprey (*Petromyzon marinus*)	9.18 Northwest	None
UK0013031	Drigg Coast SAC	• A variety of habitats including: - Estuaries	13.11 South	None

		- Atlantic decalcified fixed dunes (Calluno-Ulicetea) - Dunes with Salix repens ssp. argentea		
SPA				
UK9005012	Solway Firth SPA	• Non-breeding populations: - Red-throated diver (*Gavia stellata*) - Whooper swan (*Cygnus cygnus*) - Barnacle geese (*Branta Leucopsis*) - Golden plover (*Pluvialis Apricaria*) - Bar-tailed godwit (*Limosa lapponica*) • Migratory species supported: - Oystercatcher (*Haematopus ostralegus*) - Knot (*Calidris canutus*) - Pintail (*Anas*	6.50 Northwest	None

		acuta) - Pink-footed goose (*Anser brachyrhynchus*) - Scaup (*Aythya marila*) - Curlew (*Numenius arquata*) - Redshank (*Tringa totanus*)		
SSSI				
1006660	River Ehen SSSI	• Breeding population of freshwater pearl mussel (*Margaritifera margaritafera*)	0.12 Southeast	Hydrological
1003900	Clint's Quarry SSSI	• Diverse limestone flora including bee orchid (*Ophrys apifera*).	0.38 South	Hydrological
1003894	Black Moss SSSI	• Unmodified lowland bog • Eight species of Sphagnum moss (*Sphagnum sp.*).	2.69 Southeast	None
1003911	Haile Great Wood SSSI	• Intact ancient woodland	3.40 Southeast	None

1003709	St Bees Head SSSI	• Various habitats including: - natural cliff-top grassland and heath, - cliff-fall rubble; and - shingle and wave-cut platform. • Breeding site for black guillemot (*Cepphus grylle*).	4.63 Southwest	None

5.5. Two non-statutory designated sites are present within 2km of the Application Site. They are both County Wildlife Sites (CWS).

5.6. Each of these sites are outlined in Table 5-2 below. The site descriptions are derived from the original site citations available from the CBDC data search.

Table 5-2: Non-statutory Designated Sites.

Site Code	Site Name	Qualifying Features	Distance & Direction	Potential Connectivity with the Proposed Development Site
County Wildlife Site (2km)				
N/A	Longlands Lake	• Not provided	0.05km Southeast	Hydrological
N/A	Ehen Ponds	• Not provided	0.56km Southeast	Hydrological

PROTECTED AND NOTABLE SPECIES

Desk-based

5.7. The potential presence of protected species within the study area was assessed though a data search conducted through the CBDC. This identified records of invasive, rare, scarce and protected species within 2km of the Proposed Development location.

5.8. Table 5-3 below summarises the protected/notable species recorded within the search area, and their potential to be present within the Application Site at Woodend.

Table 5-3: Summary of Biological Records. Invasive non-native species are given in bold black font.

SPECIES	NUMBER OF RECORDS	FIELD SIGNS OR SIGHTINGS OBSERVED WITHIN SURVEY AREA	POTENTIAL FOR SPECIES WITHIN PROPOSED DEVELOPMENT SITE
Mammals			
Daubenton's Bat (*Myotis daubentonii*)	3	None	No
West European Hedgehog (*Erinaceus europaeus*)	9	None	Yes
Polecat (*Mustela putorius*)	1	None	No
Eurasian Red Squirrel (*Sciurus vulgaris*)	8	None	No
Pipistrelle (*Pipistrellus pipistrellus sensu lato*)	3	None	Yes
Soprano Pipistrelle (*Pipistrellus pygmaeus*)	4	None	Yes
European Otter (*Lutra lutra*)	4	None	No
Birds			
Greenfinch *(Chloris chloris)*	1	None	Yes
Herring Gull *(Larus argentatus)*	1	None	Yes

House Sparrow (Passer domesticus)	1	None	Yes
Starling *(Sturnus vulgaris)*	1	None	Yes
Herptiles			
Common Frog (*Rana temporaria*)	1	None	No
Invertebrates			
Dingy Skipper *(Erynnis tages)*	60	None	No
Flora			
Himalayan Balsam (*Impatiens glandulifera*)	11	None	No
Japanese Knotweed (*Fallopia japonica*)	12	None	No

Habitat Survey

5.9. The UK habitat survey undertaken in May 2022 identified nine primary habitat types and four secondary codes within the ESA. Each of these are listed below, with the relevant habitat codes beforehand.

- G3c – Other neutral grassland;
- G3c6 – Lolium-Cynosurus neutral grassland;
- G4 – Modified grassland;
- H2a – Hedgerow (priority habitat);
- U1b5 – Buildings;
- U1b6 – Other Developed Land;
- U1c – Artificial unvegetated unsealed surface;
- U1e – Built linear features; and
- W1g7 – Other broadleaved woodland.

5.10. A map of the habitats is given in **Figures 2b, Appendix 2A**, with photographs in **Appendix 2B** of this report. The habitats are described in **Table 5-4** below; the target notes referred to in the figures are detailed in **Table 5-5**.

Table 5-4: Habitat Descriptions

Habitat Code and Type	Description
G3c6 – Lolium-Cynosurus Neutral Grassland	The Northeast corner of the site holds this habitat, where it holds a frequent amount of creeping thistle. A second area is found at the centre of the site. It composes sward type mosaic (UK Habitat secondary code 160) species poor grassland. It contains frequent Yorkshire fog. The water level is estimated to be 40-100cm from the surface with water available most of the year classifying it as mesic (UK Habitat secondary code 118).
G3c – Other Neutral Grassland	Unmanaged versions of the G3c6 grasslands to the East within the 50m buffer.
G4 – Modified Grassland	Found to the West of the development boundary, and beyond into the 50m survey buffer to the West and North. A small area is also found within the battery storage compound. This habitat had been recently managed and was cropped close to the ground, with a mixture of herbs including Yorkshire fog, red clover, and ragwort amidst the grass.
H2a – Hedgerow (priority habitat);	Priority hawthorn (*Crataegus monogyna*) hedgerow on the site's South boundary.
U1b5 – Buildings	This habitat covers the battery storage within the compound and the electricity substation found to the North within the 50m survey buffer.
U1b6 – Other Development	The farmyard to the West, outside the development boundary is this habitat.
U1c – Artificial unvegetated unsealed surface	This habitat comprises the majority of the habitat within the battery storage compound and the gravel tracks that serve as road connecting it to the substation to the North and road to the South.
U1e – Built linear feature	Dalzell street is a road (UK Habitat secondary code 111) which lies to the South of the development area within the 50m survey buffer.

W1g7 – other broadleaved woodland	Plantation (UK Habitat secondary code 36) norway maple and cherry woodland around 10m in height to the East and North of the development area within 50m survey buffer.

Table 5-5: Target Notes

Target Note	Description
1	This rougher area has rare Epilobium sp., Juncus sp., Lamido sp. and common fumitory.
2	Creeping thistle increasingly invading in this Northern part. Occasional Cocksfoot, hogweed and rare cuckooflower, ragwort, white clover and hawkweed also present.
3	Chiffchaff singing offsite.
4	Grassland occupies a bund and is overplanted with young Hawthorn, Holly and birch sp. Sward typically 15cm to 35cm.
5	Pylon(s)
6	Blackbird and mistle thrush singing nearby.
7	Carrion crow and rook heard.
8	House.
9	Wooded garden.

5.11. The Application Site is split into two distinct divisions, the battery storage compound and the outer grassland. The outer grassland is mostly comprised of a sward type mosaic Lolium-Cynosurus neutral grassland with a mixture of herbaceous plants such as Yorkshire fog *(Holcus lanatus)*, creeping thistle (*Cirsium arvense*), ribwort plantain (*Plantago lanceolata*), spear thistle (*Cirsium vulgare*) and mouseear (*Cerastium fontanum)* appearing most commonly across the site. The site also holds a hawthorn *(Crataegus monogyna*) hedgerow containing some self-seeded sycamore (*Acer pseudoplatanus*) along the Southern boundary and some

plantation wild cherry (*Prunus avium*) woodland with a thick ground layer of bramble (*Rubus fructicosus*) to the East. Overall, the site is considered to be of low intrinsic ecological value in terms of habitats.

5.12. No invasive species were found during survey.

Field Survey

5.13. The UK habitat survey included a species scoping survey in order to assess the potential of the site to support protected species.

Bats

5.14. Hedgerows and trees within the Application Site offer suitable foraging and commuting habitat for bats, as bats use linear features to commute. The trees within the woodland to the East are deemed as having low to negligible bat roosting potential. Records of five species of bats were returned in the data search.

Other Mammals

5.15. No signs of other protected or notable mammal species were observed during the survey.

5.16. The data search returned records for European hedgehog, European rabbit, Eastern grey squirrel and Eurasian red squirrel. No signs of this species were observed during the site survey; however, hedgerows, treelines and amenity grassland offers suitable habitat to support these species.

5.17. Records of otter, polecat, and red deer were identified within the 2km desk-study data search, however there is no suitable habitat for these species within the Application Site.

Birds

5.18. Woodland and hedgerow within the Application Site offer suitable habitat to support breeding and foraging birds.

5.19. Any incidental observations of bird species during the walk over survey were recorded to provide information for the assessment of potential bird activity within the Application Site. Table 5-6 below lists the bird species observed during the habitat survey. Classifications are based upon the Birds of Conservation Concern 5 (BOCC5) list from the British Trust for Ornithology (BTO)[21].

Table 5-6: Bird Species Observed During the UK Habitat Survey

[21] Available at https://www.bto.org/our-science/publications/birds-conservation-concern

Common Name	Scientific Name	BoCC5 Listed Species
Blackbird	*Turdus merula*	Green
Carrion Crow	*Corvus corone*	Green
Chiffchaff	*Phylloscopus collybita*	Green
Mistle Thrush	*Turdus viscivorus*	Red
Rook	*Corvus frugilegus*	Amber
Wood pigeon	*Columba palumbus*	Amber

Herptiles

5.20. Common frog was identified in the 2km data search. There is no suitable habitat for these species within the Application Site.

Invertebrates

5.21. Dingy skipper, a priority species for Cumbria was identified in the 2km data search. However, there is no suitable habitat for this species within the Application Site.

5.22. No notable or protected invertebrate species were recorded on the site visit.

Flora Species

5.23. Invasive species including Japanese Knotweed and Giant hogweed were identified in the 2km data search. No protected, notable or invasive flora species was recorded within the survey area.

6. DISCUSSION

6.1. This section of the PEA outlines the ecological constraints and opportunities within the ESA, and recommendations for mitigation and further survey as appropriate.

ENVIRONMENTAL DESIGNATIONS

6.2. Within 15km of the Application Site boundary there are three Special Areas of Conservation (SAC) and one Special Protection Areas (SPA). Within 5km of the Application Site boundary there are five Sites of Special Scientific Interest (SSSI). In addition, there are two non-statutory designated sites within 2km of the Application Site. They are both County Wildlife Sites (CWS) within 600m of the Proposed Development.

6.3. As there is hydrological connectivity via groundwater flow between the Application Site and the following designated sites; River Ehen SAC, River Ehen SSSI, Clint's Quarry SSSI, Longlands Lake CWS, and Ehen Ponds CWS.

6.4. The Proposed Development will be subject to mandatory pollution prevention measures under the Control of Pollution Act 1974 (as amended)[22]. Measures have been included within the development design to prevent dust and other pollution entering the watercourse. Any **standard pollution prevention measures** can be secured through a suitably worded planning condition requesting a Construction Environmental Management Plan ("CEMP").

6.5. As a result of the development design and the implementation of the above measures, it is considered there will be **no likely significant effect** upon the designated sites.

HABITATS

6.6. Nine primary habitat types were identified within the survey boundary: other neutral grassland (g3c), lolium-cynosurus neutral grassland (g3c6), modified grassland (g4), hedgerow (priority habitat) (h2a), buildings (u1b5), other developed land (u1b6), artificial unvegetated unsealed surface (u1c), built linear features (u1e), and other broadleaved woodland (w1g7). The majority of these habitats are of low ecological value and currently offer limited potential to support wildlife. The only habitat which will be directly lost as a result of the proposed development is lolium-cynosurus neutral grassland.

[22] https://www.legislation.gov.uk/ukpga/1974/40/part/III/crossheading/construction-sites

PROTECTED AND NOTABLE SPECIES

Bats

6.7. All trees within the survey area are of low or negligible suitability for roosting bats. Although treelines and hedgerows are still suitable commuting and foraging features for bats.

6.8. Should any trees be affected by the scope of this work, pre-commencement surveys will be conducted to ensure no significant negative impacts on the local bat populations.

Birds

6.9. Woodland, treeline and hedgerows within the Application Site offers suitable habitat for breeding birds. It is recommended that these habitats are retained.

6.10. If habitats are lost, in the absence of mitigation potential significant impacts may occur for breeding birds (including their nests, eggs and/or young) if works are undertaken during the breeding season (March to August inclusive). It is therefore recommended that pre-commencement breeding bird surveys should be carried out on the proposed demolition of buildings and on any trees and hedgerows which may be removed.

6.11. Where works are undertaken the outside of the breeding season, no significant impacts are predicted. The overall loss of potential nesting and foraging habitat is not significant, due to the abundant availability of similar habitat in the wider area.

Dingy Skipper

6.12. Dingy skipper is a priority species for Cumbria, and the data search returned 60 records for the species within 2km in the last 10 years. The preferred habitat of dingy skipper is as follows:

"[...] a wide range of open, sunny habitats including chalk downland, woodland rides and clearings, coastal habitats such as dunes and undercliffs, heathland, old quarries, railway lines and waste ground. Suitable conditions occur where food plants grow in a sparse sward, often with patches of bare ground in a sunny, sheltered situation. Taller vegetation is also required for shelter and roosting."

6.13. The Application Site is lacking in these habitats. In addition, bird's foot trefoil, the usual foodplant for caterpillars of the species, was not found in the ESS. Therefore, the species is likely confined to Clint's quarry and other designated sites, where the majority of the records were recorded.

6.14. Given the species' local presence, it is possible the grassland could be made viable for Dingy Skipper with relatively few changes, primarily, the addition of bird's foot trefoil. This would greatly enhance the value of the habitat surrounding the Proposed Development.

7. OUTLINE OF FURTHER SURVEY AND MITIGATION MEASURES

7.1. Table 6-1 below outlines further surveys and recommendations derived from the results of the survey walkover.

Table 6-1: Protected and Notable Species Constraints Evaluation

Site/ Species	Potential Development Impacts	Phase of Development	Further Survey Requirements	Recommended Mitigation Options
Birds	Disturbance for breeding birds	Construction	Pre-commencement breeding bird surveys (if works are to be undertaken during the breeding season (March to August inclusive)	Dependent on pre-commencement survey results.
Bats	Loss of roosting habitats	Construction	Potential Roost Feature (PRF) Assessment on trees proposed to be removed	Dependent on design

8. APPENDICES

APPENDIX A – FIGURES

- Figure 1 – Habitat Map
- Figure 2 – Environmental Designations Map

APPENDIX B – SITE PHOTOGRAPHS

Appendix A

Cleator
Habitat Map
Figure 1

0 0.03 0.05 0.1 Kilometers

Key

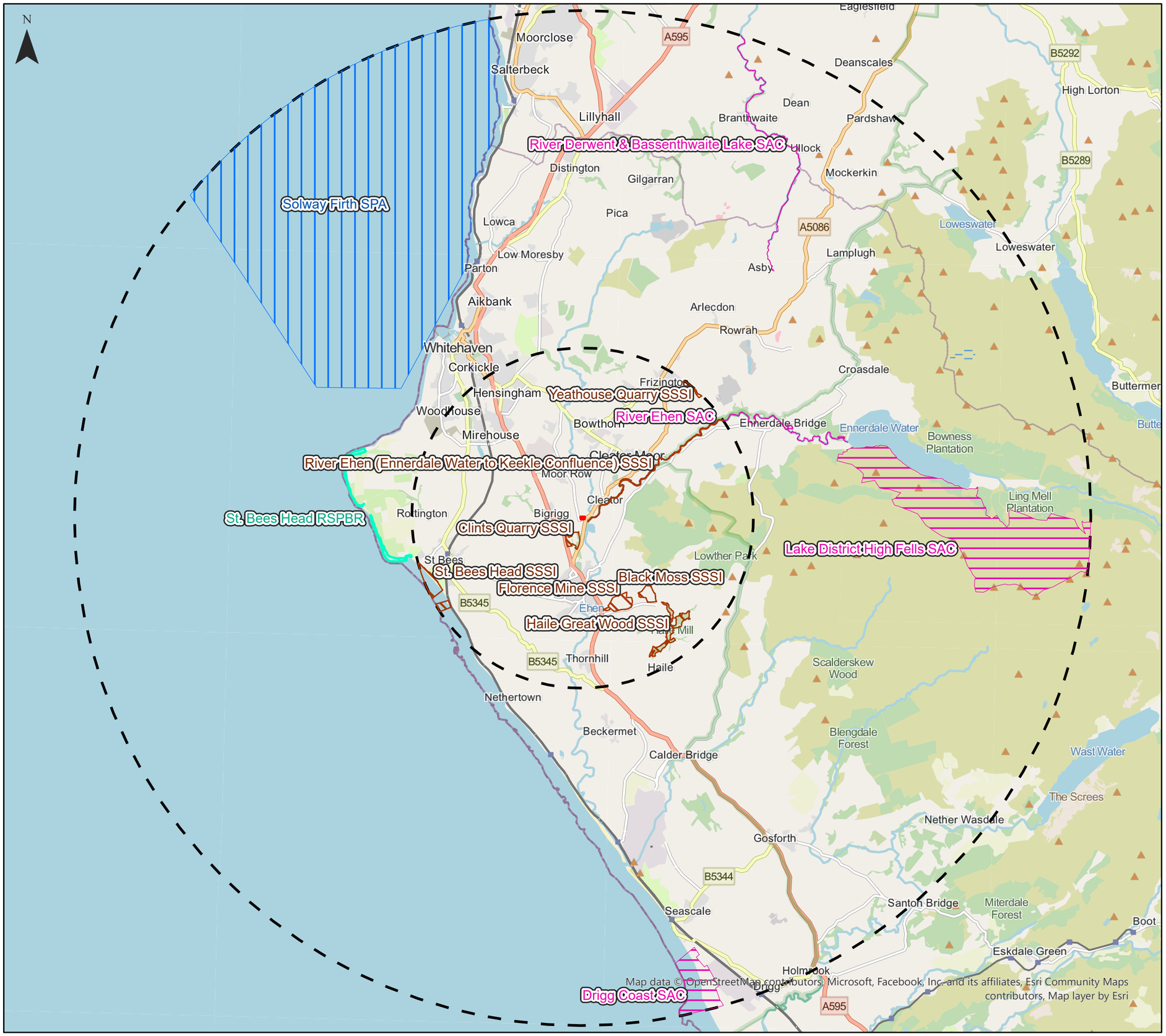
- 50m ESA
- Development Boundary
- h2a - hedgerow (Priority Habitat)
- g4 - Improved Grassland
- g3c - Other Neutral Grassland
- g3c6 - Lolium-Cynosurus Neutral Grassland
- w1g7 - Other Broadleaved Woodland Types
- u1b - Developed Land Sealed Surface
- u1b5 - Buildings
- u1c - Artificial Unvegetated Unsealed Surface
- u1e - Built Linear Features
- Target Notes

Neo Office Address:
Wright Business Centre, 1 Lonmay Road, Glasgow, G33 4EL

Date: 17/07/2022
Drawn By: Thomas Hill
Scale (A3): 1:800
Drawing No: NEO00XXX/001I/A

neo ENVIRONMENTAL

Cleator BESS
Environmental Designations
Figure 2



Key

- Development Boundary
- 5km, 15km Study Area
- Special Areas of Conservation
- RSPB Reserves
- Special Protection Areas
- Sites of Special Scientific Interest

Neo Office Address:
Wright Business Centre, 1 Lonmay Road, Glasgow, G33 4EL

Date: 02/06/2022
Drawn By: Scott Griffin
Scale (A3): 1:112,500
Drawing No: NEO01044/001I/A

neo ENVIRONMENTAL

Appendix B

Photograph 1 – Young planted trees amid *lolium-cynosurus* neutral grassland

Photograph 2 – Norway maple and cherry woodland to east of proposed development

Photograph 3 – Priority hedgerow as viewed from site side

Photograph 4 – Modified grassland

GLASGOW - HEAD OFFICE

Wright Business Centre, 1 Lonmay Road, Glasgow G33 4EL
T: 0141 773 6262
www.neo-environmental.co.uk

N. IRELAND OFFICE

83-85 Bridge Street
Ballymena, Co. Antrim
Northern Ireland
BT43 5EN
T: 0282 565 04 13

IRELAND OFFICE

Johnstown Business Centre
Johnstown House, Naas
Co. Kildare
T: 00 353 (0)45 844250
E: info@neo-environmental.ie

RUGBY OFFICE

Valiant Office Suites
Lumonics House, Valley Drive,
Swift Valley, Rugby,
Warwickshire, CV21 1TQ
T: 01788 297012

WARRINGTON OFFICE

Cinnamon House, Cinnamon Park
Crab Lane, Fearnhead
Warrington
Cheshire
T: 01925 661 716