Preliminary Ecological Appraisal

Land off Scalegill Road, Moor Row, Egremont, Cumbria, CA24 3JU

2021

Report commissioned by:

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Quality Management

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DRAFT FOR CLIENT COMMENT / APPROVAL ONLY.	Sam Griffin	Vicky Griffin	Glen Beattie	19/03/2021	**UNSIGNED** **UNSIGNED**
FINAL	Sam Griffin	Vicky Griffin	Glen Beattie	03/08/2021	

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No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. We therefore cannot guarantee that the investigations fully identified the degree or extent of e.g. species presence. Professional judgement and opinion has been utilised where required. All opinion is provided in good faith.

Nothing in this report constitutes legal advice or opinion. If legal opinion is required a qualified legal professional should be contacted for advice.

Contents

1. Introduction

1.1. Background and Pre-Existing Site Information

This report details a Preliminary Ecological Appraisal conducted on Land off Scalegill Road, Moor Row, Egremont, Cumbria, CA24 3JU (Nat. Grid Ref. NY 00187 14425 - Approx. centre of site. See Figure 1).

Plans 'as proposed' have been provided (See Figure 2) and it is thereby understood that a proposal exists for a residential development on site.

A search of historic planning applications for the post-code area was attempted on the Copeland Borough Council planning application search facility (https://www.copeland.gov.uk/planning/application-search) on 16/03/2021, however as the Copeland Borough Council planning application search facility only allows searches by 'Application Reference Number', 'Date' and/or 'Parish', and furthermore only contains applications dating back to 1st Jan 2018 and then presents the results listed by their application reference number only, the web search facility is not suitable for this purpose. As a result of the shortcomings of the Copeland Borough Council planning application search facility, no historic ecological survey data has been identified for the site itself, nor other properties within the post-code area. Ecological survey effort has undoubtably been expended on adjacent development sites - this information is inaccessible via the usual routes and can therefore not be considered in this report.

This survey has been commissioned to complete a baseline preliminary ecological assessment of the site and specifically to identify;

- Any areas of potential conservation interest,
- Any potential impacts to legally protected species / species groups,
- Any likely impacts on statutory and non-statutory designated sites as a result of the proposal,
- The presence of any invasive species listed in Schedule 9 of The Wildlife and Countryside Act 1981 (as amended).
- Opportunities to enhance the biodiversity value of the site in line with the National Planning Policy Framework (2019)

Glen Beattie of Alpha Design Architectural Services Ltd. commissioned Hesketh Ecology to complete this survey and report in February 2021. It is understood that this report will be used to inform the finalisation of proposals for the site and to accompany a full planning application.

1.2. Full Details of Proposed Works on Site

See Figure 1 and 2. The site measures approximately 1.5ha. Plans 'as proposed' have been provided and it is thereby understood that a proposal exists for a residential development consisting of 19no. Units plus associated infrastructure.

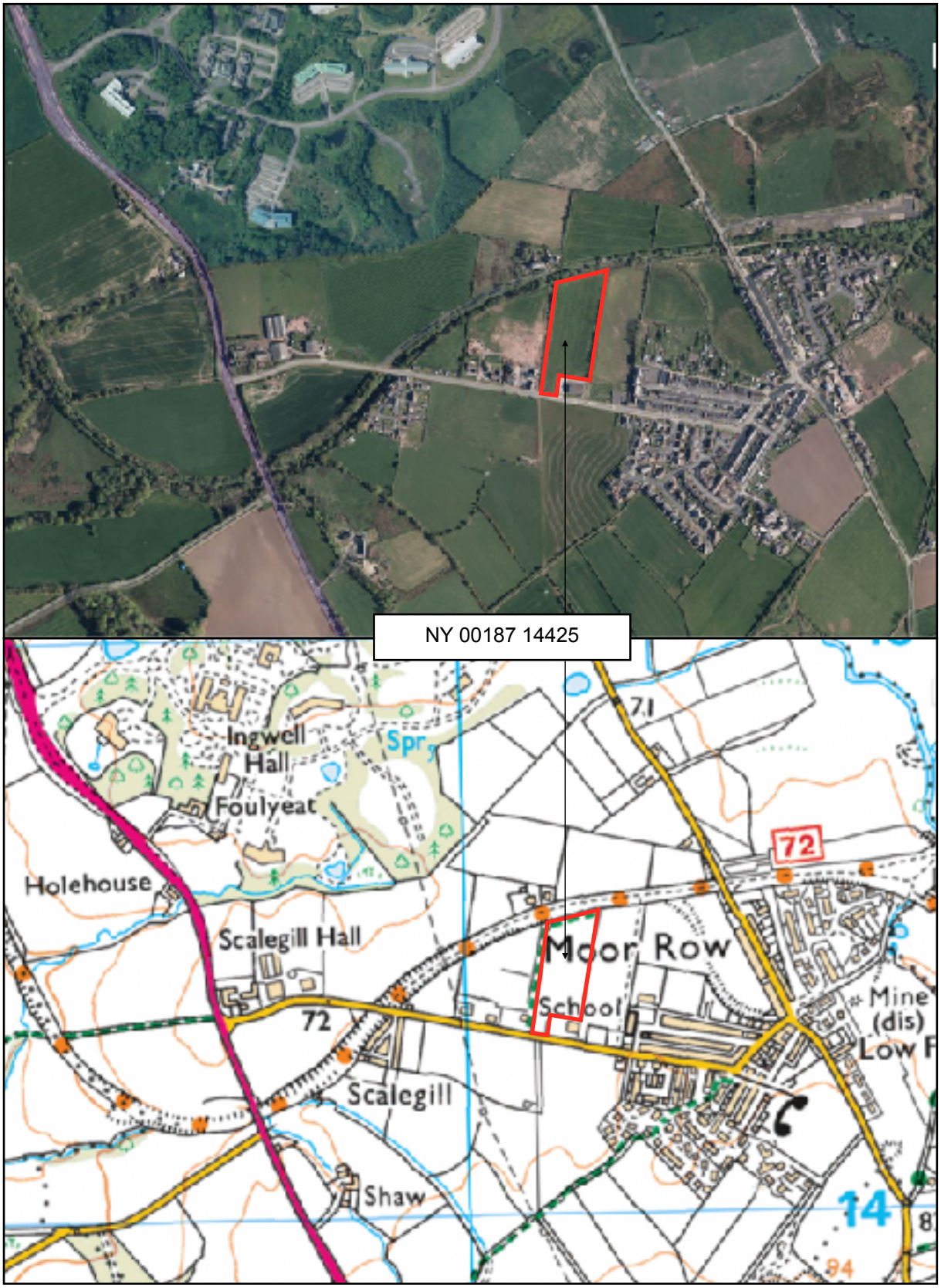


Figure 1: *Location Plan - Land off Scalegill Road, Moor Row, Egremont, Cumbria, CA24 3JU*

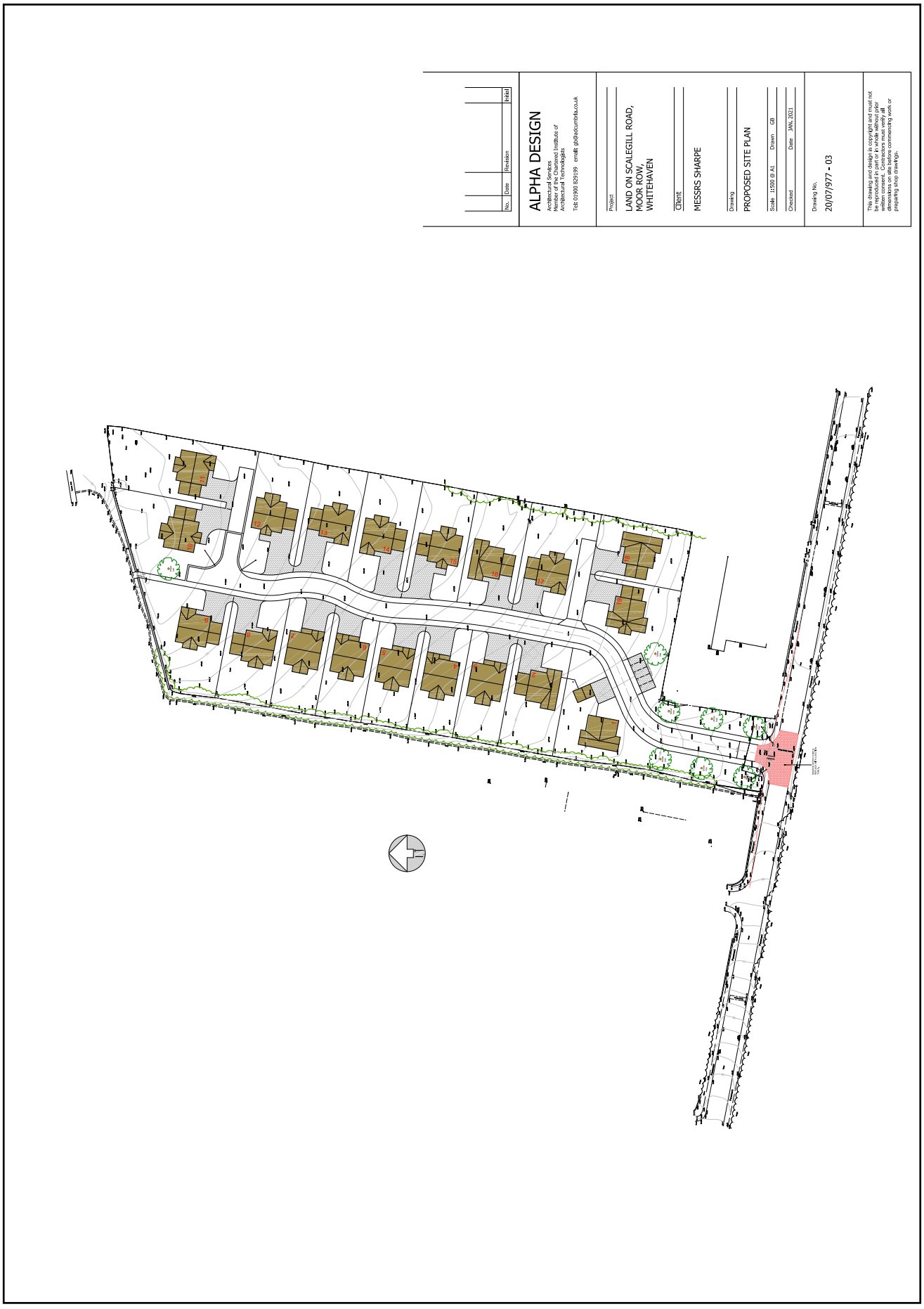


Figure 2: *Land on Scalegill Road, Moor Row, Whitehaven - Proposed site Plan - Drawing No. 20/07/977 -03 by Alpha Design Architectural Services.*

2. Legislation and Policy

2.1. Designated Sites

There are broadly 3 levels of designation currently in place to protect the most significant areas for habitats and wildlife. These are Internationally Designated Sites (Special Areas of Conservation, Special Protection Areas etc.), Domestically Designated Sites (Sites of Special Scientific Interest, National Nature Reserves etc.) and Locally Designated Sites (County Wildlife Sites, Local Nature Reserves etc.).

The Conservation of Habitats and Species Regulations 2017 provides safeguards for European Protected Sites and Species (as listed in the Habitats Directive). This has recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 which continue the same provision for European protected species, licensing requirements, and protected areas after Brexit.

2.2. Internationally Designated Sites

Special Areas of Conservation (SACs) are areas which have been given special protection under the European Union's Habitats Directive. They provide increased protection to a variety of wild animals, plants and habitats. All SAC's are also designated as SSSI's. The legal requirements relating to the designation and management of SACs in England are set out in The Conservation of Habitats and Species Regulations 2017. The SAC designation is recognition that some or all of the wildlife and habitats are particularly valued in a European context.

Special Protection Areas (SPAs) are areas which have been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found within European Union countries. They are European designated sites, classified under the 'Birds Directive 1979' which provides enhanced protection given by the Site of Special Scientific Interest (SSSI) status all SPAs also hold. The legal requirements relating to the management and protection of SPAs in England are set out in The Conservation of Habitats and Species Regulations 2017.

Natura 2000 is the centrepiece of EU nature & biodiversity policy. It is an EU wide network of nature protection areas established under the 1992 Habitats Directive. The aim of the network is to assure the long-term survival of Europe's most valuable and threatened species and habitats. It is comprised of Special Areas of Conservation (SAC) designated by Member States under the Habitats Directive, and also incorporates Special Protection Areas (SPAs) which they designate under the 1979 Birds Directive. Natura 2000 is not a system of strict nature reserves where all human activities are excluded. Whereas the network does include nature reserves most of the land is privately owned and the emphasis is on ensuring that future management is sustainable, both ecologically and economically.

The 'competent authority' is required to complete an Appropriate Assessment of a proposal, if the proposed activities would be likely to have a significant effect on the Natura 2000 site. An Appropriate Assessment aims to determine if the proposed development would have an adverse effect on the notified interest features of the SAC. The developer or proposers of the plan or project shall provide such information as the competent authority may reasonably require for the purposes of the assessment (Regulation. 43(2)).

2.3. Domestically Designated Site

Sites of Special Scientific Interest (SSSIs) are the country's very best wildlife and geological sites and give legal protection to these sites in England. Natural England now has responsibility for identifying and protecting SSSIs in England under the Wildlife and Countryside Act 1981 (as amended). The SSSI notification package includes a list of operations requiring Natural England's consent (formerly known as operations likely to damage the special interest). None of the listed operations can be carried out without Natural England's consent, or the consent of another public body (provided that the other body has formally consulted us). Operations listed on the list of operations requiring Natural England's consent (which are not already consented to) requires permission from Natural England. To obtain consent, a written notice must be submitted to Natural England containing the details of the operations in order for the proposal to be assessed and permission granted.

National Nature Reserves (NNRs) are all also designated as SSSIs. It is via this designation that legal protection is afforded to NNRs.

2.4. Locally Designated Sites

There are currently a number of different terms in use to describe Local Wildlife Sites, including Sites of Importance for Nature Conservation (SINCs), Sites of Nature Conservation Importance (SNCIs) and County Wildlife Sites. Local Wildlife Sites are usually selected within a local authority area and this process is often managed by the local Wildlife Trust together with representatives of the local authority and other local wildlife conservation groups. They support both locally and nationally threatened wildlife, and many sites will contain habitats and species that are priorities under the county or UK Biodiversity Action Plans (BAP).

In Cumbria, Local Wildlife Sites are known as 'County Wildlife Sites'. They are designated and reviewed at a county level by the Wildlife Selection Panel for the Cumbria Local Sites Partnership, administered by Cumbria Wildlife Trust. County Wildlife Sites are not afforded any legal protection.

2.5. Protected Species

The legislation protecting wildlife exists regardless of the requirements of any planning consent.

The legal protection of animals and plants in the United Kingdom is mainly provided for by:

- The Wildlife & Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000,
- The Habitats and Species Directive (92/43/EC) enacted through The Conservation of Habitats and Species Regulations 2017.
- The Protection of Badgers Act 1992.

The level of protection for each species varies according to the conservation status of the species.

The Conservation of Habitats and Species Regulations 2017 provides safeguards for European Protected Sites and Species (as listed in the Habitats Directive). This has recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 which continue the same provision for European protected species, licensing requirements, and protected areas after Brexit.

The Countryside and Rights of Way Act 2000 supplemented existing legislation for wildlife protection by prohibiting reckless acts that result in the killing or injuring of protected species.

The Natural Environment and Rural Communities Act 2006 requires that every public authority in exercising its functions must have regard as far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Section 41 of this Act requires the Secretary of State to have prepared lists of species and habitats which are considered to be of principal importance for the purpose of conserving biodiversity [The UK Biological Action Plan (BAP) species].

2.6. Schedule 2 - European Protected Species of Animal

These species are listed in Schedule 2 of the Habitat Regulations and in Schedule 5 of the Wildlife & Countryside Act 1981. The legislation makes it illegal to:

- Intentionally or deliberately kill, injure or capture (or take);
- Deliberately disturb;
- Recklessly disturb or obstruct access to any place used for rest and shelter
- Damage or destroy any place used for rest and shelter
- Possess or transport an animal or any part of, unless acquired legally,
- Sell (or offer for sale) or exchange

Conservation of Habitats and Species Regulations 2010 (as amended): Schedule 2 Animals
Horseshoe bats *Rhinolophidae* - all species
Common bats *Vespertilionidae* - all species
Wild cat (*Felis silvestris)*
Dolphins, porpoises and whales *Cetacea* – all sp.
Dormouse (*Muscardinus avellanarius)*
Pool frog (*Rana lessonae)*
Sand lizard (*Lacerta agilis)*
Fisher's estuarine moth (*Gortyna borelii lunata)*
Great crested newt (*Triturus cristatus)*
Otter (*Lutra lutra)*
Lesser whirlpool ram's-horn snail (*Anisus vorticulus)*
Smooth snake (*Coronella austriaca)*
Sturgeon (*Acipenser sturio)*
Natterjack toad (*Epidalea calamita)*
Marine turtles (*Caretta caretta, Chelonia mydas, Lepidochelys kempii, Eretmochelys imbricata* and *Dermochelys coriacea)*

Table 1: *Conservation of Habitats and Species Regulations 2010 (as amended): Schedule 2 Animals*

Work that disturbs Schedule 2 species is illegal without a Wildlife Development Licence issued by Natural England.

2.7. Schedule 5 - European Protected Species of Plants

Conservation of Habitats and Species Regulations 2010 (as amended): Schedule 5 – Plants
Shore dock (*Rumex rupestris)*
Killarney fern (*Trichomanes speciosum)*
Early gentian (*Gentianella anglica*)
Lady's-slipper (*Cypripedium calceolus*)
Creeping marshwort (*Apium repens)*
Slender naiad (*Najas flexilis)*
Fen orchid (*Liparis loeselii*)
Floating-leaved water plantain (*Luronium natans)*
Yellow marsh saxifrage (*Saxifraga hirculus*)

Table 2: *Conservation of Habitats and Species Regulations 2010 (as amended): Schedule 5 - Plants*

These species are listed in Schedule 5 of the Habitat Regulations and in Schedule 8 of the Wildlife & Countryside Act 1981. The legislation makes it illegal to pick, uproot, destroy, or trade in these plants.

2.8. Otters

Otters are protected under Section 39 of The Conservation of Habitats and Species Regulations 2017 as European Protected Species and Section 9 of the Wildlife and Countryside Act 1981 (as amended) (Schedule 5). It is an offence to:

- Deliberately capture, injure or kill an Otter;
- Intentionally or recklessly disturb an Otter in a place used for shelter or protection, or deliberately disturb Otters in such a way as to be likely significantly to affect (i) the ability of any significant group of Otters to survive, breed, rear or nurture their young, or (ii) the local distribution or abundance.
- Damage or destroy a breeding or resting place
- Intentionally or recklessly obstruct access to a place used for shelter or protection
- Possess an Otter (alive or dead), or any part of an Otter.

Work that disturbs otters is illegal without a Wildlife Development Licence issued by Natural England.

2.9. Badgers

Badgers are a protected species. In addition to The Wildlife and Countryside Act 1981, The Countryside and Rights of Way (CRoW) Act 2000 and The Conservation of Habitats and Species Regulations 2017, badgers and their setts are also covered by the provisions of the Protection of Badgers Act (1992). A sett is defined as "any structure or place which displays signs indicating current use by a badger". The legislation makes it illegal to:

- Intentionally or deliberately kill, injure or capture (or take) badgers;
- Damage a badger sett or any part of it;
- Destroy a badger sett;
- Obstruct access to, or any entrance of, a badger sett;
- Disturb a badger when it is occupying a badger sett;

Work that disturbs badgers is illegal without a Wildlife Development Licence issued by Natural England.

2.10. Breeding Birds

All wild birds (birds in a wild state resident in or visiting Great Britain) and their nests and eggs are protected under the Wildlife & Countryside Act 1981. Particular emphasis is given to the protection of breeding birds. With certain exceptions, it is an offence to:

- Kill, injure or take wild birds
- Take, damage or destroy the nest of wild birds while in use or being built
- Take or destroy the eggs of wild birds
- Disturb wild birds listed in Schedule 1 when nest building or at a nest containing eggs or young, or disturb dependent young of wild birds

2.11. Reptiles

Reptiles, including common lizards, slow worms and grass snakes, are protected under the Wildlife & Countryside Act 1981 against deliberate killing, injuring and sale (Sub-Sections 9 (1) and 9 (5)). These species are listed in Schedule 5.

2.12. Other Mammals

Mammal species not covered by the above legislation (rabbits, foxes, hares, moles etc) are protected by the Wild Mammals (Protection) Act 1996. This states; ‘any person [whom] mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering he shall be guilty of an offence.’ This is potentially relevant in the case of burrowing animals on a development site.

2.13. Invasive Non-Native Species

In the UK, it is an offence under section 14(2) of the Wildlife and Countryside act 1981 to "plant or otherwise cause to grow in the wild" any plant listed in Schedule 9, Part II to the Act. This could include cutting the plant or roots and disturbing surrounding soil if not correctly managed.

An offence under the Wildlife and Countryside Act can result in a criminal prosecution. An infringement under the Environmental Protection Act can result in enforcement action being taken by the Environment Agency (EA) which can result in an unlimited fine.

Schedule 9 – List of Invasive plant species	
Australian swamp stonecrop or New Zealand pygmyweed (*Crassula helmsii)*	Small-leaved cotoneaster (*Cotoneaster microphyllus*)
Californian red seaweed (*Pikea californica*)	Three-cornered garlic (*Allium triquetrum*)
Curly waterweed (*Lagarosiphon major*)	Variegated yellow archangel (*Lamiastrum galeobdolon subsp. argentatum*)
Duck potato (*Sagittaria latifolia*)	Virginia creeper (*Parthenocissus quinquefolia*)
Entire-leaved cotoneaster (*Cotoneaster integrifolius*)	Wakame (*Undaria pinnatifida*)
False Virginia creeper (*Parthenocissus inserta*)	Giant salvinia (*Salvinia molesta*)
Fanwort or Carolina water-shield (*Cabomba caroliniana*)	Green seafingers (*Codium fragile*)
Few-flowered garlic (*Allium paradoxum*)	Himalayan cotoneaster (*Cotoneaster simonsii*)
Floating pennywort (*Hydrocotyle ranunculoides*)	Hollyberry cotoneaster (*Cotoneaster bullatus*)
Floating water primrose (*Ludwigia peploides*)	Hooked asparagus seaweed (*Asparagopsis armata*)
Giant hogweed (*Heracleum mantegazzianum*)	Hottentot fig (*Carpobrotus edulis*)
Giant kelp (Macrocystis spp.)	Hybrid knotweed (*Fallopia japonica × Fallopia sachalinensis*)
Giant knotweed (*Fallopia sachalinensis*)	Indian (Himalayan) balsam (*Impatiens glandulifera*)
Giant rhubarb (*Gunnera tinctoria*)	Japanese knotweed (*Fallopia japonica*)
Japanese rose (*Rosa rugosa*)	Wall cotoneaster (*Cotoneaster horizontalis*)
Japanese seaweed (*Sargassum muticum*)	Water fern (*Azolla filiculoides*)
Laver seaweeds (except native species) (Porphyra spp)	Water hyacinth (*Eichhornia crassipes*)
Parrot's-feather (*Myriophyllum aquaticum*)	Water lettuce (*Pistia stratiotes*)
Perfoliate alexanders (*Smyrnium perfoliatum*)	Water primrose (*Ludwigia grandiflora*)
Pontic rhododendron (*Rhododendron ponticum*)	Water primrose (*Ludwigia uruguayensis*)
Red algae (*Grateloupia luxurians*)	Waterweeds (Elodea spp.)

Schedule 9 – List of Invasive plant species	
Rhododendron (*Rhododendron ponticum x Rhododendron maximum*)	Yellow azalea (*Rhododendron luteum*)
Purple dewplant (*Disphyma crassifolium*)	

Table 3: *Schedule 9 – List of Invasive plant species*

2.14. Natural Environment and Rural Communities (NERC) Act (2006)

Beyond the legal protection afforded to species in the UK, the Natural Environment and Rural Communities (NERC) Act (2006) states;

> *'Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.'*
> NERC Act 2006 - Section 40.
>
> '*The Secretary of State must, as respects England, publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity.'*
>
> *'Without prejudice to section 40(1) and (2), the Secretary of State must—*
>
> > *(a) take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section, or*
> > *(b) promote the taking by others of such steps.'*
>
> NERC Act 2006 - Section 41

2.15. UK Biodiversity Action Plan (BAP) priority species / UK Post-2010 Biodiversity Framework

UK Biodiversity Action Plan (BAP) priority species were those that were identified as being the most threatened and requiring conservation action under the UK Biodiversity Action Plan (UK BAP). The original list of UK BAP priority species was created between 1995 and 1999. In 2007, however, a revised list was produced, following a 2-year review of UK BAP processes and priorities, which included a review of the priority species and habitats lists.

The UK BAP has now been superseded by the UK Post-2010 Biodiversity Framework. The UK Post-2010 Biodiversity Framework covers the period from 2011 to 2020, and was developed in response to two main drivers: the Convention on Biological Diversity's (CBD's) Strategic Plan for Biodiversity 2011-2020 and its five strategic goals and 20 'Aichi Biodiversity Targets', published in October 2010; and the EU Biodiversity Strategy (EUBS), released in May 2011. The UK Post-2010 Biodiversity Framework now serves to meet the statutory obligation imposed by Section 41 of the NERC Act. The UK BAP list, as revised in

2007, was incorporated into the UK Post-2010 Biodiversity Framework with only minor alterations.

The Cumbria Biodiversity Action Plan (CBAP) was designed to implement national biodiversity targets set out in the UK BAP at a local level, with an emphasis on local priorities. At its inception the CBAP included 40 species / species groups, 21 of which had dedicated action plans with a further 19 without action plans. The original CBAP list was updated in 2010 to include all UK BAP species which occur in Cumbria.

2.16. National Planning Policy Framework (NPPF) 2019

The National Planning Policy Framework (NPPF) was originally published by the Department of Communities and Local Government in 2012, consolidating over two dozen previously issued documents called Planning Policy Statements (PPS) and Planning Policy Guidance Notes (PPG) for use in England. A revised NPPF was published by the UK Government's Ministry of Housing, Communities and Local Government in 2018 and then again in 2019. The revised National Planning Policy Framework sets out the government's planning policies for England and how these are expected to be applied. This revised Framework replaces the previous National Planning Policy Framework published in 2012, and revised in 2018.

Chapter 15 of the NPPF, Conserving and Enhancing the Natural Environment, states (NB the following is a summary only, selecting points which relate to biodiversity and species only, for the full text see National Planning Policy Framework; February 2019, Ministry of Housing, Communities and Local Government ;

> *'Planning policies and decisions should contribute to and enhance the natural and local environment by:*
>
> - *protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
>
> - *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;'*
>
> Paragraph 170, Pg. 49.
>
> *To protect and enhance biodiversity and geodiversity, plans should:*
>
> - *Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
>
> - *promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.*
>
> Paragraph 174, Pg. 50.

When determining planning applications, local planning authorities should apply the following principles:

- *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*

- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists;*

Paragraph 175, Pg. 50.

3. Methodology

3.1. Desk Based Investigation

Natural England's MAGIC website (http://www.magic.gov.uk) was consulted for information relating to statutory designated sites adjacent to the site or within the immediate area.

A data search was commissioned from Cumbria Biodiversity Data Centre for all records of rare, scare, protected or invasive non-native species and non-statutory designated sites within a 2km radius of national grid ref. NY 00187 14425 (the approximate centre of the site).

3.2. Field Survey

A daytime inspection of the site was conducted during which all areas of the site were inspected in detail during a walk over survey. A methodology based on that outlined in the JNCC Phase 1 Habitat Survey Guidelines was employed, as per the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2013), and the species / habitat codes presented therein used. Areas immediately adjacent the site were inspected from public rights of way only. Mature trees were inspected from ground level only using binoculars and an AG80 20x- 60x spotting scope as necessary. The following evidence of potential for protected species is a brief summary only.

Bats

Evidence of potential for bats includes:

- Evidence of bats (droppings, seeing bats, smelling bats)
- Older trees/woodlands for foraging and roosting;
    - Woodpecker holes
    - Gap / crevices behind bark
    - Rot holes
    - Bird / bat boxes
    - Cracks associated with damaged limbs
- Linear landscape elements e.g. hedgerows and watercourses for commuting and foraging
- Built structures e.g. buildings and bridges for summer roosting or hibernation

In relation to bats, the survey methodology conformed with that laid out in '*Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London*'. Any buildings, woodland areas and standard trees within the site were categorised (negligible, low, medium or high) for their potential to support roosting bats.

The survey area for bats comprised accessible land within 50m of the site boundary.

Amphibians

Evidence of potential for protected amphibian species includes:

- Evidence of protected amphibian species (seeing great crested newts or natterjack toads)
- Ponds or other bodies of open standing water on site or within 500m of site
- Suitable terrestrial habitat including foraging habitat and / or hibernation potential

In relation to great crested newts, the survey methodology conformed with that laid out in '*English Nature (2001) Great crested newt mitigation guidelines Version: August 2001. English Nature. ISBN 1 85716 568 3*'. All ponds onsite or within 500m of the site boundary were identified using OS maps and a Habitat Suitability Index Score was calculated using '*Oldham R.S., Keeble J., Swan M.J.S., and Jeffcote M. (2000) Evaluating the suitability of habitat for the great crested newt. Herpetological Journal 10: 143-155*'.

The survey area for amphibians comprised accessible land within 500m of the site boundary.

Otter

Evidence of potential for otters includes:

- Evidence of otters (seeing otters, spraint, footprints, feeding remains)
- Watercourses / water bodies
- Woodland or rough grassland / scrub for holts and lying up

In relation to otter, the survey methodology conformed with that laid out in '*Chanin (2003) Monitoring the Otter*' and '*Liles (2003) Conserving Otter Breeding Sites*'. Any evidence of otter, such as places of rest (holts or couches), spraint sites, prints and slides, as well as any otter sightings would be recorded.

The survey area for otters comprised accessible land within 50m of the site boundary.

Badger

Evidence of potential for badgers includes:

- Evidence of badgers (latrines, setts, footprints, fur, runs)
- Woodland for foraging and setts

In relation to badger, the survey methodology conformed with that laid out in '*Scottish Badgers (2018). Surveying for Badgers: Good Practice Guidelines. Version 1.*'. Any evidence of badger, such as latrines, setts, footprints, fur and runs, as well as any badger sightings would be recorded.

The survey area for badgers comprised accessible land within 50m of the site boundary.

Birds

Evidence of potential for breeding birds includes:

- Evidence of breeding birds (nests, nest building behaviour, courtship and display behaviour, distraction display, used nests or eggshells)

- Trees/woodlands for nesting
- Built structures for nesting
- Natural habitat features for nesting (watercourses, embankments, rough grassland)

In relation to breeding birds the survey methodology employed a simple 'look and see', Visual Encounter Survey technique in which the evidence identified above was recorded as encountered.

The survey area for birds comprised land within the site boundary and immediately adjacent the site boundary only.

Reptiles

Evidence for potential for reptiles includes:

- Evidence of reptiles (seeing reptiles, sloughed skin)
- Rough grassland
- South facing slopes

In relation to reptiles, the survey methodology involved a Habitat Suitability Assessment using the characteristics laid out in '*Natural England Technical Information Note TIN102 Reptile mitigation guidelines*' [WITHDRAWN].

The survey area for reptiles comprised land within the site boundary and immediately adjacent the site boundary only.

'Other Mammals'

Evidence for potential for 'other mammal' species:

- Evidence of 'other mammals' (seeing other mammals, droppings, burrows, mole hills)

In relation to 'other mammals', the survey methodology conformed with that laid out in '*The Mammal Society (2013). How to Find and Identify Mammals*'.

3.3. Timing

The survey was conducted on 17th February 2021.

3.4. Weather conditions

Date	Activity	Weather conditions			
		Temp (°C)	Wind (Beaufort scale)	Cloud (%)	Precipitation
17/02/2021	Site inspection	8	0	40	None

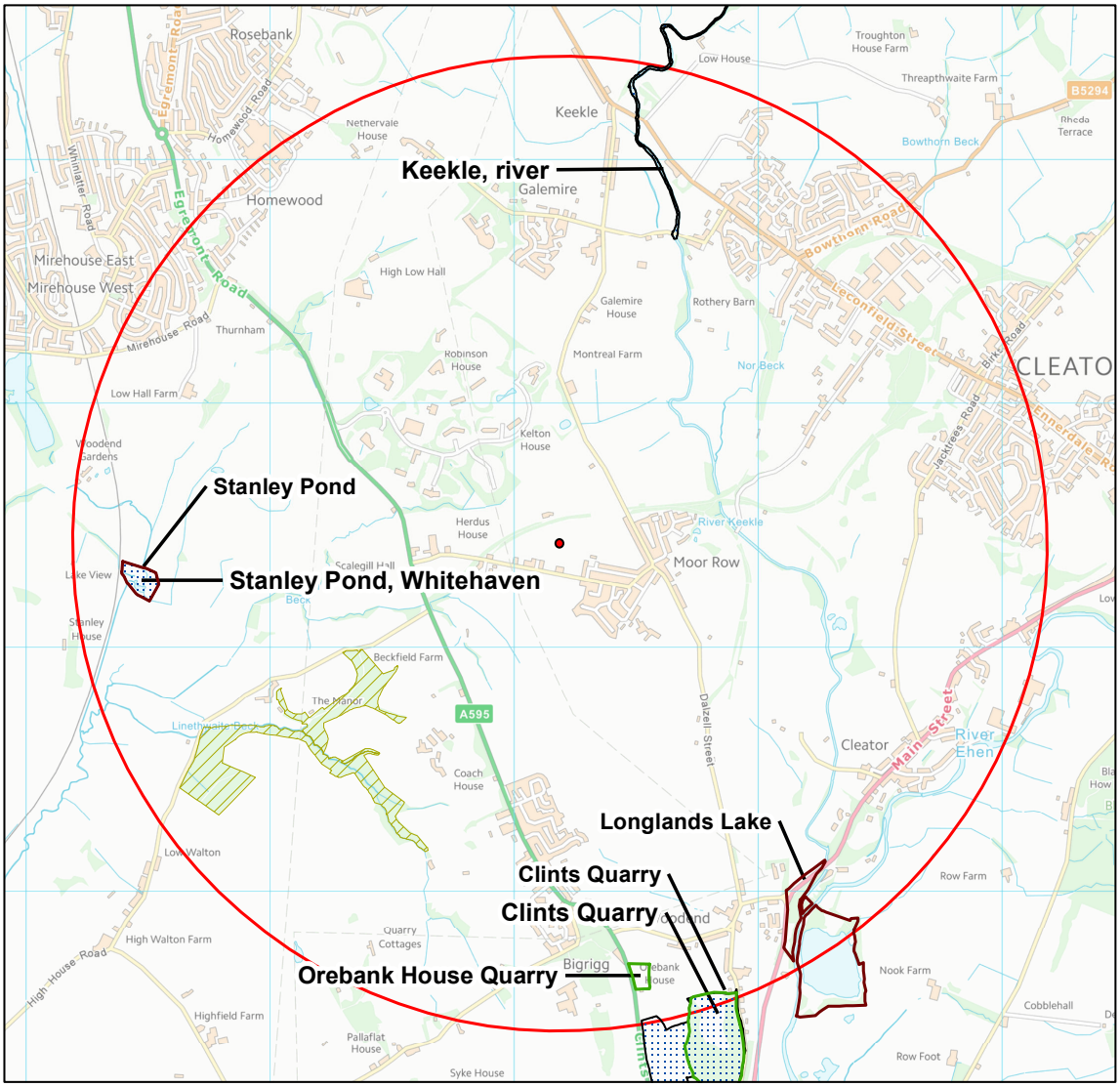
Table 4: *Weather conditions.*

Cumbria Biodiversity Data Centre (CBDC): Non-Statutory Sites Search

For: Sam Griffin at Hesketh Ecology

Centroid: NY 00187 14425
Site Name: Scalegill Road, Moor Row
Buffer: 2km
Search Date: 01/03/2021

N.B. Sites are displayed only if they exist within the search area



Key

- County Wildlife Sites
- Local Geological Sites
- Site of Invertebrate Significance
- Ancient Woodland

0 250 500 1,000 m

Any queries in the first instance contact:
Dr Moustafa Eweda
Biological Data Officer
Cumbria Biodiversity Data Centre (CBDC)

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Tullie House Museum and Art Gallery Trust

Figure 3: *Cumbria Biodiversity Data Centre (CBDC): Non-Statutory Sites Search - Centroid:* NY 00187 14425*, Site Name: Land off Scalegill road, Moor Row Search Buffer: 2km, Search Date: 01/03/2021.*

3.5. PERSONNEL

The site inspection was conducted by Sam Griffin BSc ACIEEM.

4. Results

4.1. Designated Sites

Internationally Designated Sites

A search for all 'land-based' designated sites on Natural England's MAGIC website (http://www.magic.gov.uk) conducted on 16/03/2021 has identified a single internationally designated site within a 2km radius of national grid ref. NY 00187 14425 (the approximate centre of the site). This is the River Ehen Special Area of Conservation (SAC) which flows north east to south west approximately 1.66km to the south east of the site boundary at its closest point.

The River Ehen SAC (SAC EU Code UK0030057) consists of 'Inland water bodies (Standing water, Running water) (90%), Broad-leaved deciduous woodland (8%) and Coniferous woodland (2%)' and is designated for the following Annex II species;

- Freshwater pearl mussel (*Margaritifera margaritifera*)

'*The River Ehen supports the largest freshwater pearl mussel (Margaritifera margaritifera) population in England. Exceptionally high densities (greater than 100 m2) are found at some locations, with population estimates for the entire river exceeding 100,000. The conservation importance of the site is further enhanced by the presence of juvenile pearl mussels, indicating recruitment since 1990.*'

https://sac.jncc.gov.uk/site/UK0030057

The following Annex II species are also listed as 'present as a qualifying feature, but not a primary reason for site selection';

- Atlantic salmon - *Salmo salar*

The site is not connected to the River Ehen SAC via any natural watercourse or manmade ditches. A manmade ditch which exists on the northern boundary appears to ultimately flow into Scalegill Beck, which is a tributary of Pow Beck, but this ditch does not appear to routinely flow or hold water. There is no direct connectivity between the site and the River Ehen SAC and connectivity to any other watercourse is very weak.

The River Ehen SAC lies 1.66km to the south east. The site is not connected to the SAC via any watercourse and therefore no potential impacts to the SAC are anticipated.

Domestically Designated Sites

A search for all 'land-based' designated sites on Natural England's MAGIC website (http://www.magic.gov.uk) conducted on 16/03/2021 has confirmed that two domestically designated sites exist within a 2km radius of national grid ref. NY 00187 14425 (the approximate centre of the site).

These are as follows;

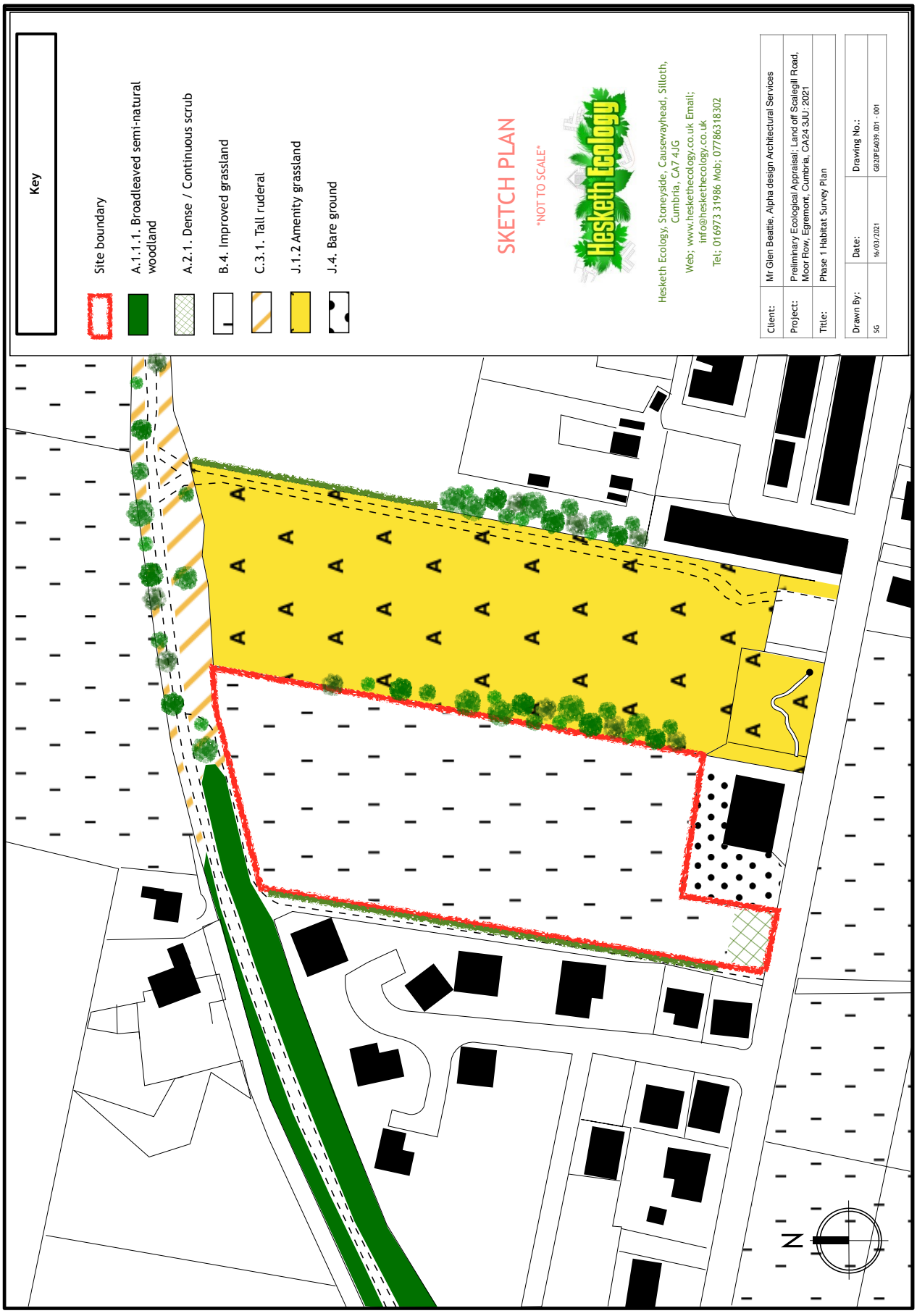

Figure 4: *Phase 1 Habitat Survey Plan.*

- Clints Quarry Site of Special Scientific Interest (1.8km to the south)
- River Ehen (Ennerdale Water to Keekle confluence) Site of Special Scientific Interest (1.66km to the south east)

Clints Quarry SSSI (not to be mistaken for Lints Quarry *SAC* which is located near Bothel in north Cumbria), is notified for its geological interest and the '*species-rich neutral and calcareous grasslands, along with woodland and shrub communities [which] have become established within the quarry*.' (https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1004531.pdf). In addition, and although not mentioned on the site notification document, Clints Quarry SSSI is known to support a population of great crested newts (pers. obs.).

River Ehen (Ennerdale Water to Keekle confluence) SSSI is notified as '*an oligotrophic, or nutrient-poor, river flowing over bryophyte-dominated substrates of shingle, pebbles and rock*' and '*supports outstanding populations of the freshwater mussel Margaritifera margaritifera*.' (https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000147.pdf).

Clints Quarry SSSI is a terrestrial site, designated for its geology and terrestrial habitats, and lies approximately 1.8km to the south of the site. The River Ehen SSSI lies 1.66km from the site boundary and the two are not connected.

Both SSSI's identified within 2km of the site are remote and disconnected from the site and no potential impacts to these SSSI's are anticipated.

Locally Designated Sites

A detailed data search for all locally designated sites was commissioned from Cumbria Biodiversity Data Centre (CBDC) for all Locally Designated Sites within a 2km radius of Nat. Grid Ref. NY 00187 14425 (the approximate centre of the site). This revealed that the site is not designated as a County Wildlife Site. Two County Wildlife Sites exist within 2km of the site, along with three Sites of Invertebrate Significance and two Local Geological Sites. These are as follows;

- Stanley Pond County Wildlife Site / Stanley Pond, Whitehaven Site of Invertebrate Significance (approximately 1.8km to the west)
- Longlands Lake County Wildlife Site (approximately 1.8km to the south east)
- Keekle, River Site of Invertebrate Significance (approximately 1.7km to the north, north east)
- Orebank House Quarry Local Geological Site (approximately 1.9km to the south)
- Clints Quarry Site of Invertebrate Significance / Lints Quarry Local Geological Site (approximately 1.95km to the south)

Due to the proximity of these sites to the proposed development, it is concluded that the proposed development will not impact upon any locally designated site.

4.2. Habitat Description

This site inspection was conducted during the winter - outside of the optimal Phase 1 Habitat Survey window. Consequently certain plant species may have not been evident at the time of the survey

The site is located in west Cumbria, on the western edge of the village of Moor Row, approximately 5km south east of Whitehaven town centre. The site lies to the north of Scalegill Road, to the west and north of Moor Row Working Mans Club. The site consists of improved grassland with a small area of scrub on the road edge. Beyond the site to the west is a public footpath which runs between the site and an ongoing housing development currently under construction. To the east the site adjoins a school playing field which consists of mown amenity grassland. Along the northern boundary the site adjoins a cycle path which follows the course of a former railway line. At this point the cycle path is part of Sustrans Route 72, which is 177 miles in length and connects Kendal with South Shields, via the west Cumbrian Coast, Silloth, Carlisle and Haltwhistle.

A review of historic maps and aerial photography has shown that the site comprised enclosed agricultural land, in its current configuration, prior to 1863 (earliest available OS Plan). At this time the Whitehaven, Cleator & Egremont Railway is shown running along the northern boundary of the site (where the cycle path currently exists). The village of Moor Row itself expands rapidly between 1867 and 1899, presumably as mining in the area provided employment opportunities. Although originally (1863) enclosed in its current configuration, during the latter period of the 1800s and early 1900s the site is shown as a single field - incorporating the adjacent field which is today a school playing field. By 1962 the site is again fenced in the current configuration and by 1967 the adjacent field is marked as 'School Playing Field'. The Working Mens Club which now exists on Scalegill Road, is not marked on historic OS plans from 1985 but does appear on aerial photographs taken in 2003. Between 2003 and the present, the site itself has remained unchanged. Land adjoining the site to the east has been developed (commencing c.2017) as a residential estate - this is ongoing.

The site now lies within Cumbria Landscape Character Assessment Type 5: Lowland; Sub Type 5b: Low Farmland (as defined by the 'Cumbria Landscape Character Guidance and Toolkit PART ONE Landscape Character Guidance, Cumbria County Council 2011). This landscape type includes extensive areas of lowland agricultural pasture and agricultural land influenced by urban fringe development. The key characteristics of 'Sub Type 5b: Lowland Farmland' are as follows;

- Undulating and rolling topography
- Intensely farmed agricultural pasture dominates
- Patchy areas of woodland provide contrast to the pasture
- Woodland is uncommon west towards the coast
- Fields are large and rectangular
- Hedges, hedgerow trees and fences bound fields and criss cross up and over the rolling landscape

Lowland Farmland is '*an intensely, agricultural landscape where semi- natural vegetation is scarce. There are areas of grazing marsh and floodplain habitat north west of Wigton and north east of Carlisle. This supports a range of plants including creeping bent and marsh foxtail. In wetter field margins greater reedmace, reed canary grass, water plantain and sedges are supported. Hedgerows are common, but often species-poor and woodland is scarce west of Carlisle. Significant woodland cover is however present along the River Lyne,*

supporting a range of upland oak and wet woodland communities. Small and medium sized rivers are a common feature of the landscape, supporting small ribbons of woodland and otters. Several small remnant lowland raised bogs are present around the Carlisle area and these support areas of birch and pine woodland, rush pasture and purple moor-grass and small areas of raised mire vegetation. One has a colony of the uncommon white-faced darter dragonfly. This landscape is important for farmland birds, including yellowhammer, linnet and tree sparrow. This landscape is also important for barn owl to the north and east.'

Cumbria Landscape Character Guidance and Toolkit PART ONE Landscape Character Guidance, Cumbria County Council 2011, Pg. 71.

The Site is a relatively small (c.1.5ha) agricultural field. The field is bounded by a stock fence on the northern (partial), eastern and southern sides, but this is defunct and is not stock proof. The western boundary is formed by an intact species poor hedge.

The field is under agricultural management but is seemingly harvested annually as a fodder crop rather than grazed. At the time of the site inspection the interior of the field contained Yorkshire fog (*Holcus lanatus*), perennial rye (*Lolium perenne*), annual meadow grass (*Poa annua*), cocksfoot (*Dactylis glomerata*), field mouse-ear (*Cerastium arvense*), dandelion (*Taraxacum officinale* sp. agg.), creeping buttercup (*Ranunculus repens*), curly dock (*Rumex crispus*), broadleaved dock (*Rumex obtusifolius*), nettle (*Urtica dioica*), creeping thistle (Cirsium arvense), field bindweed (*Convolvulus arvensis*), doves-foot cranesbill (*Geranium molle*), chickweed (*Stellaria media*) and daisy (*Bellis perennis*).

The small area of scrub which exists on the southern boundary (roadside) contains bramble (Rubus fruticosus sp. agg.), with cocksfoot, Yorkshire fog, common cleavers (*Galium aparine*), cow parsley (*Anthriscus sylvestris*) and soft rush (*Juncus effusus*).

The northern boundary is in part formed by a sandstone retaining wall which appears to be related to the former railway. This is partially collapsed in places. This wall, and the field margin directly adjacent this wall, has developed a flora similar to the tall ruderal habitat on the verges off the adjacent cycle path. The epipetric species growing on the wall include hearts tongue fern (*Asplenium scolopendrium*), black spleenwort (*Asplenium adiantum-nigrum*) and maidens hair spleenwort (*Asplenium trichomanes*), but broad buckler fern (*Dryopteris dilatata*) and male fern (*Dryopteris filix-mas*) are also growing in an endolithic manner. Bramble is present and confirms the relative lack of agricultural disturbance of the field margin adjacent this wall; other species include red fescue (*Festuca rubra*), oxeye daisy (*Leucanthemum vulgare*), hairy bittercress (*Cardamine hirsuta*), great mullein (*Verbascum thapsus*), knapweed (C*entaurea nigra*), rosebay willow herb (*Chamerion angustifolium*), white dead-nettle (*Lamium album*) and ribwort plantain (*Plantago lanceolata*).

The intact hedgerow on the western boundary contains hawthorn (Crataegus monogyna), elder (*Sambucus nigra*) and ash (*Fraxinus excelsior*) with dog rose (*Rosa canina*) and bramble. Although this hedge is tall in places, none of the trees are particularly large or mature. From a review of historic maps, it would appear that this hedgerow ran parallel to a similar hedgerow to the west, forming a track (now public footpath) between Scalegill Road and the railway / cycle path. However, the corresponding hedge - which formed the eastern boundary of the adjacent building site - appears to have been replaced by garden fences around new (and under construction) properties. The hedgerow which forms the boundary of the site being considered here is species poor, but is intact and is apparently of some age. Although it is unlikely to qualify as an 'important' hedgerow under the ecological criteria of the Hedgerow Regulations (1997), it is possible it may qualify under the historic criteria.

The eastern boundary of the site is formed by an intact stock fence. The adjacent playing field is mown amenity grassland but a narrow strip of deciduous trees have been planted within the playing field adjacent the boundary but do not extend along the entirety of this boundary. These include Scots pine (*Pinus sylvestris*), beech (*Fagus sylvatica*), ash, downey birch (*Betula pubescens*), silver birch (*Betula pendula*), and Swedish whitebeam (*Sorbus intermedia*).

The habitats identified within the interior of the site are broadly of very little intrinsic conservation value, but may be of value to legally protected and / or priority species (See below). The western boundary hedgerow *may* qualify as an 'important' hedgerow under the Hedgerow Regulations (1997) and the sandstone wall on the northern boundary is possibly of some cultural significance and provides a habitat for a range of epipetric species.

4.3. Legally Protected Species

A data search was commissioned from Cumbria Biodiversity Data Centre for all records of rare, scare, protected or invasive non-native species within a 2km radius of nat. grid. ref. NY 00187 14425 (the approximate centre of the site). The search was conducted on 01/03/2021. This detailed biological records search returned a total of 3121 records of 170 rare, scarce and protected species.

Taxon Group	Number of historic records	Number of species
Fungus	0	0
Lichen	0	0
Moss	0	0
Conifer	1	1
Flowering Plant	43	10
Mollusc	3	1
Crusacean	0	0
Spider	0	0
Insect	176	29
Jawless Fish	0	0
Bony Fish	6	1
Amphibian	36	5
Reptile	1	1
Bird	2564	103
Marine Mammal	0	0
Terrestrial Mammal (including unidentified bat species)	291	19
TOTAL	3121	170

Table 6: *Summary of detailed biological records search from Cumbria Biodiversity Data Centre.*

With 3121 individual historic records of 170 species; species of all taxon groups are well recorded in this search area. However, historic biological records are of use in identifying potential presence of a species in an area, but should never be taken to imply likely absence. A lack of records is more likely to suggest lack of recorder effort than likely absence. This being the case, each species / species group is considered individually in relation to the site and the features of the site which may offer potential for the species / species group.

4.4. BATS

Records obtained from Cumbria Biodiversity Data Centre include 29 historic records of bat species from within 2km of the site. A total of 6 positively identified species have been previously recorded, these are soprano pipistrelle (*Pipistrellus pygmaeus*), common pipistrelle (*Pipistrellus pipistrellus*), noctule (*Nyctalus noctula*), Natterer's bat (*Myotis nattereri*), whiskered bat (*Myotis mystacinus*) and Daubenton's bat (*Myotis daubentonii)*. Records of 'bats', 'unidentified bats' and 'Pipistrelle sp. bats' also exist.

Of the 29 historic records; 7 relate to bat roosts and of these, 4 explicitly relate to maternity roosts. By accounting for multiple records of the same roost location - 4 separate roost sites have been identified in the search area of which 3 are maternity roosts.

The majority of historic records within the search area come from Cleator and Cleator Moor and are therefore >1.5km from the site; only three historic records within 1km of the site exist, none of these are records of bat roosts.

No built structures nor large mature trees exist on site and consequently there is no risk that bats currently roost on site. The boundary hedges on the western side and the narrow strip of trees planted within the playing field to the east provide some low quality foraging habitat which is likely to be already affected by light spillage from street lighting and the adjacent development. These features are unlikely to be significant to commuting or foraging bats in the wider area. The cycle path to the north is a distinct linear feature, often lined with trees and / or scrub and as such is likely to be used by foraging and commuting bats, but as the Site screened from the cycleway by an embankment and vegetation, it is unlikely that operations on site would significantly impact bats using this feature.

The risk of bat roosts occurring on site is considered to be 'nil'. The site is unlikely to be of significance to foraging or commuting bats in the wider area. The risk to bats is therefore considered to be 'nil'.

4.5. AMPHIBIANS

Records obtained from Cumbria Biodiversity Data Centre include 36 historic records of amphibians from within 2km of the site. These historic records include common toad (*Bufo bufo*), common frog (*Rana temporaria*), palmate newt (*Lissotriton helveticus*), smooth newt (*Lissotriton vulgaris*) and great crested newt (*Triturus cristatus*) within the search area. Two records of great crested newt exist, one record from 1988 which gives an imprecise location c.0.9km from the site boundary and one record from 2011 (which was collected and submitted by the author of this report) from a pond 1.8km to the south, south east.

A review of data contained on Natural England's MAGIC website (http://www.magic.gov.uk) conducted on 19/03/2021 has identified no 'Great Crested Newt Class Licence Returns' nor any 'Great Crested Newt Pond Surveys 2017-2019' which confirm presence within 500m of the site.

The Association of Local Government Ecologists (ALGE) trigger list for when protected species surveys may be required suggests that any pond within 500m of a major proposal (one that is more than 10 dwellings or more than 0.5 hectares) or within 100m of a minor proposal (fewer than 10 dwellings or less than 0.5 hectares) may require full survey work for great

crested newts unless a barrier to dispersal exists. The site here considered must be considered as a ‘major’ proposal meaning that ponds within 500m of the site boundary should be identified and potentially surveyed for great crested newts if deemed to be suitable for this species.

A detailed inspection of OS maps for the area has identified a total of three ponds within 500m of the site boundary. These are all within the grounds of West Lakes Science Park and lie at 380m, 380m and 450m from the site boundary. All three of these ponds have been surveyed previously by the author of this report in 2011 and were not found to be used by great crested newts at that time. It is also apparent (from CBDC records) that these ponds were again surveyed in 2018, and again returned no records of great crested newt presence.

The site measures c.1.5ha. The closest identified pond is c.380m from the site boundary. By inputting these figures (only) to the Rapid Risk Assessment Tool on the Great Crested Newt Mitigation Licence Method Statement spreadsheet, a result of "Green: offence highly unlikely” is returned. This assumes that there will be ‘no effect’ to individual great crested newts, which in the absence of any historic / contemporary survey data would be an unsafe assumption. However, with the ponds concerned having been surveyed on a number of occasions over the last 10 years (including by the author) and having not been found to be occupied by great crested newts, it is considered safe in this instance to assume that the will be ‘no effect’ to individual great crested newts.

The risk of great crested newts occurring on site is currently considered to be ‘nil’.

4.6. Otters

Records obtained from Cumbria Biodiversity Data Centre include 11 historic record of otter (*Lutra lutra*) within 2km of the site. These records relate to ‘dung or other signs’, ’field records’ and ‘road casualties’ with no historic records of otter holts within the search area. Historic records have been collected between 2002 and 2018 and come primarily from the River Ehen and the River Keekle but a record at Longlands Lake and road casualty in Cleator also exist.

Otter are now widespread in Cumbria and are likely to at least occasionally use *any* watercourse. The River Ehen lies approximately 1.6km to the southeast: the River Keekle lies 0.6km to the east. The Site lies on the watershed between two catchments, but a drainage ditch running along the northern boundary flows towards the Pow Beck catchment. This ditch is manmade and seemingly only carries water during wet weather. The Site itself contains no ponds or other bodies of water and contains no habitat suitable for otters to lie-up.

No evidence of otters having been present on the site was discovered during the site inspection.

The risk of otter holts or couches being affected by the proposed works is considered to be ‘nil’. It is unlikely that individual otter would cross the site and therefore there is no more than a ‘negligible’ risk that individual otter could be harmed during works.

4.7. Badgers

Records obtained from Cumbria Biodiversity Data Centre include 2 historic records of badger (*Meles meles*) within 2km of the site. These records relate to ‘road casualties’ only.

The site itself - being open improved grassland - is broadly unsuitable for badger setts but could be used by foraging badger. The cycle path to the north is lined with areas of woodland and West Lakes Science Park to the north also appears to contain superficially suitable habitat for badger setts. Improved pasture is abundant in the surrounding area and the Site is overlooked by the development to the west which is likely to make it less attractive to badger.

No evidence of badgers having been present on the site was discovered during the site inspection.

The risk of badger setts being affected by the proposed works is considered to be 'nil'. It is unlikely that individual badger would cross the site and therefore there is no more than a 'negligible' risk that individual otter could be harmed during works.

4.8. Reptiles

Records obtained from Cumbria Biodiversity Data Centre include a single historic record of common lizard (*Zootoca vivipara*) within 2km of the site. This was recorded in 1988 at Clints Quarry.

The following list gives characters that influence reptile habitat suitability;

- Location in relation to species range
- Vegetation structure
- Isolation
- Aspect
- Topography
- Surface geology
- Connectivity to nearby good quality habitat
- Prey abundance
- Refuge opportunity
- Hibernation habitat potential
- Disturbance regime

The site consists of improved grassland. The field boundaries are generally insubstantial and the site is surrounded by developed areas (to the west) and amenity grassland (to the east). The Site itself is unsuitable for reptiles.

The cycle path to the north offers a mosaic of tall ruderal, scrub and grassland habitats which although linear, add up to a considerable area of suitable reptile habitat. The cycle path follows a former railway line and therefore runs through cuttings and on embankments which provide a varied aspect and topography as well as an appropriate surface geology. The route of the former railway connects with the operational Cumbria Coastal Line at Mirehouse, Whitehaven approximately 2km to the north west. The sidings of the operational Cumbria Coastal Line in Whitehaven are known to support a large population of both common lizard and slow worm (*Anguise fragilis*). The cycle path is therefore connected to known populations of common lizard and slow worm, via uninterrupted, broadly suitable habitat. It is understood that no works are proposed which will affect the cycle path (or adjacent habitats) and therefore no impacts to reptiles are anticipated and further survey effort is not neces-

sary. However, if any works without the northern boundary do become necessary - such as drainage, services etc. - this may need to be reconsidered. It should also be noted that if the existing Site management regime were to alter, and suitable reptile habitat were to develop on site, the possibility for natural colonisation from adjacent habitat exists.

The risk of reptiles being affected by the proposed works is considered to be 'nil'.

4.9. Breeding Birds

Records obtained from Cumbria Biodiversity Data Centre include 2564 records of birds relating to 103 species occurring within 2km of the site. The majority of species recorded are identified as either possible, probable or confirmed as breeding. The precise location of bird records, specifically nest sites, is rarely provided in historic data.

The interior of the site is improved grassland and is cut annually and therefore offers very little potential for breeding birds. The hedgerow on the western boundary offers some potential for breeding birds, but this has been extensively cut back in an *ad hoc* manner, possibly due to encroachment on to the adjacent development, and therefore lacks any particularly dense structure. Furthermore it is understood that this hedgerow will be retained and will not be affected by the proposed development. The small area of scrub on the southern boundary of the site, adjacent Scalegill Road, is insubstantial, isolated and subject to some disturbance and is unlikely to be used by breeding birds.

Overall the proposal is considered to have the potential to impact upon individual pairs of breeding birds only (i.e. nest sites) and due to the very limited loss of potential nesting habitat is highly unlikely to have any wider impact on populations of breeding birds in the area.

All wild birds (birds in a wild state resident in or visiting Great Britain) and their nests and eggs are protected under the Wildlife & Countryside Act 1981. Particular emphasis is given to the protection of breeding birds. With certain exceptions, it is an offence to:

- Kill, injure or take wild birds
- Take, damage or destroy the nest of wild birds while in use or being built
- Take or destroy the eggs of wild birds

Although hedges and scrub on the peripheries of the site do have potential for breeding birds, these features will be broadly unaffected by any proposed works and therefore the risk to breeding birds is currently considered to be 'low'.

4.10. Red Squirrels

Records obtained from Cumbria Biodiversity Data Centre included 104 records of red squirrels (*Sciurus vulgaris*) and 35 records of grey squirrels (*Sciurus carolinensis*) within 2km of the site. Red squirrels have been recorded between 1990 - 2015; grey squirrels have been recorded between 2004 and 2015. Both red and grey squirrels are routinely recorded within suitable habitat throughout the area. Both red and grey squirrels have been previously recorded on the cycle path which lies to the north of the site and in gardens within 100m of the site boundary.

The Site does not contain any areas of woodland nor large, mature trees. The hedgerow on the western boundary contains species unlikely to be attractive to squirrels for foraging or dens / dreys, but could be used occasionally as a movement corridor.

No squirrel dens or dreys were observed during the site inspection and no other evidence of squirrel species was discovered.

The risk of red squirrels being affected by the proposed works is considered to be 'nil'.

4.11. Other Mammals

Records obtained from Cumbria Biodiversity Data Centre include records of hedgehog (*Erinaceus europaeus*), stoat (*Mustela erminea*), American mink (*Neovison vison*), red deer (*Cervus elaphus*) and rabbit (*Oryctolagus cuniculus*) from within 2km of the site.

During the survey moles (*Talpa europaea*) were recorded on site. No evidence of rabbit warrens or other extensive burrow systems were identified but other small mammal species are highly likely to occur on site.

'Other mammals', including burrow dwelling species may occur on site. There is a risk that 'other mammals' will be affected by the proposed works.

4.12. Invasive Non-Native Species

This site inspection was conducted during the winter - outside of the optimal Phase 1 Habitat Survey window. Consequently certain plant species may have not been evident at the time of the survey

Records obtained from Cumbria Biodiversity Data Centre include historic records of two Schedule 9 - Invasive Plant Species occurring within 2km of the site. These are Himalayan balsam (*Impatiens glandulifera*) and Japanese knotweed (*Fallopia japonica*) both of which have been previously recorded within 2km of the site boundary, with Himalayan balsam having been recorded on the cycle path within 200m of the site boundary.

During the survey no Schedule 9 - Invasive Plant Species were recorded.

Considering the seasonal constraints of a winter survey, the risk of invasive non-native species currently growing on site being spread within or beyond the site boundary is currently considered to be 'low'. The generic risk of invasive non-native species being introduced to the site and then spread within or beyond the site boundary is considered to be 'low'.

5. Photographs

Figure 5: *Showing the southern boundary of the site looking east along Scalegill Road.*

Figure 6: *Showing the western boundary hedge looking north.*

Figure 7: *Showing the interior of the site looking east.*

Figure 8: *Showing the stonewall on the northern boundary with epipetric fern species growing on the wall (inset).*

Figure 9: *Showing the cycle path - beyond the northern boundary - which represents suitable reptile habitat.*

Figure 10: *Showing ditch beyond the northern boundary which ultimately drains towards the Pow Beck catchment.*

Figure 11: *Showing the eastern boundary looking south.*

Figure 12: *Showing the interior of the site looking west with adjacent development beyond.*

6. Impact Assessment

6.1. Summary of Predicted Impacts

This survey has identified potential ecological impacts to;

- Breeding birds
- 'Other Mammals'
- Invasive Non-Native Species

Each of these features will be discussed below.

6.2. Breeding Birds

Although hedges and scrub on the peripheries of the site do have potential for breeding birds, these features will be broadly unaffected by any proposed works and therefore the risk to breeding birds is currently considered to be 'low'.

Potential impacts to breeding birds as a result of activities on site include;

- Disturbance / destruction of active nest sites and harm to nesting birds. Any felling or pruning of trees, boundary hedges or scrub during the bird nesting season would risk disturbing / destroying active nest sites and harming nesting birds. This would only be a risk during the bird breeding season (March - September inclusive)

6.3. 'Other Mammals'

'Other mammals', including burrow dwelling species may occur on site. There is a risk that 'other mammals' will be affected by the proposed works.

The proposed works could have the following impacts;

- Harm to burrow dwelling mammals. Burrow dwelling mammals (i.e. rabbits) could be crushed or asphyxiated in burrows if heavy plant is operated on ground above active burrows.

6.4. Invasive Non-Native Species

Considering the seasonal constraints of a winter survey, the risk of invasive non-native species currently growing on site being spread within or beyond the site boundary is currently considered to be 'low'. The generic risk of invasive non-native species being introduced to the site and then spread within or beyond the site boundary is considered to be 'low'.

The potential risks as regards invasive non-native species are as follows;

- Spread of invasive non-native species on / off site. Although no invasive non-native species have been confirmed as growing on site, such species could be present particularly along the northern boundary and *if* present could be spread on site following any excavation or disturbance of ground, or via seed or vegetative material adhering to plant / vehicles moving around the site.

7. Mitigation / Recommendations

The following potential impacts have been identified;

- Breeding Birds
  - Disturbance / destruction of active nest sites and harm to nesting birds.
- 'Other Mammals'
  - Harm to burrow dwelling mammals
- Invasive Non-Native Species
  - Spread of invasive non-native species on / off site.

7.1. Breeding Birds

Disturbance / destruction of active nest sites and harm to nesting birds

- Vegetation clearance should occur outside of the bird nesting season (March - August).
- If any vegetation clearance must occur during the bird breeding season, a breeding bird survey must be conducted immediately prior to vegetation clearance commencing. Should evidence of active nest sites (or dependant young) be identified, no work will be possible until the nest can be confirmed as no longer active or the young have fledged and / or moved out of the works area. This should be conducted by a suitably experienced ecologist.

7.2. 'Other Mammals'

Harm to burrow dwelling mammals

- All plant operatives will be vigilant for mammal burrows. If burrows are discovered, no plant will operate within 5m of any burrow entrance until an experienced ecologist can confirm if the burrow is active. If burrows are found to be active, measures will be taken to exclude mammals before works in the area may proceed.

7.3. Invasive Non-Native Species

Spread of invasive non-native species on / off site.

- All plant and equipment (including boots and hand tools) will be washed to remove any mud or debris, allowed to dry and remain dry for a period of 48hrs prior to being delivered to site.

- All materials delivered to site will be clean and free from contamination with seeds or vegetative material from invasive non-native species.

- No arisings from vegetation clearance work should be removed from the site unless it can be confirmed to be free of invasive non-native species or otherwise to an appropriate facility as contaminated waste.

- No spoil (top soil, sub-soil, aggregate etc.) will be removed from the site unless it can be confirmed to be free of invasive non-native species or otherwise to an appropriate facility as contaminated waste.

8. Summary

8.1. Summary of development and mitigation

This report details a Preliminary Ecological Appraisal conducted on Land off Scalegill Road, Moor Row, Egremont, Cumbria, CA24 3JU (Nat. Grid Ref. NY 00187 14425 - Approx. centre of site. See Figure 1).

Plans 'as proposed' have been provided (See Figure 2) and it is thereby understood that a proposal exists for a residential development on site.

The site is located in west Cumbria, on the western edge of the village of Moor Row, approximately 5km south east of Whitehaven town centre. The site lies to the north of Scalegill Road, to the west and north of Moor Row Working Mans Club. The site consists of improved grassland with a small area of scrub on the road edge. Beyond the site to the west is a public footpath which runs between the site and an ongoing housing development currently under construction. To the east the site adjoins a school playing field which consists of mown amenity grassland. Along the northern boundary the site adjoins a cycle path which follows the course of a former railway line. At this point the cycle path is part of Sustrans Route 72, which is 177 miles in length and connects Kendal with South Shields, via the west Cumbrian Coast, Silloth, Carlisle and Haltwhistle.

This survey has identified potential ecological impacts to;

- Breeding birds
- 'Other Mammals'
- Invasive Non-Native Species

Mitigation measures have been presented in Section 7 to address identified risks to ecological receptors.

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