

Site:	CMIQ - BOC Yard
Client:	Copeland Borough Council
Job Number:	784-B034202
Survey Type(s):	Ecological Appraisal
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#### INTRODUCTION

#### BACKGROUND

Tetra Tech was commissioned by Copeland Borough Council in January 2022 to undertake a review of existing reports and baseline information in order to compile an Ecological Appraisal report for the proposed BOC Yard. This report should be read in conjunction with the Cleator Moor Innovation Quarter (CMIQ) Ecological Appraisal Report (Tetra Tech, 2021a) which the current proposal falls within.

This report has been prepared by Assistant Ecologist Danny Burrows and the conditions pertinent to it are provided in Appendix A.

#### SITE LOCATION

The proposed BOC yard site, hereinafter referred to as the 'site', is located in Cleator Moor and is centred at Ordnance Survey National Grid Reference NY 01383 15586 – see Figure 1 for location plan. The site is 0.3 ha in size and is located in the west of the Main Leconfield Site / Leconfield Industrial Estate which is part of the Cleator Moor Innovation Quarter (CMIQ).

The site is comprised of hardstanding, marshy grassland, dense/ continuous scrub and unimproved neutral grassland; with the surrounding area consisting of various industrial buildings associated with the Leconfield Industrial Estate, hardstanding, amenity grassland, semi-improved grassland, marshy grassland, scrub, and various woodlands including broadleaved and mixed.

#### **DEVELOPMENT PROPOSALS**

The proposed description of the development is as follows:

"The proposal will comprise of a concrete service yard used for storage and distribution purposes. Installation of 10no LED 150w Lights are to be fixed to the perimeter fence providing direct illumination across the site".

The masterplan showing the proposed site plan is included in Appendix B (Drawing Reference: CMIQ-NOR-BOC-00-DR-A-90000 – SITE – LOCATION PLAN\_P03).

# PURPOSE OF THE REPORT

The purpose of this report is to complete a review of existing reports and baseline information in order to compile an ecological appraisal specific for the development, as well as site specific assessment and recommendations.



#### **METHODOLOGY**

#### **DESK STUDY**

#### **Previous Reports**

The following reports were available for review:

- Tetra Tech (2021a) CMIQ Ecological Appraisal;
- Tetra Tech (2021b) CMIQ Bat Roost Assessment Report;
- Tetra Tech (2021c) CMIQ Breeding Bird Survey Report;
- Tetra Tech (2021d) CMIQ Great Crested Newt Report;
- Tetra Tech (2021e) CMIQ Invasive Non-Native Species Management Plan Report;
- Tetra Tech (2021f) CMIQ Invertebrate Report;
- Tetra Tech (2021g) CMIQ National Vegetation Classification Report;
- Tetra Tech (2021h) CMIQ Reptile Report;
- Tetra Tech (2021i) CMIQ Habitats Regulations Assessment Report;
- Tetra Tech (2021j) CMIQ Bioiversity Net Gain Report; and
- WYG (2020) Leconfield Industrial Estate Ecological Appraisal.

#### Local Ecological Records Centre

A data search was requested from the Cumbria Biodiversity Data Centre (CBDC) for information on any nature conservation designations and protected or notable species records within 2 km of the Leconfield Industrial Estate / Main Leconfield Site as part of the Ecological Appraisal (WYG, 2020) and was still applicable to this report. Only records post year 2000 were considered in this report.

#### **Online Resources**

A search for relevant information was also made on MAGIC <u>www.magic.gov.uk</u> – DEFRA's interactive, web-based database for statutory designations and information on any European Protected Species licence (EPSL) applications that have been granted in the local area.

#### **FIELD SURVEYS**

The following data used within this report has been derived from surveys conducted as part of the wider CMIQ application process in 2021. Methodologies for the following surveys can be found within their respective reports:

- Habitats CMIQ Ecological Appraisal (Tetra Tech, 2021a) and CMIQ National Vegetation Classification Report (Tetra Tech, 2021g);
- Great Crested Newt CMIQ Great Crested Newt Report (Tetra Tech, 2021d);
- Bats CMIQ Ecological Appraisal (Tetra Tech, 2021a) and CMIQ Bat Roost Assessment Report (Tetra Tech, 2021b);
- Reptiles CMIQ Reptile Report (Tetra Tech, 2021h);
- Badger CMIQ Ecological Appraisal (Tetra Tech, 2021a);
- Birds CMIQ Breeding Bird Survey Report (Tetra Tech, 2021c);
- Invertebrates CMIQ Invertebrate Report (Tetra Tech, 2021f); and
- Invasive Species CMIQ Invasive Non-Native Species Management Plan Report (Tetra Tech, 2021e).



# RESULTS

### **DESIGNATED SITES**

The following designated sites of ecological importance have been identified within 2 km of the site.

Designation	Site Name	Distance & Direction	Summary of features		
	Statutory				
Special Area of Conservation (SAC)	River Ehen	1.6 km SE	The designated stretch of the river, between Ennerdale Water and the confluence with the River Keekle at Cleator Moor, meanders across a narrow floodplain with areas of riparian woodland and trees. This stretch of the river supports outstanding populations of the freshwater pearl mussel <i>Margaritifera</i> <i>margaritifera</i> . In addition the river supports Atlantic salmon <i>Salmo salar</i> , important for the ecology of the river.		
Site of Special Scientific Interest (SSSI)	River Ehen (Ennerdale Water to Keekle Confluence)	1.6 km SE	A river that supports freshwater pearl mussel populations.		
Non-statutory					
County Wildlife Site (CWS)	Rheda South Park	0.9 km NE	No information available.		
CWS	Birkhouse Pond	1.6 km E	No information available.		
CWS	Parkside Pond	1.9 km E	No information available.		
CWS	Dub Beck	1.9 km N	No information available.		
Site of Invertebrate Significance	Keekle River	0.6 km W	No information available.		
Site of Invertebrate Significance	Weddicar Hall	1.5 km N	No information available.		
Site of Invertebrate Significance	Dub Beck	1.9 km N	No information available.		

#### Table 1: Summary of designated sites

#### Habitats of Principle Importance/ Priority habitats (HPI)

The MAGIC search identified the following HPI types:

- Open mosaic located to the east of the site boundary; and
- Deciduous woodland located along the northern boundary of western and to the north of the wider CMIQ Site A.



### HABITATS

The following habitats have been identified through review of previous assessments, with detailed Target Notes (Appendix C) included in Phase 1 Habitat Plans for the site (Figure 2).

#### **Dense/ Continuous Scrub**

An area of scrub is present on the north east of the site boundary (Figure 2). This predominantly comprised willow *Salix sp.* and alder *Alnus glutinosa* with further smaller areas of swamp dominated by reed canary grass *Phalaris arundinacea*. *Cotoneaster sp.* and *Montbretia sp.* were also found to be present within this area.

#### **Scattered Scrub**

Scattered willow and birch Betula sp. scrub was present towards the northwest boundary (Figure 2).

#### **Unimproved Neutral Grassland**

A small area of unimproved neutral grassland is recorded within the site boundary (Figure 2). This habitat was unmanaged and reverting to various degrees from landscaping and natural colonisation of the original slag heaps when the site was created (White Young Green, 2007). The main grass species recorded within the sward included Yorkshire fog *Hoclus lanatus*, cock's-foot *Dactylis glomerata*, red fescue *Festuca rubra*, sweet vernal-grass *Anthoxanthum odoratum* and crested dog's tail *Cynosurus cristatus*.

#### **Marshy Grassland**

Marshy grassland with areas of hard standing, ephemeral vegetation and scattered scrub was recorded within site boundary (Figure 2). The habitat consisted of an abundance of common bent *Agrostis capillaris* with frequent common knapweed *Centaura nigra* and occasional cock's foot *Dactylis glomerata*, creeping buttercup *Ranunculus repens* and crested dogstail *Cynosurus cristatus*.

#### **Ephemeral Water Feature**

An ephemeral water feature was present in the site (TN1; Figure 2) within vehicle tracks during the winter months, however it was absent during the majority of the year. When present it formed connected linear waterbodies within the marshy grassland habitat. The water dries out seasonally but many aquatic species such as lesser spearwort *Ranunculus flammula*, water crowfoot *Ranunculus aquatilis* and charophytes were present.

#### **Hard Standing**

A large part of the site is comprised of hardstanding in derelict patches where buildings were previously demolished as well as a long area of road (Figure 2).

# PROTECTED & NOTABLE SPECIES

#### **Great Crested Newt (GCN)**

The desk study returned one record of GCN *Triturus cristatus* in Cleator approximately 2 km south from the site, recorded in 1998 (no post 2000 records were returned).

As part of the GCN survey conducted in 2021 (Tetra Tech, 2021d) the ephemeral water feature within the site boundary scored an average HSI score, however it should be noted the imperminance of this feature having dried up by spring. The terrestrial habitat within and surrounding the site (with the



exception of the hardstanding) was deemed as suitable for GCN. At the time of survey the waterbody was dry, therefore no GCN adults, juveniles, efts or eggs were observed during the survey. Presence of other amphibians including smooth newt *Lissotriton vulgaris*, palmate newt *Lissotriton helvetica* and common frog *Rana temporaria* were found within the grassland areas of the site.

#### Bats

The desk study found records for a variety of bat species with a 2 km radius of the site, they are displayed in Table 2.

Species	No. of records	Date	Recording	Distance & Direction
Natterer's bat Myotis nattereri	1	2017	1 count	2 km S
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	1	2011	5 count	1.6 km NE
Noctule Nyctalus noctula	1	2011	1 count	1.6 km NE
Common pipistrelle Pipistrellus pipistrellus	2	2011	1 count	1.6 km NE
		2012	Count of more than 5 bats	2 km S
Unidentified bat Chiroptera sp.	1	2016	Not specified	1.6 km N

Table 2: Desk study bat results note only the nearest record have a distance and direction.

There was one bat EPSL granted within 2 km of the site. The license was for the destruction of a resting site for whiskered bat, Natterer's bat & Brandt's bat *Myotis brandti* in 2013, located approximately 0.5 km west of the site.

No bat roosting habitat was identified on site, however bat roosts were identified in the wider CMIQ site including building B6 (figure 2) which is adjacent to the south eastern site boundary. As part of the bat roost assessment, a number of woodland areas were identified within and around the site boundary, specifically woodland block "W2 & W3" (Tetra Tech, 2021b). Woodland block "W2" was directly adjacent to the sites northwest boundary and was found to have multiple trees with low to high roosting suitability. Woodland block "W3" was adjacent to the eastern boundary with a section of the woodland encroaching within the site boundary; woodland block "W3" was found to have no trees suitable for roosting bats. The habitats within both the site and the wider CMIQ area, including the woodland blocks, are suitable for use by commuting and foraging bats.

# **Reptiles**

The desk study returned one old record of a slow worm *Anguis fragilis* approximately 1.7 km north of the site, recorded in 1997 (no post 2000 records were returned).

It was previously identified that the site as well as several other areas within the CMIQ have potential to sustain reptile populations due to the presence of suitable habitats (Tetra Tech, 2021a).

Therefore, the proposed BOC yard site was scoped in as part of the presence / likely absence reptile survey for the entire CMIQ site. The survey identified a small population / low numbers of common lizard *Zootoca vivipara* (with a peak count of two gravid common lizards observed) within the area directly adjacent south to the proposed BOC yard site (Tetra Tech, 2021h).

Habitats suitable for reptiles occur across the site and includes marshy and ephemeral grassland, hardstanding, soil and rubble piles, scattered scrub and woodland edges. Furthermore, the site is



directly adjacent to the section of hardstanding, rubble, scrub and grassland where common lizards were recorded.

### Badger

The desk study returned one record of badger *Meles meles* within a 2 km radius of the site, recorded in 2018.

The habitats within the red line boundary appeared to be of suitability for badgers and are likely to provide good connectivity and foraging features. However, no badger setts or other signs of badgers were recorded within the site and 50m radius. The scrub and grassland habitat within and surrounding the site, including the woodland habitat adjacent to the site, are considered to provide suitable features for foraging badgers.

#### **Otter & Water Vole**

The desk study returned no records of water vole *Arvicola amphibius* within a 2 km radius of the site. The desk study did return 26 records of otter *Lutra lutra*, with majority of these associated with River Keekle that runs approximately 1.2 km northwest from the site. The nearest record was approximately 0.7 km north of the site; however, the record's location description stated 'River Keekle' and therefore, it is considered that the grid reference for this record may have been mis-recorded.

Nor Beck, which was located approximately 250m north from the site boundary, comprised of a shallow, straightened ditch with generally low suitability to support otter. Given the distance from Nor Beck and the sub-optimal habitats present on the site, it is considered that the site is of negligible for breeding, resting or foraging.

No suitable habitat for water voles was observed on site during the survey.

#### **Birds**

The desk study returned 1,236 records of 105 bird species within 2 km of the site (including 12 sensitive species). Of these a total of 10 are legally protected bird species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), a total of 20 bird species are Birds of Conservation Concern (BoCC) Red List species and a total of 43 bird species are BoCC Amber list species.

A breeding bird survey (Tetra Tech, 2021c) was carried out as part of the wider CMIQ site and recorded a number of bird species. Four bird species were recorded within and adjacent to the site boundary including two BoCC Amber listed species. Additionally, one of those species were listed as a Species of Principal Importance (SPI) under the Natural Environment and Rural Communities (NERC) Act 2006. No Schedule 1 species were recorded within the survey area.

The habitats on site, including scrub and grassland provide suitable habitats for nesting birds.

#### **Invertebrates**

The desk study returned 168 records of 34 invertebrate species in the 2 km search radius. There are seven insect species listed under the NERC Act (SPI). Species are displayed in Table 3.

Species	Foodplant preferences	
Butterflies		
Dingy skipper Erynnis tages	Common bird's-foot-trefoil Lotus corniculatus	

Table 3: Favoured food plant of NERC insect species within the desk study.



Wall Lasiommata megera	Grasses; Tor-grass <i>Brachypodium pinnatum</i> , false brome <i>Bromus sylvaticum</i> , cock's-foot <i>Dactylis glomerata</i> and Yorkshire fog <i>Holcus lanatus</i>
Small heath	Fine grasses; fescues <i>Festuca</i> spp., meadow-grasses <i>Poa</i> spp.,
Coenonympna pampnilus	and beins Agrosus spp.
Grayling Hipparchia semele	Sheep's-fescue <i>Festuca ovina</i> , red fescue <i>F</i> . rubra and early hair- grass <i>Aira praecox</i>
Small pearl-bordered fritillary Boloria selene	Common dog-violet Viola riviniana and marsh violet V. palustris
	Moths
Latticed heath Chiasmia clathrate	Clovers Trifolium spp. and lucerne Medicago sativa
Cinnabar Tyria jacobaeae	Ragwort Jacobaea vulgaris

All of the species in Table 3, excluding the small pearl-bordered fritillary, could be potentially present on site as their preferred foodplant has either been recorded on site or likely to be present, based on habitats identified. As the survey was conducted in winter, a full list of plant species on site could not be gathered (Tetra Tech, 2021a). However, an NVC survey (Tetra Tech, 2021g) was able to establish a full list of plant species within the surrounding CMIQ site.

Further to this, the invertebrate surveys were conducted on site in summer 2021 (Tetra Tech, 2021f) found a local level of invertebrate interest on the greater CMIQ site, that being restricted to cinnabar moth and its caterpillars. Similarly, the larger CMIQ site supports both common bird's foot trefoil which is the food plant of dingy skipper. Although the habitat on site might support dingy skipper, no evidence was recorded during the detailed invertebrate survey.

#### **Other Species**

#### Red Squirrel

CBDC returned 123 records for red squirrel *Sciurus vulgaris* within a 2 km radius of the site, with the nearest record located approximately 120m north of the site.

The block of woodland adjacent northwest to the site (Figure 2) was considered to be suitable for red squirrel since it had numerous mature trees present and good connectivity to the other suitable woodland blocks and residential gardens. Areas of willow / alder carr scrub to the east of the site (Figure 2) comprised of predominantly young trees and were considered to provide sub-optimal conditions for red squirrel.

Given the woodland is outside of the red line boundary of the site and there are negligible breeding opportunities within the site it is reasonable to suggest that the site holds negligible value for red squirrel breeding. However, squirrels can forage in various habitats, including scrub, so it is possible that they move through the site if present in the area.

#### West European Hedgehog

CBDC returned 47 records for West European Hedgehog *Erinaceus europaeus* within 2 km radius of the site. The site has the potential to support hedgehog and the scrub and grassland on site provide suitable habitat for foraging and may contain hedgehog nests.



#### Brown Hare

CBDC returned four records for brown hare *Lepus europaeus* within a 2 km radius of the site. The habitats on site are considered to be sub-optimal suitability for this species due to the lack of extensive grassland cover, however, it is considered likely that individuals may occasionally commute through the site.

#### Polecat

CBDC returned two records for polecat *Mustela putorius* within a 2 km radius of the site; approximately 2 km north of the site. The site is considered to provide sub-optimal habitat for this species as it has no signs of their main prey – rabbits – and was likely to be subject to frequent human / dog disturbance.

#### **Invasive Species**

The desk study returned three plant and three animal specues listed under the Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Table 4 displays each species and the nearest record to the site.

Species	Number of records	Distance & Direction
Montbretia Crocosmia pottsii x aurea = C. x crocosmiiflora	1	2.5 km SW
Indian balsam Impatiens glandulifera	4	2 km SE
Japanese knotweed Reynoutria japonica	10	0.8 km SW
Canada goose Branta canadensis	1	Within 2 km
American mink Neovison vison	1	1.3 km N
Grey squirrel Sciurus carolinensis	26	0.6 km E

#### Table 4: Invasive species identified in the desk study

The Invasive Non-Native Species survey conducted by Tetra Tech in 2021 (Tetra Tech, 2021e) found areas of Montbretia and wall cotoneaster *Cotoneaster horizontalis* along the southwest boundary of the site.

# **IMPORTANCE OF ECOLOGICAL FEATURES**

In line with the CIEEM PEA Guidelines, and based on the above baseline information, the importance of each ecological feature recorded within the study area is given in Table 5 below. The categories used are those which are defined in Section 4 of the CIEEM EcIA Guidelines (2018 v1.1):

Table 5: Importance of o	ecological features
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Feature	Importance	Rationale
River Ehen SAC	International	Designated for freshwater pearl mussel <i>Margaritifera</i> <i>margaritifera</i> population and Atlantic Salmon <i>Salmo salar</i> .



River Ehen (Ennerdale Water to Keekle Confluence) SSSI	National	Designated for freshwater pearl mussel <i>Margaritifera</i> <i>margaritifera</i> population
Dub Beck CWS; Rheda South Park CWS; Parkside Pond CWS; Birkhouse Pond CWS	County	Designated County Wildlife Site
Dub Beck; Weddicar; Keekle River Site of invertebrate significance	Local	Locally designated Site of Invertebrate Significance.
Dense and scattered scrub	Negligible	Habitat is common and widespread.
Semi-improved neutral grassland and marshy grassland	Local	Habitats are common and widespread but it is likely to support a diverse range of fauna including invertebrates, small mammals and foraging birds.
GCN	Likely absent from site.	Waterbody within site is ephemeral and scored average on HSI, with surveys finding no evidence of GCN.
Reptiles	Local	A small population of common lizards were found to be in close proximity to the site. The site provides suitable foraging / commuting habitat and potential refugia / hibernacula features.
Bats	Local	The adjacent woodland has trees suitable for roosting bats with the scrub and grassland considered suitable for foraging and commuting bats which could be indirectly impacted.
Badgers	Likely absent from the site.	No badger setts were recorded within 50m radius of the site. There are no records of badgers within the local area.
Breeding Birds	Local	Habitats within the site are likely to support a wide range of common bird species.
Invertebrates	Local / County	Habitats within the site likely support a population of cinnabar moths as well as host





	-	-
		bird's-foot trefoil which is the foodplant of the dingy skipper.
Red Squirrel	Likely absent from the site.	The habitat adjacent is suitable, however no suitable habitat within the site boundary for breeding.
Hedgehog	Local	Habitats on site are suitable for foraging and hibernating hedgehog. Hedgehog is a NERC SPI.
Brown Hare	Likely absent from the site.	No suitable habitat within the site boundary.
Polecat	Likely absent from the site.	No suitable habitat within the site or signs of main prey.
Either: International (Incl. European) / National / Regional / County / Local / Negligible		

# **RELEVANT PLANNING POLICY & LEGISLATION**

### **Revised National Planning Policy Framework**

A revised NPPF was issued on 20<sup>th</sup> July 2021 (Ministry of Housing Communities and Local Government, 2021) and currently supplements government Circular *06/2005*, *Biodiversity and Geological Conservation: Statutory and their Impact within the Planning System* (Office of the Deputy Prime Minister, 2005).

Circular 06/2005 states that the presence of protected species is a material consideration in the planning process – refer to Tetra Tech (2021a) for further details on this policy.

# **Biodiversity 2020: A strategy for England's Wildlife & Ecosystem Services**

The priority species and habitats considered under Biodiversity 2020 are the SPI & Habitats of Principal Importance (HPI) detailed under NERC Act.

#### **Local Biodiversity Action Plan**

The Cumbria Biodiversity Action Plan (CBAP) is a list of habitats and species identified under the NERC Act 2006. A list of all 268 SPI which occur in Cumbria is provided at:

https://www.cumbriawildlifetrust.org.uk/sites/default/files/cumbria%20bap%20species%20updated%2 0list%202009%20web.pdf

#### Local Plan

Copeland Borough Council holds the following policies relevant to this development in their local plan 2013-2018: Core Strategy and Development Management Policies DPD, adopted in 2013:

- Policy SS5 Provision and Access to Open Space and Green Infrastructure
- Policy ENV3 Biodiversity and Geodiversity
- Policy DM25 Protecting Nature Conservation Sites, Habitat and Species
- Policy DM28 Protection of Trees



Copeland Borough Council holds the following policy relevant to this development in their draft local plan 2021-2038: Focused Pre-Publication Draft Changes Consultation:

#### • Policy DS2PU – Reducing the impacts of development on Climate Change

Refer to Tetra Tech (2021a) for further details on each policy.

#### **DISCUSSION & RECCOMENDATIONS**

#### **DESIGNATED SITES**

#### Natura 2000 Sites – River Ehen SAC

Nor Beck is located approximately 250m north from the site boundary and enters the River Keekle which flows into the River Ehen. There is no hydrological connectivity between the site and Nor Beck. A Habitat Regulations Assessment was produced for the wider CMIQ site (Tetra Tech, 2021i). Therefore, the distance between Nor Beck and the site boundary is likely a great enough distance to mitigate any negative impacts entering Nor Beck and consequently the River Ehen SAC.

Therefore no likely significant impacts upon the conservation status of the qualifying features of River Ehen SAC is expected.

#### Sites of Special Scientific Interest – River Ehen

The site lies within the Impact Risk Zone (IRZ) for River Ehen (Ennerdale Water to Keekle Confluence) SSSI. However, the proposals do not fall into a category of likely risk and therefore consultation between Natural England and Local Planning Authority in relation to impacts on the SSSI is unlikely to be required.

#### **Local Wildlife Sites**

There are seven county wildlife sites within 2 km radius of the site. The closest CWS is the River Keekle at 0.6 km west of the site. As no designation information was available for each of the sites, it is difficult to assess impacts on the particular habitats and species that may be found on site. However, given the distance from the site to the CWS', no adverse effects are considered likely. No further assessment required.

#### HABITATS

#### **Grassland & Scrub Habitats**

The BOC Yard Masterplan (Appendix B) shows that the areas of marshy grassland, dense/ continuous scrub and unimproved neutral grassland are to be removed and replaced with areas of hardstanding. Both habitats are considered low value habitat, as well as being apart of a larger mosaic of habitats within the larger CMIQ site, therefore the loss of this habitat is likely not significant in the perspective of a wider landscape. The neutral grasslands however has been found to be a part of a wider high value species rich neutral grassland (Tetra Tech, 2021g). That being said, the area being removed is small and is unlikely to affect the condition of the wider habitat, with the CMIQ masterplan retaining the wider neutral grassland. However these habitats have been found suitable in providing foraging and shelter opportunities for a range of species including nesting birds, reptiles and amphibians. The current site comprises of a small section within the larger CMIQ site, with recommendations and enhancements being made including native tree planting, implementing species rich grasslands, and the retention of high priority habitats such as woodland (Tetra Tech,



2021j). Consequently, the greater CMIQ site aims to provide mitigation for these species and the current BOC Yard proposal (Appendix B) would not benefit any biodiversity enhancements.

### **PROTECTED & NOTABLE SPECIES**

#### Amphibians

The GCN and its habitat are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). Under the legislation, it is an offence to intentionally kill, injure or take GCN as well as intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a GCN or disturb an animal while it is occupying a structure or place which it uses for that purpose. GCN are also a NERC SPI and Local Biodiversity Action Plan (LBAP) species.

No signs of GCN were found during the surveys with GCN confirmed as likely absent from the ephemeral water feature.

In the unlikely event of GCN being recorded during works on site then works should be postponed and advice sought from a suitably qualified ecologist.

Three other amphibian species: a medium population of palmate newt, a small population of smooth newt and a small population of common frog were observed within the grassland areas. Reasonable Avoidance Measures (RAMS) are recommended to protect notable species onsite – refer to CMIQ Ecological Appraisal (Tetra Tech, 2021a).

#### **Reptiles**

All species of native reptiles are protected under the Wildlife and Countryside Act 1981 (as amended).

The Tetra Tech reptile survey conducted in 2021 indicates that breeding populations of common lizard are present within close proximity to the site and likely use the site for foraging and commuting (Tetra Tech, 2021h). The proposed development is therefore likely to impact reptiles present on site.

Reptiles observed during surveys were confined to areas of hardstanding with surrounding areas of scrub and grassland margins. Given the scope of the proposed development the habitat loss is likely to impact reptiles within the wider CMIQ site. However, given the wider landscape of suitable habitat, and the small amount of grassland and scrub being removed, the impact on reptiles can be mitigated through the implementation of RAMS to include restrictions on timing of site clearance to avoid the sensitive hibernation period (Tetra Tech, 2021a).

#### Reasonable Avoidance Measures

Reasonable avoidance measures (RAMs) for reptiles and amphibians prior to and during works include the following:

- A toolbox talk should be provided to the contractors at the start of the works. The toolbox talk
  will detail any RAMs and should also mention other animals that may be encountered on site
  during works, such as hedgehog.
- Any site clearance works, including vegetation removal, removal of natural /artificial refugia and breaking ground must be undertaken during the amphibian active season (March end October during periods of suitable weather) to avoid impacting on hibernating amphibians;
- All removal of the below-ground parts of cleared vegetation e.g. scrub roots must be undertaken during the amphibians active season (March - end October inclusive) to avoid impacting on hibernating amphibians;





- Immediately prior to site clearance works, an ECoW should finger-tip search and check all of the refugia and sheltering places for animals. This will then be followed by the removal of the refugia under the supervision of the ECoW;
- For the loss of any suitable grassland terrestrial habitat, it is recommended that staged strimming is undertaken to displace amphibians from these areas and encourage dispersal to suitable retained areas. Strimming should be undertaken in a directional manner. For example, the marshy and neutral grassland should be strimmed in the direction of the woodland. This will allow displaced animals to move towards the retained woodland and woodland edge habitats.
- Uninjured animals encountered at any time during site clearance works should be carefully handled using gloved hands and moved to a retained area of habitat a suitable distance from machinery and site works. Any injured animals should be taken to a vet or wildlife clinic. Contact an ecologist for ECoW advice;
- Any pipes stored, or installed on-site, with a diameter of greater than 200mm should be covered or capped at night to reduce the risk of animals becoming trapped inside;
- Backfilling excavations before the end of the day, or covering of excavations greater than 300 mm depth before nightfall;
- Escape routes should be incorporated into shallower excavations if covering is not practicable, such as escape boards or shallow sloped sides;
- Daily checks of any excavations should be made by contractors prior to commencing work to ensure that no animals have become trapped in the excavations. Should a trapped protected / notable species be found within the works, the supervising ECoW or Cumbria Wildlife Trust (CWT) should be contacted immediately for advice;
- If any injured animals are found during works, then all works should stop immediately the animal should be taken to an appropriate wildlife hospital or centre for relocation. The incident should then be reported to the ECoW.
- Storage of waste and materials to avoid creating potential resting places or areas of pooling water with potential for amphibians to breed in, by storing material on raised platforms e.g. wooden pallets;
- It is preferable to use wheeled machinery rather than track machinery. However, if track machinery is used it should only track over areas already cleared under supervision.
- No night-time working.
- Proposed lighting schemes for the site should avoid light spill on to open water due to the potential to interrupt breeding activity.

#### **Bats**

All bats and their roosts receive full protection both under The Conservation oh Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to:

- Intentionally kill, injure or take a bat;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat; or
- Disturb a bat while it is occupying a structure or place which it uses for that purpose.

A detailed bat survey was conducted on site in 2021 by Tetra Tech (Tetra Tech, 2021b). No bat roosts were found to be on the application site, however a common pipistrelle day roost was identified in the building adjacent to the site's south east facing boundary (see Figure 2 for location). The current grassland and scrub habitat provide suitable foraging and commuting areas for bats, however given the relatively small area of suitable foraging habitat on site being removed it is unlikely that



these losses will be of significance to bat populations within the area, as they are likely to use the woodland and wider areas of habitat. The woodland corridor adjacent to the application site's west/north west boundary is considered a valuable foraging and commuting resource and must be maintained as a dark corridor.

Artificial lighting in the form of flloodlighting will be required during the operational phase of the BOC Yard, which may indirectly impact roosting and foraging bats using the wider CMIQ site through disturbance.

Bats are sensitive to external light spill and the unmitigated introduction of high lux levels may disrupt roosting bats (delaying emergence and potentially resulting in the bats abandoning the roost) and foraging bats (through displacement of insect concentrations). Some bat species are particularly sensitive to light spill and would avoid using a commuting feature that was subject to light spill.

A sensitive lighting strategy will be implemented to mitigate disturbance to roosting, forgaing and commuting bats in line with the Institute of Lighting Professionals (ILP) Guidance Note 08/8 Bats and artificial lighting in the UK (ILP, 2018). The following control measures will be incorporated into the design:

- LED warm lights will be used, which have no UV output, therefore attracting fewer insects with warmer colours reducing impacts on bats (Stone 2012, 2015a, and 2015b).
- During detailed design of the lighting plan, lux plots will be produced to show predicted lux level change across the site and demonstrate avoidance of external light spill on sensitive features (bat roost and woodland foraging and commuting feature).
- Flood lights will have a dimming feature working alongside the typical timeclock and photocell, in order to keep lux levels as low as possible during the active bat season (March to September inclusive) between dusk and dawn (when bats are emerging and re-entering roosts and during peak foraging times).
- Lighting column height will be kept as low as possible (<4m) in order to keep light directional and below the horizonatal line.

It is noted that flood lighting will be required for longer periods in the winter, to facilitate de-icing of the hardstanding, however this is not considered to have a significant impact as this is outside the active bat season and no hibernation features have been identified in the wider CMIQ area.

#### Badger

Badgers are protected and so are the setts (burrows) they occupy. Under the Protection of Badgers Act 1992, in England and Wales it is an offence to:

- Wilfully kill, injure or take a badger (or attempt to do so);
- Cruelly ill-treat a badger;
- Dig for a badger;
- Intentionally or recklessly damage or destroy a badger sett, or obstruct access to it;
- Cause a dog to enter a badger sett;
- Disturb a badger when it is occupying a sett.

No badger setts or other signs of badger were recorded within the site (or within a 50m radius of the site). Therefore, it is considered unlikely that badger setts occur within the site boundaries. Parts of the habitat and surrounding area appear suitable for badgers and there are records of this species within 2 km; badger are highly mobile and can rapidly colonise new areas. Therefore, presence of badger may be a potential constraint to the future development works.



#### It is recommended that a pre-works badger survey of the proposed development area is undertaken at least three months prior to work.

If a badger sett is found during works, an application for a license to disturb or destroy the sett may be required to be completed and approved by Natural England, to avoid contravention of legislation.

#### **Birds**

All wild birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended).

A breeding bird survey was carried out within the breeding bird season (May – June 2021) in which a total of four bird species were identified within and immediately around the site boundary (Tetra Tech, 2021c). Of these species, two BoCC Amber list species were recorded. Of the four species recorded, one was confirmed breeding, while the other three were probable breeders. The survey revealed that breeding birds recorded on site included predominantly common passerine species breeding within the woodland edge and scrub habitats in and around the site.

Given the retention of woodland edges (see CMIQ Masterplan) and further habitat creation it is unlikely that the loss of grassland and scrub habitat on site will significantly effect the availability of potential breeding territories.

Works should be carried outside of the breeding bird season (I,.e. outside March – September). If this is not possible, potential nesting habitat should be checked for nests by a suitably qualified and experienced ecologist / ECoW immediately prior to its removal. Once complete, a 48-hour window will allow for the area to me made unsuitable for nesting in the area checked. If these works in the checked area are not completed within 48h, a further inspection will be required (Tetra Tech, 2021c).

#### **Invertebrates**

The site is likely to support a range of commonly occurring invertebrate species as well as some LBAP and SPI species that were recorded within 2km. The site has the potential to have host plant species including birds-foot trefoil which is known to be dingy skipper's food plant.

The small area of habitat to be removed is unlikely to impact local invertebrate populations.

#### **Red Squirrels**

The site is unlikely to support red squirrel breeding, with no evidence found during the survey (Tetra Tech, 2021a). However, given the data search suggesting potential for red squirrels on site there is a possibility that the grassland and scrub habitat are used for foraging. Therefore, it is recommended a RAMS is followed to mitigate any potential incidence (refer to Tetra Tech, 2021a).

#### **Invasive Species**

An invasive non-native species (INNS) walkover survey was carried out during the month of June 2021 in order to assess any INNS within the site. Two plant species listed on Schedule 9 of the W&CA were recorded during the survey:

- Montbretia Crocosmia x crocosmiiflora
- Wall cotoneaster Cotoneaster horizontalis

Recommended working practices to prevent further spread include:

- All invasive species on site should be clearly marked and buffer zone of 3m highlighted.
- All operatives should be provided a toolbox talk given by a invasive species contractor.
- Wash-down areas should be provided to clean boots and tools as soon as contractors leave the area.



### SUMMARY

#### Habitats & Species

- The terrestrial habitats are suitable for amphibians however GCN were confirmed as likely absent.
- The grassland and scrub habitats are suitable for reptiles and presence of common lizard was previously confirmed within the area directly adjacent the southern boundary.
- The grassland and scrub habitats are suitable for nesting birds
- No bat roosts or potential roosting features are present on site, however a common pipistrelle roost was found adjacent to the south east face of the site boundary. Similarly, the grassland and scrub may provide foraging and commuting potential, with the adjacent eoodland corridor also being of value for foraging and commuting.
- Badgers are unlikely to be present on site, with no evidence of setts within or 50m around the site.
- INNS are present within the site.

#### **Recommendations**

- During the construction phase a Reasonable Avoidance Measures (RAMS) will be followed to prevent any incidence with protected or notable species.
- A bat sensitive lighting strategy will be implemented to mitigate indirect disturbance impacts on roosting, commuting and foraging bats.
- A pre-site commencement check for badgers should be carried out no less than three months prior to site works.
- Highlight INNS within the site and create a 3m buffer zone. Provide a toolbox talk to contractors as well as providing wash down facilities to limit INNS spread.

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# FIGURES

- Figure 1 Site Location Plan
- Figure 2 Extended Phase 1 Plan









	Site boundary
2	Buildings
$\bigotimes$	Scrub - dense/continuous
	Neutral grassland - unimproved
	Marsh/marshy grassland
	Hardstanding
	Common pipistrelle roost
	Cotoneaster - Cotoneaster horizontalis
	Montbretia - Crocosmia x crocosmiiflo
	Scattered scrub
)	Target note



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The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

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APPENDIX B – MASTERPLAN





REVISION	REV	DR	СН
AMENDED FORTH ENTRANCE	P01	JS	DS
AMENDED RED LINE		JS	DS
AMENDED FOR TETRATECH COMMENTS	P03	JS	DK
	REVISION AMENDED FORTH ENTRANCE AMENDED RED LINE AMENDED FOR TETRATECH COMMENTS	REVISION       REV         AMENDED FORTH ENTRANCE       P01         AMENDED RED LINE       P02         AMENDED FOR TETRATECH COMMENTS       P03	REVISION       REV       DR         AMENDED FORTH ENTRANCE       P01       JS         AMENDED RED LINE       P02       JS         AMENDED FOR TETRATECH COMMENTS       P03       JS         Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Image: Comparison of the system       Image: Comparison of the system       Image: Comparison of the system         Image: Comparison of the system       Imag

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Keyplan





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Project No.				
IANC21-0043				
Drawing No.		Rev.		



# **APPENDIX C - TARGET NOTES**

#### Target Note 1

Grid Reference: NY 0142 1562

Ephemeral Water Feature



