Cleator Moor Innovation Quarter

REPTILE SURVEY REPORT

784-B029668 Rev 2

Copeland Borough Council

October 2021

Prepared on Behalf of Tetra Tech Group Limited

Tetratecheurope.com

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CONTENTS

EXECUTIVE SUMMARY

Contents	Summary
Site Location	The 'site' is located in Cleator Moor, Cumbria and is centred at Ordnance Survey National Grid Reference NY 01570 15529. The site is approximately 34.9 hectares in size and lies on the north side of Leconfield Street.
Proposals	The Cleator Moor Innovation Quarter (CMIQ) site has been used as an industrial estate since 1980s. It is proposed for re-development into an Innovation Quarter for West Cumbria.
Existing Site Information	Previous reports available for the site: • Tetra Tech (2021a) Cleator Moor Innovation Quarter: Ecological Appraisal. On behalf of Copeland Borough Council. Ref: 784-B029668 • Tetra Tech (2021b) Cleator Moor Innovation Quarter: Great Crested newt Report. On behalf of Copeland Borough Council. Ref: 784-B029668 • WYG (2020) – Leconfield Industrial Estate – Ecological Appraisal • White Young Green (2007) – Leconfield, Cleator Moor – Preliminary Ecological Appraisal
Scope of this Survey(s)	Reptile survey, involving eight site visits to establish presence / likely absence of reptiles.
Results	A small / low population of common lizard was identified on Sites A and C, with a peak count of two common lizards observed.
Recommendations	• It is recommended that reasonable avoidance measures (RAMS) are actioned prior to and during works, including the appointment of an ECoW and ECoW supervision of activities including but not limited to vegetation clearance works, the digging of excavations and the removal of refugia. • Any site clearance works, including vegetation removal, removal of natural /artificial refugia and breaking ground must be undertaken during the reptile active season (mid-March to October inclusive) to avoid impacting on hibernating reptiles. • Works involving the removal of rubble / refuge within known areas of reptile populations should be done by hand and under the supervision of an ECoW. • It is suggested that areas within the wider CMIQ site that are suitable to support reptiles are enhanced using the recommended measures, prior to the commencement of works.

GLOSSARY

CBAP	Cumbria Biodiversity Action Plan
CBDC	Cumbria Biodiversity Data Centre
CBEB	Cumbria Biodiversity Evidence Base
CIEEM	Chartered Institute of Ecology & Environmental Management
CMIQ	Cleator Moor Innovation Quarter
CWT	Cumbria Wildlife Trust
DEFRA	Department for the Environment, Food and Rural Affairs
EA	Ecological Appraisal
EcIA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
HAP	Habitat Action Plan
HPI	Habitat(s) of Principal Importance
HRA	Habitats Regulations Assessment
JNCC	Joint Nature Conservation Committee
LA	Local Authority
LBAP	Local Biodiversity Action Plan
MCIEEM	Member of Chartered Institute of Ecology & Environmental Management
Natura 2000 site	A European site designated for its nature conservation value
NE	Natural England
NERC Act	Natural Environment and Rural Communities Act 2006
NPPF	National Planning Policy Framework
pSPA	Proposed Special Protection Area
SAC	Special Area of Conservation
SAP	Species Action Plan
SPI	Species of Principal Importance
S41	Section 41
W&CA	Wildlife & Countryside Act 1981 (as amended)

1.0 INTRODUCTION

1.1 BACKGROUND

Tetra Tech was commissioned by Copeland Borough Council on May 2021 to undertake Reptile Surveys of the site known as Cleator Moor Innovation Quarter (CMIQ), located in Cleator Moor, Cumbria following recommendations of the Ecological Appraisal (Tetra Tech 2021a).

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

1.2 SITE LOCATION

The 'site' is located in Cleator Moor and is centred at Ordnance Survey National Grid Reference NY 01570 15529 – see Figure 1 for site location plan. The Main Leconfield Site A (Site A) comprises the Industrial Estate (17.6ha in size) and lies on the north side of Leconfield Street. Additionally, two expansion areas are present; these comprise Expansion Site B (Site B) to the north-east and Expansion Site C (Site C) to the south-east of the Site A. At the time of survey there was no access to Site B, therefore this expansion area is not included within the remit of this survey.

Site A predominantly comprised of several industrial / commercial buildings with associated hard standing, roads and amenity grassland. These were surrounded by pockets of habitats that included broadleaved and mixed woodland plantation, scattered trees, dense and scattered scrub (including willow carr), semi-improved neutral grassland, unimproved neutral grassland, marshy grassland, tall ruderal vegetation and bare ground. There are several areas of derelict hardstanding where previous buildings have been demolished.

Site C is approximately 4 ha in size and comprised broadleaved semi-natural woodland along the cycle route, grassland and scrub habitats, as well as allotments and areas of hardstanding and bare ground.

1.3 DEVELOPMENT PROPOSALS

Outline planning permission is sought for light industrial-led mixed-use development on the existing Leconfield Industrial Estate and adjacent land parcels to the north and east at Cleator Moor. Quantum, use, scale and access are sought for approval with all other matters reserved. The description of the proposed development is as follows:

"Provision of 44,350 sqm (GEA) floorspace for light industrial, general industrial and storage & distribution (Class E(g),B2, B8), Hotel (Class C1) and Student Accommodation (Sui Generis) with ancillary food/beverage (Class E(b)), education and community facility uses (Class F1(a & e)) with internal accesses, parking, service yards, attenuation basins, electricity substations and associated infrastructure, earthworks and landscaping."

The masterplan showing the proposed site plan is shown in Appendix B (Drawing Reference:ZZ-DR-A-90004_SITE PLAN PROPOSED – LABELLED).

1.4 PURPOSE OF THE REPORT

The purpose of this report is to:

- Outline the legislative protection given to reptiles;
- Identify suitable habitats and features within the site that have the potential to be used by reptiles;
- Summarise the findings of the reptile presence / likely absence surveys and report on the presence or otherwise of reptile species at the site; and

- Provide an assessment of the potential ecological constraints to the proposed works at the site and recommendations for avoidance, mitigation, licensing and enhancement where appropriate.

Note that scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

2.0 METHODOLOGY

2.1 DESK STUDY

2.1.1 Previous Reports

The following reports were available:

- Tetra Tech (2021a) Cleator Moor Innovation Quarter: Ecological Appraisal. On behalf of Copeland Borough Council. Ref: 784-B029668
- Tetra Tech (2021b) Cleator Moor Innovation Quarter: Great Crested newt Report. On behalf of Copeland Borough Council. Ref: 784-B029668
- WYG (2020) – Leconfield Industrial Estate – Ecological Appraisal
- White Young Green (2007) – Leconfield, Cleator Moor – Preliminary Ecological Appraisal

2.1.2 Local Ecological Records Centre

Information on protected or notable species records within 2 km of the site was requested from Cumbria Biodiversity Data Centre (CBDC) as part of the Ecological Appraisal report WYG (2020) and updated in 2021 (Tetra Tech, 2021a).

2.2 FIELD SURVEYS

2.2.1 Reptile Presence / Likely Absence Survey

In accordance with guidance outlined in the Herpetofauna Workers' Manual (Gent & Gibson, 2003) and Froglife's Reptile Surveys: Advice Sheet 10 (Froglife, 2007) surveys were undertaken to establish the presence or likely absence of reptile species within Sites A and C (see Figure 1).

Site A and Site C were surveyed, as no access was available for Site B. Site A is 17.6ha. There is 7.25ha of reptile suitable habitat present on Site A, this total excludes buildings, hardstanding areas, roads and amenity grassland. Site C is 4ha in size, with all habitats being suitable for reptiles (excluding hardstanding areas).

In total 112 numbered artificial refuges (sections of bitumen roofing felt approximately 0.5m x 0.5m) were placed on the Site A and 59 refuges on Site C, on 3rd June 2021. These were distributed in areas considered to have habitat suitable for reptiles (see Figure 2a and 2b for refuge placement plan). The refuges were then left undisturbed on the site for two weeks prior to commencement of surveys to allow reptiles on the site to find and use them. The number of refuges placed on the Site A and Site C exceeded the best practice standard of a minimum of 10 artificial refuges per hectare of suitable habitat (Froglife, 2007). The total area of suitable habitat on Sites A and C was calculated to be 11.87ha.

Six survey visits to check the artificial refugia were conducted between 17th June and 16th July 2021. An additional two survey visits were conducted on the 2nd and 15th September 2021 to check existing (natural) refuges and basking sites.

During each survey visit, each refuge was first checked for basking individuals from a distance, before being slowly approached and hand searched for sheltering reptiles. Refuges and basking sites already present on site such as plastic debris were also checked for basking reptiles from a distance using binoculars and any that could be safely lifted were hand searched on every visit. Examples of refuges and basking sites that were checked are shown in Appendix C.

Reptiles are active from March to October, but the recommended months for surveying are April, May and September (Froglife, 2007)and this guidance states that the optimal time to survey reptiles is between 08:30 to 11:00 and 16:00 and 18:30, when the air temperature is between 9°C and 18°C. Heavy rain and wind are considered unsuitable.

Surveys were conducted in line with the above guidance and any deviations from this are discussed in the Limitations section (Section 2.3). As reptile activity is heavily dependent on weather conditions, the surveyor recorded air temperature, wind speed, precipitation and cloud cover. Details of the dates, times and weather conditions for each survey visit are given in Table 1 below.

Table 1: Date and weather conditions for surveys

Date	Site	Time		Air Temp (ºC)		Wind Speed (Bf)		Cloud Cover (%)		Precipitation	
		Start	End	Start	End	Start	End	Start	End	Start	End
Visit 1: 17/06/2021	Site A	15:50	18:00	17	18	1	1	0	0	Nil	Nil
	Site C	18:00	19:00	18	18	0	1	0	0	Nil	Nil
Visit 2: 22/06/2021	Site A	11:10	12:55	12	14	0	3	100	100	Nil	Nil
	Site C	10:05	11:00	13	12	0	2	100	100	Drizzle at 10.30	Nil
Visit 3: 01/07/2021	Site A	08:30	10:25	13	15	0	2	100	90	Nil	Nil
	Site C	10:40	11:30	15	15	1	2	90	50	Nil	Nil
Visit 4: 05/07/2021	Site A	15:45	17:40	16	17	3	3	40	10	Nil	Nil
	Site C	17:50	18:35	17	17	2	3	10	10	Nil	Nil
Visit 5: 13/07/2021	Site A	08:35	10:00	16	17	2	2	30	30	Nil	Nil
	Site C	10:05	10:55	17	18	2	2	40	40	Nil	Nil
Visit 6: 16/07/2021	Site A	08:50	10:30	17	19	2	2	0	0	Nil	Nil
	Site C	10:35	11:55	19	21	2	2	0	0	Nil	Nil
Visit 7: 03/09/2021	Site A	10:05	12:00	14	17	0	2	20	20	Nil	Nil
	Site C	08:55	10:00	14	14	1	0	20	20	Nil	Nil
Visit 8: 15/09/2021	Site A	15:55	17:45	17	16	2	2	80	100	Nil	Nil
	Site C	17:55	18:30	16	16	2	1	100	100	Nil	Nil

The reptile surveys were conducted by Tetra Tech Assistant Ecologist Elizabeth Wilcox, Tetra Tech Assistant Ecologist Alex Blackburn and Tetra Tech Field Ecologist Suzanne Collinson.

2.3 LIMITATIONS

All survey visits (except Visit 6 to Site C on the 16th July 2021) were undertaken during suitable temperature conditions, (see Table 1). The temperatures recorded ranged between 12ºC – 18 ºC, which is within the guidance of 9ºC - 18ºC (Froglife, 2007).

The temperature on Visit 6 to Site C was 19ºC at the start of the survey at 10:35 and had climbed to 21ºC when the survey finished at 11:55. The tasks on this survey included removing the artificial refugia, which increased overall survey time. However, due to the high temperatures and bright sunshine on that day, it is considered unlikely that reptiles would be utilising the refuges or basking at Site C. Therefore, the decision was made to conduct an additional survey visit in September to ensure that a complete robust data set of seven survey visits (overall total of eight survey visits).

As the artificial refugia had been removed from the site on Visit 6 17th July 2021, during the final two visits the surveyors checked existing refugia and basking spots onsite. The wealth of refugia and basking sites present on both the Site A and Site C makes this a suitable option (Appendix C).

There was light rain during the survey on 22th June 2021. This is not considered a constraint, as it was only a short shower. In addition, the survey temperature was within the suitable range and the refuges were warm and would have provided shelter from the rainfall. Therefore, any sheltering reptiles present were likely to have been detected.

The surveys were undertaken during the time of year when reptiles are active (March to October), however only two of the surveys were completed during optimal months (September). June and July can be sub-optimal survey months for reptiles as warmer temperatures mean that they are less likely to use refugia. However, it is noted the temperature ranges during all visits were appropriate for survey (except for visit 6 as noted above).

A minimum of 10 refuges per hectare of suitable habitat were deployed as per Froglife guidance (Froglife, 2007). Both sites are open access. Site C although publicly accessible was subject to little disturbance and all refugia were present on visits 1 – 6. Site A was subject to more disturbance, with refugia 12, 48 and 50 missing (Figure 2a) on 01/07/2021 and refugia 24, 26, 27, 39 and 46 missing on 05/07/2021, these were all replaced. When mats were discovered missing they were replaced immediately, with minimum disruption to the overall survey. On the final visit, refuges 13, 34, 38, 19 and 113 were missing. Overall, the movement of mats onsite was buoyed by the density of artificial and existing refuges onsite. Therefore, movement of mats onsite is not considered a significant limitation to the the overall validity of the survey results.

On the 1st of July 2021, the surveyor identified that areas of marshy grassland in the eastern portion of the site had been mown that morning (strimmer still on site at the beginning of the survey). Three refuges (12, 48 and 50, as mentioned above) were destroyed. This action may have affected the survey results on the following dates: 1st, 5th, 13th and 16th, as it is expected that any reptiles present would have been displaced from the mown grassland to neighbouring unmown areas containing refuges for shelter and therefore any reptiles present would likely have been included in the survey results. No reptiles were recorded from the eastern part of the site on any of the survey visits.

The details of this report will remain valid for a period of 18 months from the date of the survey (i.e. April 2023), after which the validity of this assessment should be reviewed to determine whether further updates are necessary. Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals which this report was based on.

3.0 BASELINE CONDITIONS

3.1 DESK STUDY

3.1.1 Previous Reports

The following reports relevant to reptiles were available:

White Young Green (2007) Leconfield Cleator Moor Preliminary Ecological Appraisal (PEA) March 2007

The survey identified a range of habitats on site which included semi-natural broadleaved woodland, scrub, neutral / basic grassland, marshy grassland, mire-type vegetation and ruderal / ephemeral vegetation. The report also noted that the site has potential to support a range of protected species including local populations of bats, breeding birds, reptiles and amphibians.

Tetra Tech (2020) – Leconfield Industrial Estate –Ecological Appraisal

The report noted that the mosaic of scrub and grassland habitats within Site A, including piles of rubble and hardstanding on site were potentially suitable to support local reptile populations of common lizard and/or slow worm. It was also noted that suitable basking and over-wintering habitat occurred on site and that the mature scrub areas east and south of the site were likely to provide connectivity to the wider environment and areas where reptile populations have been recorded in the past.

3.1.2 Local Ecological Records Centre

The desk study returned one record of a slow worm *Anguis fragilis* approximately 1.8 km north from the site, recorded in 1997.

3.2 REPTILE PRESENCE / LIKELY ABSENCE SURVEY

3.2.1 Field Survey Results

Common lizard were identified on Site A. The peak count was of two gravid adult female common lizards, observed on 01/07/2021 within Site A. No other reptile species were observed. The results from all visits are summarised in Table 2 below. Figure 3 shows the results and the distribution of sightings across the survey area.

Table 2: Summary results from all survey visits

Date	Common Lizard (Female)
17/06/2021	1
01/07/2021	2
Total	**3**

During the reptile surveys a number of incidental records of amphibians (common toad *Bufo bufo* and common frog *Rana temporaria)* were also observed on site. Individuals sighted included adults with a peak count of two adult common toads seen on 01/07/21, 05/07/21 and 13/07/21 and 1 adult common frog seen on 17/06/21 and 15/09/2021 (Figure 3). In addition, palmate and smooth newt were also observed during the GCN surveys (Tetra Tech 2021b).

3.2.2 Population Size Class Assessment

A detailed population size class assessment was not undertaken due to the low numbers of individuals recorded. However, the survey data recorded appears to indicate a low population size on Site A (Froglife, 2007).

The suitable habitats within Site C indicate that common lizard may also be present. Site A is considered to have at least a low common lizard population, with the presence of two gravid females implying breeding between males onsite.

3.2.3 Reptile Distribution and Habitats Suitable for Reptiles

Figure 3 shows the distribution of common lizard, common toad and common frog records on Site A and Site C. Common lizard were observed in the west of Site A, associated with an area of hardstanding with rubble piles. Common toad observations were generally associated with grassland areas with scattered scrub or that were bordered with scrub.

Habitats suitable for reptiles occur across the site and includes marshy and ephemeral grassland, hardstanding, soil and rubble piles, scattered scrub and woodland edge (see Appendix C).

4.0 LEGISLATION

All six species of reptile native to the United Kingdom are protected through inclusion under Schedule 5 of the Wildlife and Countryside Act 1981 (W&CA) (as amended) and benefit from various levels of protection. This legislation makes it an offence to:

- Intentionally or recklessly kill or injure these animals; and,
- Sell, offer for sale, possess or transport for the purpose of sale of publish advertisement to buy or sell individual reptiles.

The smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis* are protected to a greater degree under Schedule 5 Section 9.4b and 9.4c of the W&CA and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 and are therefore European Protected Species. However, it should be noted that the site lies outside of the known distribution for smooth snake and sand lizard.

Common toad is a Section 41 (S41) Species of Principal Importance (SPI) as listed under the Natural Environment and Rural Communities (NERC) Act 2006, for the conservation of biodiversity in England. The NERC Act 2006 states that local authorities (LA) have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions i.e. the presence of a S41 species or habitat is a material consideration in the planning process.

4.1 LOCAL BIODIVERSITY ACTION PLAN

Local Biodiversity Action Plans (LBAPs) identify habitat and species conservation priorities at a local level (typically County by County) and are usually drawn up by a consortium of local Government organisations and conservation charities. Although they are no-longer managed at a national level many are still reviewed and updated at a local level.

The Cumbria Biodiversity Action Plan (CBAP) was launched in 2001; SAPs were drawn up for 21 species and HAPs were drawn up for 19 habitats. Following the UKBAP review in 2007, the CBAP was reviewed in 2009 and it was decided to include all habitats and species which are listed as HPI and SPI 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%20list%202009%20web.pdf

The original action plans for Cumbria were further reviewed as part of the Cumbria Biodiversity Evidence Base (CBEB) and detailed statements have been prepared for 11 species/species groups and 21 habitats including reptiles.

5.0 DISCUSSION

5.1 POTENTIAL IMPACTS

Site C supports suitable conditions for common lizard and the surveys indicate that breeding populations of common lizard are present on Site A. The proposed development is therefore likely to impact reptiles present on Sites A and C.

The proposed layout (Appendix B) involves removal of the following habitats which are suitable for reptiles:

- Dense and scattered scrub;
- Unimproved neutral grassland;
- Semi-improved neutral grassland;
- Marshy grassland;
- Amenity grassland;
- Tall ruderal;
- Ephemeral/ short perennial;
- Bare ground;
- And selected areas of Hard standing.

Common lizard were identified using an area of hardstanding and rubble, on the edge of neutral grassland to the west of Site A. Common toad were found mainly associated with grassland areas and scattered scrub in the centre of Site A and also within Site C.

The common lizard population present on Site A was estimated as low. A low population of common toad and common frog were also found on Site A and C and should be considered during works. Common toad are a material consideration during the planning process. Reasonable Avoidance Measures (RAMs) must be adopted during works to protect both amphibians and reptiles for the lifetime of works and details of which are listed in Section 5.2 and within the Great Crested Newt Report (Tetra Tech, 2021b).

Areas of suitable reptile habitats will be retained and have been incorporated into the site development plan (Appendix B), including areas of bare ground, neutral grassland and bramble scrub on Site A and areas of mixed and bramble scrub as well as neutral grassland within Site C. The woodland margins surrounding Site A and between Sites A and C will be retained as part of the development. Further to this, a cycle path to the east of the site may also provide suitable connectivity to the wider environment.

5.2 REASONABLE AVOIDANCE MEASURES FOR REPTILES

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 grassland in the western part of the site should be strimmed from the industrial estate towards 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.

5.3 ENHANCEMENT OPPORTUNITIES

The majority of the scrub mosaic and associated grassland in the east of the Site A will be retained. The woodland surrounding Site A and C will also be retained. These areas will continue to provide foraging, basking and refuge opportunities for reptiles. Woodland edge buffers will encourage

unimproved grassland, scattered scrub and tall ruderal habitats, which are suitable for reptile foraging and shelter. Retained grassland of high ecological value when managed appropriately (i.e. infrequently mown) will encourage invertebrate diversity and abundance, which in turn will provide a sustained reptile food source.

Where basking and refugia opportunities will be lost to facilitate the development (e.g. rubble piles, hardstanding etc) the inclusion of rock piles or large boulders, as well as 4 – 5 areas of rubble (recycled material from the site) to act as hibernacula, within the grassland will provide compensation in line with good practice guidance (Natural England, 2011).

Provision for reptiles within the west of Site A and maintaining connectivity (via woodland corrifors and unmanaged grassland) is particularly important, as this areas is where common lizard were recorded. Provided the measures above are implemented it is considered that the loss of habitats on site as a result of the proposed development will not have a significant impact on the local reptile population.

5.4 ENHANCEMENTS

In line with the NPPF, it is recommended that enhancements to the CMIQ site to improve habitat quality are implemented, including the following:

- To create and implement additional hibernacula suitable for amphibian hibernation, with three to be distributed within the wet woodland areas of Site A and a number of hibernacula to be incorporated into the woodland north west of Site A and within suitable areas of Site C.
- Areas of grassland and woodland which have been incorporated into the design of the proposed development should be managed to retain habitat suitability for amphibians, reptiles and invertebrates.

The design of Site B has included a number of enhancements that benefit the reptile, amphibian and invertebrate species including open water, reed beds and species rich grassland. This site acts as a mitigation area for entire site, with the proposed layout affording no net habitat loss

It also recommended that suitable enhancement measures of retained habitats on the CMIQ site are actioned prior to works commencing, where possible.

6.0 REFERENCES

- English Nature, (2004), Reptiles: guidelines for developers. English Nature, Peterborough.
- Froglife (2007). Advice Sheet 10 – Reptile Survey An introduction of planning, conducting and interpreting surveys for snake and lizard conservation.
- Gent, T. & Gibson, S. (2003). Herpetofauna Workers' Manual. JNCC, Peterborough.
- Natural England, (2011), Natural England Technical Information Note TIN102 Reptile mitigation guidelines
- Tetra Tech (2021a) Cleator Moor Innovation Quarter: Ecological Appraisal. On behalf of Copeland Borough Council. Ref: 784-B029668
- Tetra Tech (2021b) Cleator Moor Innovation Quarter: Great Crested newt Report. On behalf of Copeland Borough Council. Ref: 784-B029668
- WYG (2020), Leconfield Industrial Estate: Ecological Appraisal Report.
- White Young Green (2007), Preliminary Ecological Appraisal for Leconfield Cleator Moor (unpublished report).

FIGURES

Site Location Plan

CLEATOR MOOR INNOVATION QUARTER

Copeland Borough Council

Legend

Site boundary

Expansion B

Main Site

Expansion C

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Notes:

Drawn by: CL
Checked by: GP
Office: Southampton

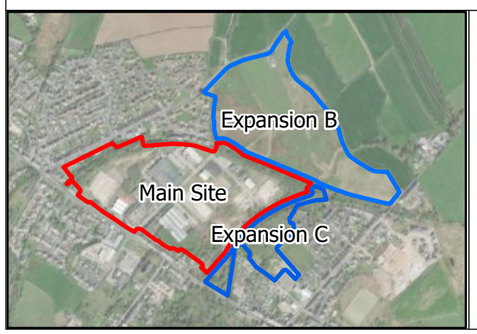
Figure No. 1
Revision No. A

0 70 140 210 Meters

Scale 1:5,000 @A3

21 October 2021

NGR: 301752E 515602N



TETRA TECH

The Pavilion, 1st Floor
Botleigh Grange
Office Campus
Hedge End
Southampton
Hampshire, SO30 2AF

Reptile Refugia Plan

CLEATOR MOOR INNOVATION QUARTER

Copeland Borough Council

Legend

- Site boundary
- Reptile refugia location

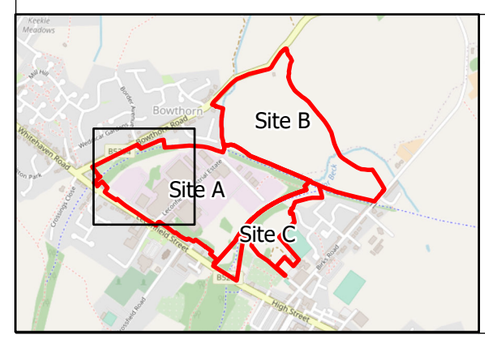
Notes:

Drawn by: CL
Checked by: CH
Office: Southampton

Figure No. 2a
Revision No. A

0 10 20 30 Meters
Scale 1:1,200 @A3

27 October 2021
NGR: 301399E 515578N



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Hampshire, SO30 2AF

Reptile Refugia Plan

CLEATOR MOOR INNOVATION QUARTER

Copeland Borough Council

Legend

- Site boundary
- Reptile refugia location

Notes:

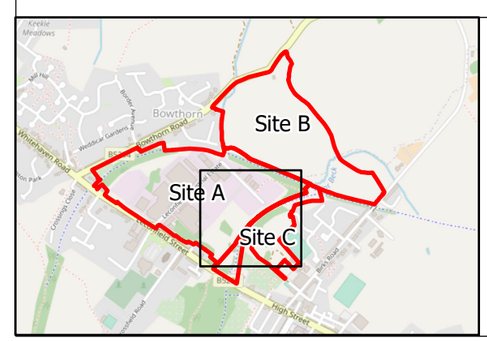
Drawn by: CL
Checked by: CH
Office: Southampton

Figure No. 2b
Revision No. A

0 10 20 30 Meters
Scale 1:1,200 @A3

27 October 2021

NGR: 301779E 515440N



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Reptile Results Plan

CLEATOR MOOR INNOVATION QUARTER

Copeland Borough Council

Legend

- Site boundary
- Common Toad
- Common frog
- Common lizard

Site A
Site B
Site C
70
61
57
8
6
46
15/09/2021
136
134
142
120
170

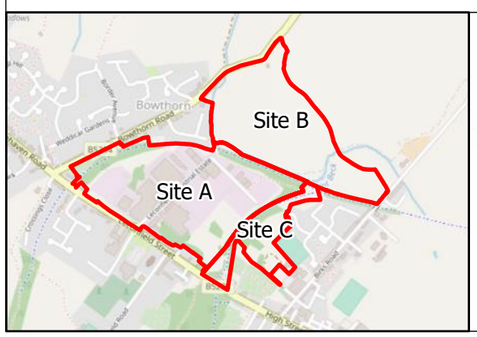
Notes:

Drawn by: CL
Checked by: DB
Office: Southampton

Figure No. 3
Revision No. A

0 40 80 120 Meters
Scale 1:2,700 @A3

26 October 2021
NGR: 301620E 515429N



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APPENDIX A – REPORT CONDITIONS

This Report has been prepared using reasonable skill and care for the sole benefit of Copeland Borough Council ("the Client") for the proposed uses stated in the report by [Tetra Tech Environment Planning Transport Limited] ("Tetra Tech"). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder's permission.

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The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The "shelf life" of the Report will be determined by a number of factors including; its original purpose, the Client's instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

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.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

APPENDIX B – PROPOSED SITE PLAN (DRAWING REF: ZZ-DR-A-90004_SITE PLAN PROPOSED – LABELLED).

SITE A
SITE B
SITE C
PLOT A1:
Proposed: Hub Building.
PLOT A2
PLOT A3
PLOT A4
PLOT A6
PLOT A8
BOC YARD
PLOT B1
PLOT B2
PLOT BE
PLOT B3
PLOT B4
PLOT B5
PLOT B6
PLOT B7
PLOT C1
PLOT C2

APPENDIX C – REFUGE AND BASKING SITE PHOTOGRAPHS

Table 3: Examples of habitats, refuges and basking sites searched oand/or observed for reptiles on the Site A and Site C. Photographs taken during visit 7 on 02/09/2021.

Description	Photograph
Site A - West	
Photograph 1 - Rubble pile on edge of hardstanding 	Photograph 2 – Brick pile 
Photograph 3 – Vegetated brick pile 	Photograph 4 – Cut log and woody debris 
Photograph 5 - Grassland with bare ground in the form of vehicle tracks 	Photograph 6 – Debris including metal, wood and plastic 
Site A - East	

Photograph 7 – Tiled ledge with ruderal/ephemeral vegetation on edge 	Photograph 8 – Soil mound 
Photograph 9 – Emphemeral grassland, with rubble and degrading hard standing 	
Site C	
Photograph 10 – Soil and Rock piles	Photograph 11 – Vegetated rubble pile

Photograph 12 – Tyres within grassland

Photograph 13 – Tree stump within grassland

Photograph 14 – Domestic debris behind houses on Heather Bank

Photograph 15 – Bonfire pile with large pieces of wood

Photograph 16 – Partially vegetated rubble pile adjacent to allotment track

Photograph 17 – Flat rocks and slates