Tan Y Graig

Cefyn Quarry,
Wrexham, LL14 3DD

Ecological Survey Report-
Reptile survey

October 2017

Produced by Wildbanks Conservation

www.wildbanksconservation.com

C O N T E N T S:

1.0 Introduction

2.0 Survey Methodology

3.0 Results

4.0 Discussion and conclusions

5.0 References

Appendices

A1 Site Photographs - Plates 1 – 13

A2 Relevant Legislation and Planning Policy in Relation to Bat Species

A3 Relevant Legislation and Planning Policy in Relation to Reptile Species

Figures

1 Site and Building Plan

1.0 INTRODUCTION

1.1 Wildbanks Conservation was commissioned by Mr V. Jurkojc to undertake an Ecological Assessment of Tan Y Graig, Cafyn Mawr, Wrexham, in support of a planning application to develop an area of the site into residential properties. This report details the findings of the ecological and protected species survey completed in August 2017 and subsequent reptile survey completed in September 2017.

1.2 The development site sites within Cefyn Mawr Quarry and comprises cliffs, piles of bare rock and areas of vegetated areas. The development site is to the south of the quarry and is predominantly an clear area used for storing logs. The site is located at at Tan Y Graig, Cefyn Quarry, Wrexham LL14 3DD (OS grid reference 27986 42341). The whole quarry covers approximately 0.5 hectares and is situated close to the centre of Cefyn Mawr village. Additional on site habitat comprise wooden storage sheds, bare rock, cliffs, rough grassland and scrub. The site is surrounded by residential properties with patches of woodland to the North East and South West.

1.3 The proposed development will see row of four 2 storey terraced houses built on an area of bare ground to the West of Mount Pleasant. All associated building works will take place including ground clearance, footings and total build construction. Associated gardens, parking and access will also be created.

SURVEY METHODOLOGY

Desktop Study

2.1 A review of the Multi-Agency Governmental Information for the Countryside (MAGIC) website was undertaken within 1km of the development site to identify any sites with statutory nature conservation designations. Non-statutory nature conservation bodies were also contacted for existing ecological records (NBN gateway).

2.2 Further inspection, using colour 1:25,000 OS base maps (www.ordanancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

Walkover Habitat Survey

2.3 The proposed development site consists of a small area to the South of the main quarry (See Figure 1), approximately 500m^2 in total. The whole quarry was assessed during this survey.

2.4 The site was surveyed on 17th August 2017 using the standard Phase 1 Habitat Survey methodology (Joint Nature Conservation Committee, 2017). This involved a systematic walk over of the quarry to classify the habitat types present, marking them on a base map. If required target notes were used to record features or habitats of particular interest, as well as any sightings or evidence of protected or notable species.

Preliminary Protected Species Survey

2.5 Consideration was given to the potential presence of species protected under the Wildlife and Countryside Act 1981 (as amended), the Protection of Badgers Act 1992 and The Conservation of Habitats and Species Regulations 2010 (as amended). Such species included, but was not limited to great crested newts, badger, bats, reptile and bird species. Evidence of any invasive plant species listed on Schedule 9 of the Wildlife and countryside Act 1981 (as amended) was also recorded where present.

Internal/External Building Assessment

2.6 The exterior and interior of any buildings were visually assessed for potential access points and evidence of bat activity. Features such as small gaps under barge/soffit/fascia boards, raised or missing roof/ridge tiles and gaps at gable ends, which have the potential for use as access points, were sought. Evidence that bats actively used these potential access points would include staining within/under the

gaps, or bat droppings; a note being made wherever these were present. The presence of cobwebs and / or general detritus within and around potential access points was used as an indicator that bats had not recently used the area to access the building.

Reptiles

2.7 The Walkover Habitat Assessment identified habitats that could support reptiles, as such a reptile survey was carried out. The survey was carried out in accordance with the requirements of all relevant legislation and good practice guidance, including Herpetofauna Workers \manual (Gefnt & Gibson, 2003) and reptile survey guidance (Froglife, 1999).

2.8 Large sections of the site comprises bare rock, poor semi improved grassland/ rough grassland with some areas of tall ruderal and many semi-permanent refugia suitable for basking sites and hibernacula for reptiles (Plates 1-8).

2.9 Common lizards occupy a large range of habitats providing that they are structurally diverse and provide adequate cover. Slow worms also occupy a wide range of habitats and have a broader range than common lizards, tolerating less diverse vegetation structure. It is considered more likely that slow worm could be present due to the less diverse vegetation structures on site and in the wider area.

2.10 Grass snakes are generally associated with wetlands but can be found in many different habitats that have a degree of structural diversity. It is unlikely that grass snakes are present on this site although they do not rely on a single site for foraging or hibernation. It is considered unlikely that adders are present on site as they are generally preferring heathlands, dense grassland and moorland with low scrub.

2.11 On the 24th August 2017, 35 artificial refugia consisting of tin sheets approximately 0.5m x 0.5m in size were placed within habitats that were assessed as suitable to support reptiles. These included sun breaks in low vegetation. (see Figure 1 for the location of the reptile refugia). The refugia were placed at a density of 35 per 0.5 hectare as the site was small and in general the more refugia tiles used the greater the chance to find reptiles, should they be on site.

2.12 Refugia tiles were left to settle for a minimum period of fourteen days before being checked for the first time. Every refugia tiles were visited seven times during the survey period during suitable weather conditions as defined by relevant guidance. Surveys were carried out on the following dates during 2017:

- Survey Visit 1 – 07/09/17
- Survey Visit 2 – 11/09/17
- Survey Visit 3 – 13/09/17
- Survey Visit 4 – 18/09/17
- Survey Visit 5 – 22/09/17
- Survey Visit 6 – 26/09/17
- Survey Visit 7 – 29/09/17

2.13 Surveys were carried out in the optimal weather conditions (between 9^0C and 20^0C during intermittent sunshine and low winds). The surveys were also carried out at the optimal times which is between the hours of 9am – 11am and 4pm – 7pm. One survey on the 18/9/17 was not carried out between these optimal times due to rain. This survey is still considered suitable as the survey was conducted in sunshine after rain showers with a temperature of 14ºC, which are considered suitable conditions.

Other Protected Species

2.14 During the survey, consideration was also given to other protected or notable species, in particular but not restricted to badger, barn owls (*Tyto alba*) and other nesting birds.

2.15 The extended phase 1 survey was conducted by Mick Smith, Director Wildbanks Conservation. 10+ years ecological consultancy experience and a licenced bat and GCN ecologist on the 17th August 2017, licence Number (2015-15175-CLS-CLS)

RESULTS

Desktop Study

3.1 NBN Gateway holds no records of any protected species within 1km of the application site and there is a record of one slow worm within 2km of the application site. A review of the MAGIC website shows that there are no statutory sites within 2km of the development site.

3.2 *Walk-over Habitat Assessment*

A walkover habitat assessment was carried out on the 17th August 2017. The development site is surrounded by residential buildings, shops, bare ground and gardens. There are patches of woodland in the wider landscape (Plate 13).

3.3 The proposed development site itself consists of an area of poor semi improved grassland dominated with cocksfoot grass *Dactylis glomerata*, broad leaved dock *Rumex obtusifolius*, nettle *Urtica dioica*, bindweed *Convolvulus arvensis* and birdsfoot trefoil *Lotus corniculatus*. Other habitat includes bare rock and log piles (Plates 1-3). The remainder of habitat within the main quarry includes piles of stone, reclaimed building items, tall ruderal vegetation consisting of nettle, rosebay willowherb *Chamerion angustifolium*, bindweed and creeping thistle *Cirsium arvense*, stone rock faces and bare ground. There are four structures on site including: An open storage shed with timber frame and corrugated metal roof (B1), a metal storage container (B2), a timber shed used for storage (B3), and a pebble dashed wall garage with corrugated metal roof (B4) (Plate 8-12).

3.4 There is a pair of semi-detached houses adjacent to the development site, not under the ownership of Mr Jurkojc or subject to this development. These have been included within Figure 1 due to their proximity and named B5. None of these structures, B1 to B5, will be altered by the proposed development. There is an immature hazel tree and immature silver birch tree amongst the scrub habitat that will also not be affected by the proposed development, Shown on Figure 1.

3.5 *Reptiles*

During the seven surveys of artificial refugia tiles and the numerous features within the whole site that offer excellent basking opportunities for reptiles no reptiles were seen or evidence of their presence noted.

3.6 *Great Crested Newts (Plate 17 and 18)*

There is one pond located 350m to the North West of the development site at grid reference SJ 27644 42452. There are roads, residential properties and an industrial area of hard standing creating significant barriers between the pond and the development site. It is deemed very unlikely that GCN will be present on site. Therefore no further survey effort is recommended with regards to GCN. See Figure 1

Bats – Buildings and surrounding area Assessment (Figure 1 and plates 8- 13)

3.7 There are no structures that offer potential roosting opportunities for bats within the proposed development site.

3.8 The buildings within the main quarry site do not hold potential for roosting bats. The walls are made from thin wood and metal and being uninsulated which is considered unsuitable for roosting bats due to their inability to retain heat and prone to severe temperature fluctuations. Roosting opportunities between timbers and metal sheeting are also limited. The garage (B4) has pebble dashed walls with some timber framing. The walls and timber are too thin to support roosting bat habitat. The corrugated metal roof is also unsuitable for roosting bats. Internal access into any of the structures was not possible.

3.9 On first glance the cracks within the stone face of the quarry could provide suitable roosting opportunities for bats but on closer inspection they were very exposed and shallow in nature thus making them unsuitable for roosting bats. It is possible that potential roosting opportunities may have been missed during the visual assessment due to overgrown vegetation, however the distance of these areas are far enough away from the development site that if they are being used by bats they would not be affected by the development. The habitat within the quarry does provide good foraging habitat, however the opportunities for roosting bats overall on this site are considered low.

3.10 *Bats – Trees*

There are no trees on site which have any potential for roosting bats. The only trees on site are an immature silver birch and an immature hazel. Neither of these trees are being affected by the development.

3.11 It is therefore recommended that no further survey work is required with regards to bats.

Birds

3.12 There are many opportunities for nesting birds on site within the proposed development site and in the wider quarry site. Including within dense vegetation, within stone and log piles, in amongst reclaimed materials, within the open buildings etc. The two trees on site offer limited potential for nesting birds however these will not be affected by the development. No evidence of nesting birds was found on site during the survey, however this is not surprising as the survey was carried out at the end of the breeding bird season.

Other protected species

3.13 No evidence of other protected or notable species was recorded during the Walkover Assessment. No badger setts, runs or activity were noted.

Constraints to survey

3.14 Some areas of the buildings and features with the potential to be used by bats or birds could not be fully checked during external surveys due to the unsafe nature of the site and structures.

RECOMMENDATIONS AND CONCLUSIONS

4.1 A Walkover Habitat Assessment and preliminary protected species survey was carried out on the proposed development site and wider quarry site in August 2017. Possible constraints to the development were identified in the form of possible presence of reptiles. As such a reptile survey was conducted on the whole quarry site.

Reptiles

4.2 The habitat within the development site and the whole quarry was considered good for reptiles. No reptiles were found during the reptile survey on site. The survey effort can be considered sufficient to determine the likely absence of reptiles as it was conducted in accordance with the requirements of all relevant legislation and good practice guidance. A conclusion can therefore be made that reptiles are likely absent from the development site at present and no further action is required with regards to reptiles.

4.3 Reptiles are a mobile species and can colonise areas of habitat within a short period of time. Therefore, it is recommended that repeat reptile surveys are undertaken if development of the site has not commenced within twelve months of the date of the Report.

4.4 *Great Crested Newts*

A review of the surrounding area and the NBN gateway provided no evidence that GCN would be present on site. GCN require a large network of ponds and suitable terrestrial habitat within 500m to thrive and live, however none of these features were present within 1km of the site. There is one pond located 350m North East of the site but there are significant barriers to dispersal between the pond and the quarry. It can therefore be determined that GCN are not present on the site and no further action is required for GCN.

4.5 *Bats*

There is negligible potential for roosting bats anywhere on the development site and low potential for roosting bats within the wider quarry. No buildings or trees are being affected by the development works. It therefore can be assumed that no bat roosts will be affected during the development and the development can proceed without further survey work carried out. The quarry does provide some foraging opportunities and some of this will be lost as a result of the development.

4.6 As such and in line with The National Planning Policy Framework that sets out how the planning system should contribute to and enhance nature conservation and the local environment. Potential nesting habitat for birds and potential feeding habitat for bats will be lost in this development. As such it is recommended that suitable mitigation is put in place to help enhance the local biodiversity of the area. It is therefore recommended that:

4.7 Permanent bat boxes within the new houses should be installed. Two integral bat boxes such as Schweglar 'bat tube' or Ibstock enclosed bat box C should be installed on either gable end of the row of terrace houses.

4.8 *Birds*

The development site does provide good habitat for nesting birds. All birds, their nests and eggs are protected by law under the Wildlife and Countryside Act 1981 (as amended), and therefore it is an offence to intentionally or recklessly disturb a nest containing eggs or young, or disturb the dependant young of such a bird. As such it is recommended that any works to clear the development site is undertaken outside the bird breeding season (March – September inclusive). However, if this is not possible the area should be checked by a suitable qualified ecologist and advise sought from Wildbanks Conservation or Natural Resources Wales. It is recommended that:

4.9 Permanent bird boxes be installed within the gardens of the development site in the form of 6 x Schweglar woodcreate nest boxes with a variety of entrance hole sizes to suit a number of birds.

4.10 If the above actions are taken it is considered that the development can proceed without any further ecological surveys. However it should be noted that some wild animals are highly mobile and if works are not started within 1 year the status of the site with regards to protected species could have changed and further survey work should be carried out.

5.0 REFERENCES

Bat Conservation Trust (2016) Available at: http://www.bats.org.uk/

Department for Communities and Local Government (2012). The National Planning Policy Framework (NPPF). Department for Communities and Local Government: London. [Online]. Available at: www.communities.qov;uk/documents/planninqandbuilding/pdf/2116950.pdf

English Nature (2001) Great Crested Newt Mitigation Guidelines. English Nature

Franklin, P.S. (1993). The migratory ecology and terrestrial habitat preferences of the great crested newt (Triturus cristatus) at Little Wittenham Nature Reserve. De Montford University unpublished thesis.

Froglife (1999). Reptile survey. An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

Gent A. H. & Gibson S. D. (2003). Herpetofauna Workers' Manual 2nd Edition, Peterborough, Joint Nature Conservation Committee.

Hundt L (2012) Bat Surveys: Good Practice Guidelines, 2nd edition, Bat Conservation Trust

Jehle, R. (2000). The terrestrial summer habitat of radio-tracked great crested newts (Triturus cristatus) and marbled newts (T. marmoratus). Herpetological Journal 10 pp. 137-142.

Joint Nature Conservation Committee (2017), Available at: http://jncc.defra.gov.uk/

Oldham, R. S., Keeble, J., Swan, M. J. S. & Jeffcote, M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus). Herpetological Journal, 10, p143-155

A1 APPENDIX – SITE PHOTOGRAPHS – PLATES 1 - 12

A1.1 **Plate 1** – Development Site



A1.2 **Plate 2** – Development site, log pile and stone walls



A1.3 **Plate 3** – Area of dense vegetation on a bank to the North of the development site



A1.4 **Plate 4** – Wider quarry site, areas of stone



A1.5 **Plate 5** – Wider quarry site - areas of rough vegetation on rocky substrate with rock piles



A1.6 **Plate 6** – Patches of poor semi improved grassland on rocky substrate



A1.7 **Plate 7** – Exposed cliff face



A1.8 **Plate 8** –Example of reclamation material storage



A1.9 **Plate 9** – Building/structure 1 (B1)



A1.10 **Plate 10** – Building/structure 2 (B2)



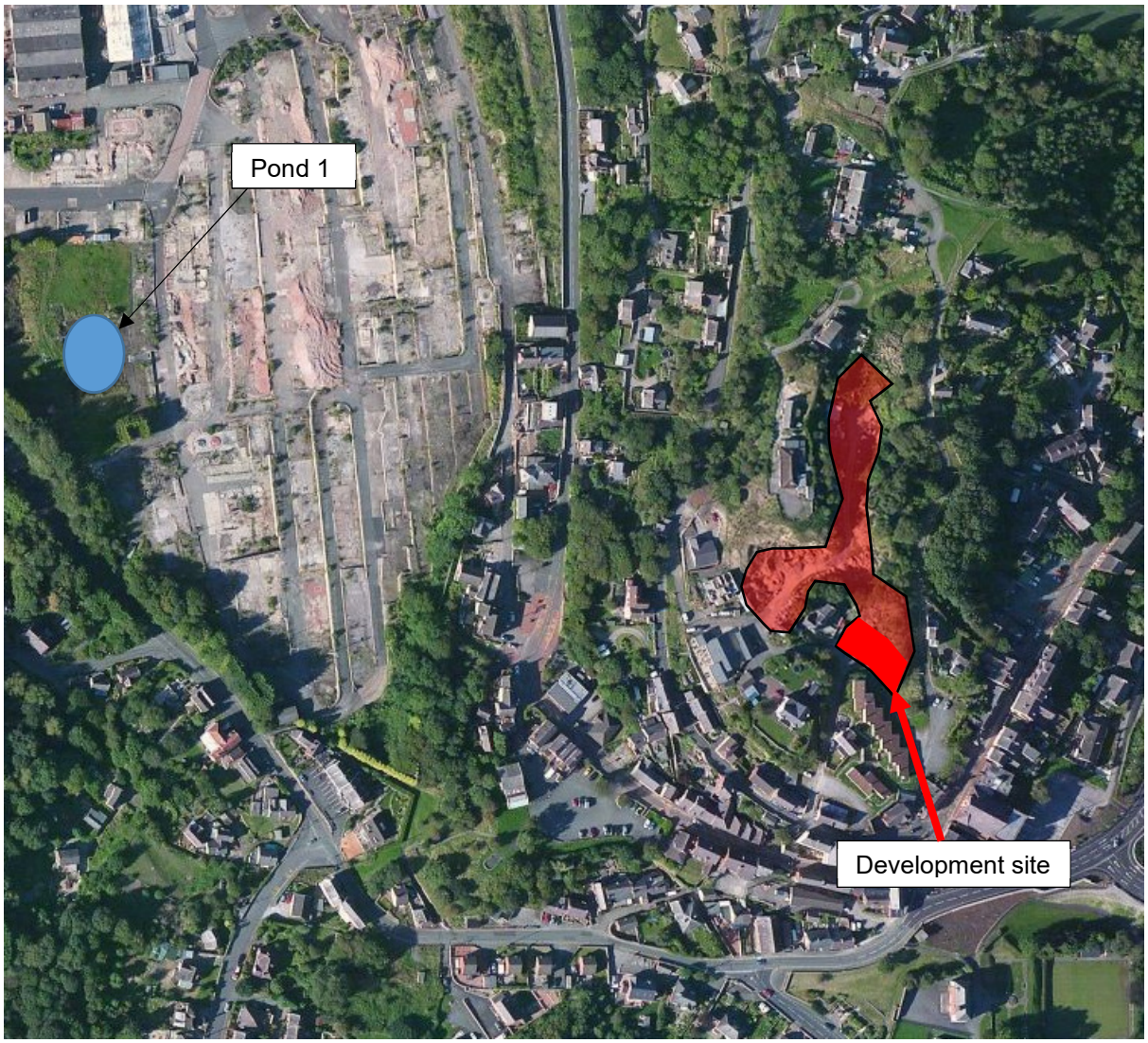
A1.11 **Plate 11 –** Building/structure 3 (B3)



A1.12 **Plate 12** – Building/structure 4 (B4)



A1.13 **Plate 13 –** The development site, pond 1 and the wider landscape



A2 APPENDIX 2 – RELEVANT LEGISLATION & PLANNING POLICY IN RELATION TO BAT SPECIES

Relevant Legislation

A2.1 Due to recent declines in bat species' populations within the United Kingdom, all bat species and their roost sites in Britain are protected under the Wildlife and Countryside Act 1981 (as amended). They are also included on Annex IV of Council Directive 92/43/EEC of 21st May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive). As a result of the United Kingdom ratifying this directive, all British bats are protected under The Conservation of Habitats and Species Regulations 2010. Under this legislation it is an offence to intentionally kill, injure or capture or intentionally (or recklessly in England and Wales) disturb bats or obstruct access to, damage or destroy bat roosts.

A2.2 Under the law, a bat roost is any structure or place used for shelter or protection e.g. a building, bridge or tree. Bats use many roost sites and feeding areas throughout the year and since they tend to re-use the same roosts for generations these sites are protected whether bats are present or not.

A2.3 Any activity resulting in a contravention of the legislation described above would require a Natural England licence to avoid committing an offence. Natural England issue licences for the purposes of:

> "preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and benefit".

A2.4 The National Planning Policy Framework sets out how the planning system should contribute to and enhance nature conservation and the local environment. This is to be achieved through a combination of local planning policies as well as through the determination of planning applications with the aim of minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

A2.5 As such it is essential that the presence or otherwise of protected species, and the extent to which they are affected by proposals is established prior to

planning permission being granted. Furthermore, where protected species are present and proposals may result in harm to the species or its habitat, steps should be taken to ensure the long-term protection of the species, such as through attaching appropriate planning conditions for example.

Natural Environment and Rural Communities Act 2006 (NERC Act)

A2.6 *Biodiversity: Section 40*

Under this legislation all local authorities have a legal duty to have regard to the purpose of conserving biodiversity (as defined in the Town and Country Planning Act (1990), Part 11). It also further refines the definition of biodiversity conservation, stating that it includes restoring or enhancing a population or habitat.

A2.7 *England: Section 41*

In England, this duty applies to any minister of the Crown and any government department and has specific reference to the Convention on Biological Diversity. However, Defra expects that the organisations affected will make reference to the lists of Habitats and Species of Principal Importance in England (produced under Section 41 of the NERC Act) when implementing the duty.

A2.8 Out of the eighteen bat species known to occur in the UK, seven of those species are listed as Species of Principal Importance, these include; Barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum*, and lesser horseshoe bat *R.hipposideros*.

A2.9 Defra has produce guidance for local authorities on the implementation of biodiversity duty. This document echoes policies set out in Planning Policy Statement 9, the accompanying good practice guide and PAS2010. Of relevance to developers is that it encourages local planning authorities to:

(i) provide screening advice to developers prior to the submission of a planning application;

(ii) require relevant biodiversity information to be submitted with a planning application in order for the application to be considered valid;

(iii) use of planning conditions and obligations to impose mitigation and enhancement measures if such measures are not included at an appropriate level in the development proposal;

(iv) monitor the implementation of planning conditions and obligations relating to biodiversity conservation and to take action if these conditions are not met;

(v) actively seek opportunities to enhance biodiversity, in addition to statutory requirements to protect designated sites, habitats and species.

A2.10 The guidance also suggests that planning obligations could be used to secure financial payments to ensure improved and ongoing management of nature conservation sites as mitigation for habitat loss within the development site.

A3 APPENDIX 3 – RELEVANT LEGISLATION & PLANNING POLICY IN RELATION TO REPTILES

A3.1 All native reptiles receive legal protection in Great Britain arising from the following legislation:

- Wildlife and Countryside Act 1981 (as amended) (in Great Britain);
- Nature Conservation Act 2004 (Scotland);
- Conservation of Habitats and Species Regulations 1994 (as amended) (in Scotland);
- Conservation of Habitats and Species Regulations 2012 (as amended) (in England & Wales).

A3.2 In England and Wales reptiles are all listed on Schedule 5 of the Wildlife & Countryside Act 1981 and the more threatened species (sand lizard Lacerta agilis and smooth snake Coronella austriaca) are also listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2012 (as amended), which designate them 'European protected species'.

A3.3 The legislation effectively creates two levels of protection. The European protected species receive strict protection, making it an offence to capture, possess, disturb, kill, FCC Environment (UK) Ltd London Road East Waste Transfer Station Reptile Survey Report ST13628 June 2014 Page 2 injure, or trade in individuals of these species. In addition it is an offence to damage or destroy the places they use for breeding or resting.

A3.4 The remaining species (common lizard Zootoca vivipara, slow worm Anguis fragilis, adder Vipera berus and grass snake Natrix natrix) are protected against killing, injuring and unlicensed trade only. The legislation applies to all life stages of these animals.

A3.5 Sand lizard Lacerta agilis and smooth snake Coronella austriaca have a restricted distribution and are geographically absent from the study area. Thus, these species are not mentioned further in this report.

FIGURE 1 – Site plan

