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4. Nomenclature

AR	Artificial Refugia
ARC	Amphibian and Reptile Conservation Society
CRoW	Countryside Rights of Way Act 2000
DEFRA	Department for Environment, Food and Rural Affairs
EN	English Nature
NBN	National Biodiversity Network
HBRC	Hertfordshire Biological Records Centre
HCC	Hertfordshire County Council
HCT	Herpetological Conservation Trust
HWM	Herpetofauna Workers' Manual
NARRS	National Amphibian and Reptile Recording Scheme
NR	Natural Refugia
PPS9	Planning Policy Statement 9 (Biodiversity and Geological Conservation)
RAM	Reasonable Avoidance Measures
SAC	Special Areas of Conservation
SSSI	Site of Special Scientific Interest
VGCL	Vicars Grove Closed Landfill
WACA	Wildlife and Countryside Act 1981

5. Introduction

5.1 Terms of Reference

QSP Ltd was engaged in March 2011 by Welwyn Services Ltd. to undertake a Reptile Survey at Vicars Grove Closed Landfill Site (hereafter referred to as 'the site'), near Hitchin, Hertfordshire. The potential need for a Reptile Survey was raised by GreenLink Ecology Ltd. as part of an Ecology Survey commissioned by QSP Ltd. as part of a Planning Application to Hertfordshire County Council. Hertfordshire County Council required information on presence/absence rather than population data.

A walk-over survey (08/04/11) undertaken by QSP Ltd. established that there may be limited areas of suitable habitat on the site. Figure 1 shows that a number of potential natural *refugia* were recognised on the walk-over survey, though actual no evidence (skin sloughs, egg cases) of reptiles was identified.



Figure 1: Natural Refugia Indentified on Walk-over Survey

This document summarises the detailed findings of a full Reptile Survey carried out by QSP Ltd. during March, April and May 2011.

5.2 Objectives

The principal objectives of the Reptile Survey were to:

- safely carry out a Reptile Survey ensuring security of personnel and protection of reptiles during completion
- determine the occupancy or likely occupancy of native species of reptiles within the boundaries of the survey area
- provide clear results of the Reptile Survey
- provide recommendations in terms of mitigation should there be a requirement to do so; i.e. to safeguard all reptile populations on site

5.3 Site Location

The Vicars Grove site is located north of the Little Almshoe Lane, approximately 1km from the southern extremis of Hitchin, and 1km west of Little Almshoe village (Fig.2). The B656 is located 500m to the east of the site; Stevenage is approximately 2.7km to the east of the site. The site is located within an existing Green Belt, and surrounded by arable and pastoral farmland. The site is approximately 8 hectares in area and is made up of three key areas; semi-natural woodland (Fig.3), spoil heaps and ruderal/scrub (Fig. 4), and the site working area of hard-standing (Fig.5).

Vicar's Grove
Little Almshoe Lane
Nr. Hitchin
Hertfordshire

NGR: TL 1925NE

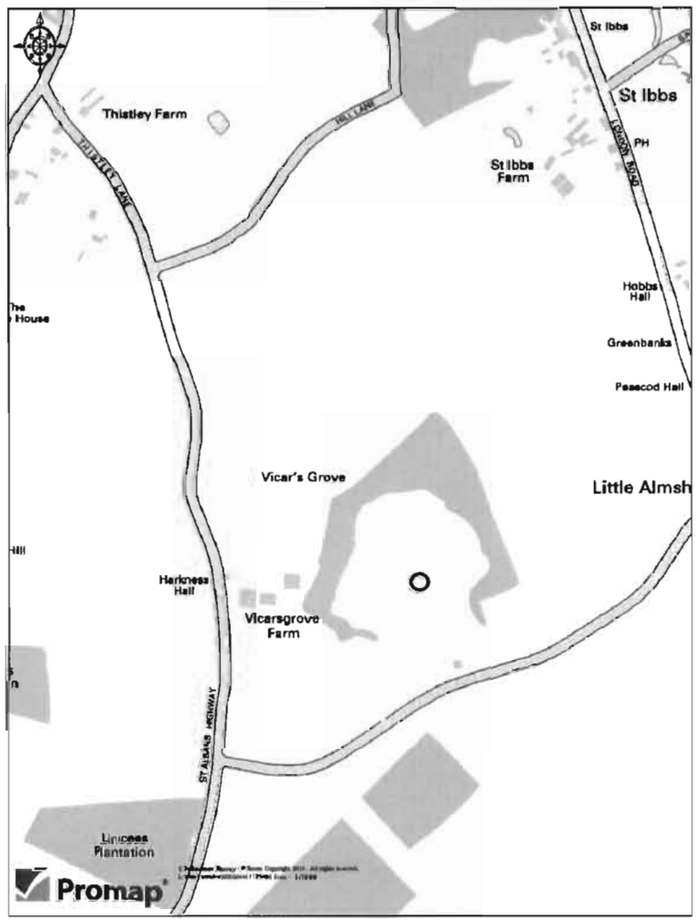

Figure 2: Vicars Grove Pit Location Map



Figure 3: Semi-ancient Woodland at Vicars Grove Pit



Figure 4: Ruderal/Spoil Heaps at Vicars Grove Pit



Figure 5: Working Area at Vicars Grove Pit

6. Legislation

6.1 Legislation Pertaining to Reptiles

Mainland Britain has 6 native reptile species; the Common Lizard, Sand Lizard, Slow Worm, Grass Snake, Adder and the Smooth Snake.

Common Lizards, Slow Worms, Grass Snakes and Adders are protected by the Wildlife and Countryside Act 1981, and they are listed as Schedule 5 species (Section 9 [1] and 9 [5] applies). The Countryside and Rights of Way Act 2000 (CRoW) also protects these four species.

It is an offence to intentionally or recklessly kill or injure Common Lizards, Slow Worms, Grass Snakes and Adders. Similarly, it is an offence to sell, or attempt to sell, any part of these four species, alive or dead.

Smooth Snakes and Sand Lizards receive protection under the Wildlife and Countryside Act 1981 Section 9 and the Conservation (Natural Habitats, *etc.*) (Amendment) Regulations, 2007. Both species are listed on Schedule 2, thus Regulation 39 also applies.

- It is an offence to:
- Deliberately kill, injure or capture any wild animal of European protected species
- Deliberately disturb wild animals of any European protected species
- Deliberately reduce the ability of any significant groups of animals to survive, breed, rear or nurture their young
- Interfere with the local distribution of any protected species
- Recklessly disturb sheltering European protected species or obstruct access to their resting place
- Damage or destroy breeding sites or resting places of European protected species
- Deliberately take or destroy the eggs of any protected species
- Possess or transport any part of a European protected species (unless legally required to do so)
- Sell, barter or exchange any part of a protected species
- Each offence can incur a £5000 fine per animal. The CRoW amendment also allows for the potential of a custodial sentence instead of, or alongside, fines.

6.2 National Planning Policy and Legislation

Planning Policy Statement 9 sets out guidance on Planning and Biodiversity and Geological Conservation, and sets out a number of principles. These principles include:

- Decisions should aim to maintain, enhance, restore or add to biodiversity and geological conservation interests
- Promote opportunities for the incorporation of beneficial biodiversity and geological features within the design of development
- Development proposals where the principal objective is to conserve or enhance biodiversity and geological conservation interest should be permitted
- The need to prevent harm to biodiversity and geological interests and the need to promote opportunities for enhancement

PPS9 states that Local and Planning Authorities should ensure that species are protected from the adverse effects of development.

6.3 Landowner Permissions

Permission to undertake the Reptile Survey and site visits was granted in full by Landowner (Welwyn Services Ltd.).

6.4 Licensing

A licence is required to survey (checking of refugia – natural and artificial) Smooth Snakes and Sand Lizards.

The desk-top survey showed no recorded sightings of Smooth Snakes and Sand Lizards within 10km of the site. Protection of habitats of reptiles is only extended to Smooth Snakes and Sand Lizards, which would not find suitable habitats at the Vicars Grove Site.

7. Survey Methodology

7.1 Health and safety

A site Desk Risk Assessment is carried out before all site visits (Appendix 1). Only trained and authorised personnel are allowed to carry out any surveys on behalf of QSP Ltd. Permission must be gained by the landowner/operator before entering the site to carry out any surveys. Key elements of health and safety when carrying out Reptile Surveys include:

- Review Reptile Survey Risk Assessment sheets
- Act calmly, safely and responsibly when carrying out Reptile Surveys
- No lone working if Adders may be present on the site
- Do not attempt to handle Adders without appropriate handling and safety equipment
- There may be a fire risk on dry grasslands; take care not to start accidental fires
- Wear appropriate footwear, clothing and PPE if appropriate
- Wear protective (Kevlar/leather) gloves and arm protection when lifting tins and similar artificial refugia, particularly if Adders may be present
- Take care on uneven ground
- Take care during sultry or thundery conditions
- Always wash hands after all site visits

7.2 Biosecurity

All surveyors are aware of the biosecurity risks, particularly with amphibians and *chytridiomicosis*. All survey equipment and boots are washed and cleaned thoroughly after each site visit. Surveyors follow NARRS and ARC guidance for biosecurity protection and use Virkon disinfectant to ensure minimal risk of cross contamination.

All QSP surveyors undertake in-house yearly training to ensure biosecurity procedures are maintained and in line with Natural England, NARRS and ARC guidance.

7.3 Introduced Species

All alien or introduced species will be recorded, and data passed to National Amphibian and Reptile Recording Scheme, or appropriate recording authority.

7.4 Artificial Refugia

Artificial refugia used for surveys comprise 1m x 0.7m roofing felt. Each refugia placed is recorded on the site Survey Point plan (Appendix 3) and labelled.

7.5 Walk-over Survey

Walk-over surveys assess the potential of a site to support occupancy of reptiles, and also other protected species. The walk-over survey assessed the likely presence of reptiles and their habitats, looked for natural refugia and basking areas, likely food sources and other direct evidence of occupancy such, as sloughed skins.

The initial walk-over suggested an unlikely habitat for *Natrix natrix* due to lack of standing water – ponds, sealed ditches – which could provide sufficient amphibian prey species.

Many rabbit burrows/warrens on site which may provide possible prey species for Adders.

Common Lizard: no evidence of occupation

Sand Lizard: no evidence of burrows or occupation (non-suitable habitat)

Slow Worm: no evidence of occupation

Grass Snake: no evidence of occupation

Adder: no evidence of occupation

Smooth Snake: no evidence of occupation (non-suitable habitat)

This survey employed two full walk-over surveys at the beginning and end of the survey period. Visual surveys are carried out during each site visit.

7.6 Timing Assessment

Reptile surveys may only be undertaken during the animals' active seasons. The principal objective of the Reptile Survey is to monitor animals basking at natural or artificial refugia, which generally takes place in the mornings when reptiles need to warm their bodies. During April and May the best weather conditions and timings include:

- Low wind conditions (still conditions are best)
- Intermittent or hazy sunshine (too high temperatures will ensure reptiles warm to active temperature quickly and move off)
- Thundery or sultry conditions
- Sunshine after a long spell of colder or cloudy conditions
- Reptiles are active during mating seasons (and may be less diffident)
- Temperature 8°C – 20°C
- Morning Survey timing: 09.00 – 11.00 hrs
- Evening Survey timing: 16.00 – 19.00 hrs

7.7 Habitat Assessment

The habitat assessment requires a full walk-over examining areas of vegetation suitable for reptile species. Each native reptile species has different habitat requirements, and thus, the habitat assessment will take into account habitat requirements for each species.

7.8 Field Survey

Each Reptile Field Survey comprises two techniques: visual search, and; artificial refugia. A visual search includes a slow walk across the site, scanning sunny sides of appropriate vegetation (vegetation interfaces and suntraps), using binoculars where available.

All refugia (natural and artificial) are numbered, labelled and located on the Survey Point plan (Appendix 3).

Artificial refugia (Roofing Felt tiles (1m x 0.7m) :

- should be in sunny locations away from site activities and interference (and livestock if appropriate)
- should not be placed onto sparse or bare ground, or in sparse cover
- are best placed in deep cover or at the edge of dense vegetation
- should be placed so as to not risk reptiles to predation

All data were recorded onto the Reptile Survey Summary – SURVEY sheet.

All artificial refugia were removed at the end of the survey period.

8. Background Data

8.1 Biological Records

There have been no recorded sightings of any reptiles on site.

The NBN Gateway holds numerous records for reptile sightings which are summarised below.

Common Lizard: recorded sighting at: Knebworth Wood (1934) TL2320; Wain Wood (before 1934) TL12; Lilley Hoo (before 1934) TL1226.

Sand Lizard: no recorded sightings within 10+km; non-suitable habitat

Slow Worm: recorded sightings at: Walkern (1934) TL2926; Hitchin (before 1965) TL1829; Wain Wood (1934) TL12; White Hills (1934) TL12.

Grass Snake: recorded sightings at: Hitchin (before 1934) TL1829

Adder: recorded sightings at Warn Wood (before 1934) TL12; Preston (before 1934) TL12; Hitchin (before 1934) TL12; Offley Holes (before 1934) TL12.

Smooth Snake: no recorded sightings within 10+km; non-suitable habitat

8.2 Previous Survey Work

An earlier ecological survey carried out by GreenLink Ecology Ltd. is included in Appendix 4. No evidence for reptiles was recorded during the original Ecological Scoping Survey.

9. Results

9.1 Habitat Assessment

The site is made up of three key areas of woodland, scrubland and working area. The scrubland area (ruderal) also contains several spoil heaps made up of inert material. This area is a former landfill, which has been very poorly capped and restored, leaving the vegetation in a poor state of succession. The spoil heaps (particularly south facing) do not afford good quality habitats for reptiles, the mounds lack cover and are open to predation. A single glade within the woodland close to the woodland/scrubland interface also suggested a possible habitat location for certain reptile species.

The woodland arc provides a potential corridor of connectivity for reptile movements, though the site is surrounded on three sides by arable farmland, farm buildings and Little Almshoe Lane.

A large length of south facing woodland/scrubland interface towards the rear of the site also could provide a possible habitat.

There is a limited occurrence of "mosaic" vegetation and limited structural diversity at this site. Some such vegetation can be found among the older spoil heaps, but the vegetation is not established, low and may not provide dense enough cover for reptile movements.

9.2 Reptile Field Survey

The survey visits were undertaken weekly throughout April and May of 2011. The locations of the Survey Points (R1-R16) are shown on Survey Point plan (Appendix 3). Five separate survey visits were undertaken; the results of which are shown in Table 1.

The Artificial Refugia (Roofing Felt Tiles) were placed two weeks before the field survey was begun.

9.3 Results Summary

Table 1: Summary of Reptile Refugia Survey Results

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R1	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	3/5/11			
Time		08.30	08.30	08.30	08.30	08.30			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		13°C	9°C	12°C	13°C	12°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R2	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		08.45	08.45	08.45	08.45	08.45			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		13°C	9°C	12°C	13°C	12°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
Total		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R3	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		09.00	09.00	09.00	09.00	09.00			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		13°C	9°C	12°C	13°C	12°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R4	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		09.15	09.15	09.15	09.15	09.15			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		13°C	9°C	13°C	15°C	12°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R5	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		09.30	09.30	09.30	09.30	09.30			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		14°C	9.5°C	13°C	15°C	13°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R6	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		09.45	09.45	09.45	09.45	09.45			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		14°C	10°C	13°C	15°C	13°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R7	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		10.00	10.00	10.00	10.00	10.00			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		14°C	10°C	13°C	15°C	13°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R8	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		10.15	10.15	10.15	10.15	10.15			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		14°C	10°C	13°C	15°C	13°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R9	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		10.15	10.15	10.15	10.15	10.15			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		15°C	10°C	13°C	15°C	13°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R10	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		10.15	10.15	10.15	10.15	10.15			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		15°C	10°C	13°C	15°C	13°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R11	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		10.15	10.15	10.15	10.15	10.15			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		15°C	10°C	13°C	15°C	13°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R12	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		10.15	10.15	10.15	10.15	10.15			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		15°C	10°C	13°C	15°C	14°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R13	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		10.15	10.15	10.15	10.15	10.15			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		16°C	11°C	13°C	15°C	14°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R14	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		10.15	10.15	10.15	10.15	10.15			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		16°C	11°C	13°C	15°C	14°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R15	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		10.15	10.15	10.15	10.15	10.15			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		16°C	11°C	13°C	15°C	14°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

Vicars Grove Pit Reptile Survey Summary									
Survey Point	R16	Visits							
		1	2	3	4	5	6	7	8
Date		8/4/11	12/4/11	22/4/11	28/4/11	4/5/11			
Time		10.15	10.15	10.15	10.15	10.15			
Weather		bright/sunny	Sunny	Overcast	Sultry	Bright/sunny			
Temperature		17°C	11°C	13°C	15°C	14°C			
Smooth Snake		0	0	0	0	0			
Sand Lizard		0	0	0	0	0			
Adder		0	0	0	0	0			
Grass Snake		0	0	0	0	0			
Slow Worm		0	0	0	0	0			
Common Lizard		0	0	0	0	0			
Non-native Species		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
		0	0	0	0	0			
TOTAL		0	0	0	0	0			
Surveyor		RTC	RTC	RTC/REH	RTC/REH	RTC			

10. Conclusions and Recommendations

10.1 Introduction

Though reptiles have been recorded in several sites in Hertfordshire, no reptiles have been recorded at the Vicars Grove site in the past, nor have they been recorded during this full Reptile Survey. It is considered a possibility that the poor quality capping of the former landfill presents a very poor habitat for reptiles, their habitats and their prey species. It may also possible that reptile species are sensitive to the biological and chemical breakdown of materials entombed at the Vicars Grove Pit.

10.2 Impact Assessment

No significant impact on reptiles is predicted.

10.3 Recommendations

The full Reptile Survey has indicated no sightings of any reptiles on the Vicars Grove site, nor any evidence of reptiles visiting or inhabiting the site. Though the survey has been detailed and completed to agreed standards, reptiles still may be present on site. At this stage of the project mitigation, translocation or protection zones are not recommended, and Reasonable Avoidance Measures are not required.

It is recommended that the present spoil heaps on site are removed prior to reptile hibernation (before the end of October), and if in place, the spoils should not be removed until after March. This recommendation will remain active throughout the life of the restoration project.

It is recommended that site personnel should be aware that reptiles may be present on site and report any sightings immediately to the Site Manager. All personnel and visitors to the restoration site should be reminded of the legal status of reptiles. It is also recommended that a Supplementary Reptile Survey (Autumn) takes place during September and October.

Though no reptiles have been identified on site, it is recommended that where appropriate, and possible, that consideration should be made during the restoration of the site to afford some habitat/vegetation introductions to encourage the return of certain reptile species such as creating brash and log piles, thus creating cover, providing additional structure to existing habitat and enhancing prey availability. Care should be taken to ensure no conflict between reptiles and horses/humans once restoration is complete.

10.4 Translocation

Translocation involves the movement of animals from one location to another. Translocation inevitably leads to Introduction – the release of a species into a location where it has not previously been recorded.

There is no requirement for Translocation of populations from this site.

10.5 Conclusion

Due to the absence of reptiles and signs of reptile occupancy on site, mitigation or avoidance measures are not required for this site. Further monitoring should continue throughout restoration.

11. References and Sources of Information

Amphibian and Reptile Conservation (www.arc-trust.org)

British Herpetological Society (www.thebhs.org)

Edgar, P., Foster, J. and Baker, J., (2010). *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation. Bournemouth.

Defra (www.defra.gov.uk)

Gent, T and Gibson, S (2003). *Herpetofauna Workers' Manual.* Joint Nature Conservation Committee. Peterborough.

Inns, H. (2009). *Britain's Reptiles and Amphibians: A guide to the reptiles and amphibians of Great Britain, Ireland and the Channel Islands.* Wild Guides. Hampshire.

The National Amphibian and Reptile Recording Scheme - NARRS (www.narrs.org.uk)

National Biodiversity Network Gateway (www.nbn.org.uk)

Planning Policy Statement 9 (2005): Biodiversity and Geological Conservation. TSO. London.

12. Appendix 1: Site Risk Assessment

Off-site/Desk-Top Risk Assessment			
Project name & reference	Vicars Grove 541	Site Location	Little Almshoe Lane, Nr Hitchin
Site description	Closed Inert Landfill sites		
Date	12/07/10		
Client H&S contact	Paul Smith	07973 827 309	
	Email: paulsmith.welwynservices@live.co.uk		
Local Information:			
Nearest A&E hospital location	Hertford A and E		
Environment: Yes/No Details			
Steep slopes	yes	Spoil heaps	
Water features	no		
Uneven or soft ground	yes	Poor capping	
Underground/confined spaces	no		
Liable to fire/flood, etc.	no		
Poor lighting	no		
Noise/vibration	no		
Hot/cold	no		
Urban/urban fringe area	no		
Hazardous Substances Yes/No Details			
Asbestos	no		
Hazardous waste	no		
Chemicals	no		
Dust	poss	On dry and windy days	
Biological agents	no		
Radiation	no		
Electricity	no		
Other (please specify)			
Site Use: Yes/No Details			
Site manned?	yes	During operations	
Public access/use	no		
History of antisocial/criminal use	no		
Construction work	yes	restoration	
Vehicles/Fork-lift present	yes	Lifting vehicles and transport vehicles	
Fixed Plant present	no		
Mobile plant present	yes	Crushers and screeners	
Survey Requirements and Site Access Yes/No Details			
Entry into roofs	no		
Entry into derelict/disused buildings	no		
Entry into underground structures	no		
Entry onto ladders/ scaffold	no		
Accessible parking	no		
Other hazards			
Landfill Gas	no		
Adders	no	None recorded on site or in close vicinity	
This Assessment carried out by:		Russell Carter	

13. Appendix 2: Native Reptile Species for Britain and Ireland

Table 2: Native Reptile Species

The native species of Britain and Ireland	
Slow Worm	*Anguis fragilis*
Common Lizard	*Zootoca vivpara*
Sand Lizard	*Lacerta agilis*
Adder	*Vipera berus*
Grass Snake	*Natrix natrix*
Smooth Snake	*Coronella austriaca*

14. Appendix 3: Survey Point Locations (R1-R16)

15. Appendix 4: Greenlink Ecology Scoping Survey