



Ref: A086068

Sent by email only to: david.lee@persimmonhomes.com

December 2015

Dear David,

Toddington Lane, North Littlehampton – Fitzalan Link

Background

WYG was commissioned by Persimmon Homes to complete reptile presence/likely absence surveys, a bat roost assessment and update invertebrate habitat assessment at Toddington Lane, North Littlehampton (hereafter referred to as 'the site'). This is following recommendations from the Update Ecological Constraints Appraisal (WYG, 2014).

Site location and general description

The site as a whole is located within, Littlehampton, West Sussex, centred on Ordnance Survey National Grid Reference TQ 031 030. The majority of the site comprises areas of semi-improved grassland with small stretches of tree lines and hedgerows and some areas of scrub. The site bordered by the A259 Worthing Road to the north, the Littlehampton Academy to the east and residential properties to the west and by B2187 East Street to the south. The surrounding areas are dominated by residential development.

Development Proposals

The proposed masterplan includes the construction of a single carriageway link road, the Fitzalan Link which will form the southern continuation of the A284 South Lyminster Bypass, between A259 Worthing Road and B2187 East Street.

Reptile Presence/Likely Absence Surveys

Methodology

The method used for carrying out the presence/likely absence survey for reptiles followed guidelines set out by Gent and Gibson (2003). Further guidance was taken from the Froglife Advisory Sheet No. 10 Reptile Survey (Froglife 1999). The reptile presence/likely absence surveys were completed between 9th and 28th October 2015. Please find enclosed information regarding results of the surveys.

The survey was based on the following methods and was undertaken by suitably qualified and experienced WYG ecologists;



- Direct Observation – Whilst carrying out a walkover survey, locations of basking animals were noted and mapped inductively. This method is especially important for grass snakes *Natrix natrix* as they generally bask close to their winter hibernacula.
- Refugia Searches – Any suitable naturally occurring refugia were carefully searched especially log-piles, rubble and discarded pallets or old carpets. In-situ refugia on site were mapped only if reptiles were found using them during the survey period.
- Mats – Artificial refugia were placed in suitable reptile habitat within rough grassland and at the edges of scrub vegetation for 3 weeks prior to the commencement of the surveys.

The seven reptile surveys visits were undertaken between the 9th and 28th October 2015 in suitable weather conditions.

Results

Desktop Study

Sussex Biological Records Centre (SxBRC) returned seven records within 2 km of the site, comprising of four slow worms (*Anguis fragilis*) and three grass snakes. The closest record is of a grass snake 0.71 km west of the site.

Consultation with SxBRC provided the following records for reptiles (see below, Table 1).

Table 1: Reptile Information from Records Office Consultation

Date	Grid Ref	Distance (Km) and Direction from site.	Reptile details
2003	TQ020027	1.9 km south west of the site	Slow worm
1986	TQ026042	0.95 km west of the site	Slow worm
1993	TQ029061	1.6 km north of the site	Slow worm
1993	TQ0502	2 km north of the site	Slow worm
1991	TQ028038	0.71 km west of the site	Grass snake
1993	TQ030063	1.8 km north of the site	Grass snake
1993	TQ0506	2 km west of the site	Grass snake

Site Survey

Weather Conditions

Table 2 provides the weather conditions in which the reptile surveys were completed. These were all completed during optimal weather conditions with temperatures between 9th October and 28th October 2015.

Table 2: Survey Weather Conditions



Survey	Date	Time	Air Temperature (°C)	Rain	Wind Speed	Cloud Cover (%)
1	09/10/15	13:00	16	Nil	0	20
2	12/10/15	15:50	12.2	Nil	2	30
3	15/10/15	12:30	12.1	Nil	1	80
4	19/10/15	12:05	12	Nil	1	30
5	22/10/15	11:50	13.4	Nil	2	60
6	26/10/15	11:30	14.4	Nil	1	90
7	28/10/15	12:25	15	Nil	2	30

Survey Results

Table 3 provides the maximum count of reptiles recorded during any one visit to the development site.

Table 3: Maximum counts of reptiles recorded during any one survey visit at the proposed development site – Fields A and B

Visit Number	Date	Species	Adult	Juvenile	Mat number
1	09/10/15	-	0	0	-
2	12/10/15	-	0	0	-
3	15/10/15	-	0	0	-
4	19/10/15	-	0	0	-
5	22/10/15	-	0	0	-
6	26/10/15	-	0	0	-
7	28/10/15	-	0	0	-

See Figure 1, Appendix A for the distribution of reptile refugia within the Fitzalan Link site.

Limitations

This area of the site (Fitzalan Link) was accessible on all occasions and was completed in accordance with the relevant guidelines; however the surveys did take place outside of the normal survey season (April to September). The overnight temperatures remained suitable and did not drop below ten degrees for a sustained period and daytime temperatures remained within the suitable range (9°C-18°C) therefore the survey result are considered valid.

Conclusions and Recommendations

As reptiles are likely to be absent from the site despite the habitats on-site being assessed as having potential for reptiles, the proposed development is highly unlikely to impact reptile species. Therefore



reptiles are not considered to represent a constraint to development and **no further survey for reptiles is recommended.**

It is recommended that the vegetation located within the areas of retained habitat adjacent to the proposed road and associated footpaths be in-filled and planted with native hedgerow species to enhance the suitable habitat present.

A mowing regime should also be implemented once a year in October. This will provide suitable commuting, foraging and basking habitat for reptiles.

In the unlikely event that reptiles are encountered during works on-site, all works should cease immediately, and a suitably qualified ecologist should be contacted in order to provide further advice.

The results of this survey will remain valid for two years from the date of the final survey effort (i.e. until October 2017). If works have not commenced by this time, it is strongly recommended that an update survey is completed as habitats on-site may have become increasingly suitable for reptiles, or changes in surrounding habitats may force reptiles on to the site.

Bat Roost Assessment

Methodology

The bat roost assessment was complete on 1st September 2015 by WYG Ecologist, Emmanuelle Amiral, Assistant Ecologist using methodology based on the Bat Conservation Trust's (BCT) *Bat Survey: Good Practice Guidelines* (2012) and the Joint Nature Conservation Committee (JNCC's) *Bat Workers Manual* (2004). Only those trees likely to be directly or indirectly affected by the proposed works, within the proposed development site, were examined.

Climbed tree inspections were also conducted within the Fitzalan Link on the 1st October 2015 as several artificial bat boxes were identified attached to trees within the Fitzalan Link area of the site.

Bat roost potential is determined by a variety of factors including physical attributes of the tree, and proximity to good feeding sites and safe commuting routes. A brief summary of the known factors which influence a trees potential to support bats provided in Table 4.1 below.

Table 4.1: Factors influencing potential for trees to be used by bats (adapted from BCT, 2012)

Features of trees used by bats	Signs indicating possible use by bats
- Natural Holes - Woodpecker Holes - Cracks/Splits in Major Limbs - Loose Bark - Behind Dense, Thick-stemmed Ivy - Hollows/Cavities - Within Dense Epicormic Growth - Bird and Bat Boxes	- Tiny Scratches around Entry Point - Staining around Entry Point - Bat Droppings in/around/below Entrance - Audible Squeaking at Dusk or in Warm Weather - Flies around Entry Point - Distinctive Smell of Bats - Smoothing of Surfaces around Cavity



The trees which were surveyed were all within the site boundary as those likely to be affected by the development.

These trees were visually inspected for their bat roosting potential, including potential access points into the trees and connectivity to the wider environment. These were categorised in accordance with Table 4.2, through a visual assessment of the trees to record the presence of features such as crevices, holes, fissures, split bark and arboreal ivy.

Table 4.2: Categories of trees, based on their potential to support bat roosts (taken from Bat Conservation Trust, 2012)

Tree Category	Description
Known of Confirmed Roost	Confirmed bat roost tree with field evidence demonstrating bats are present e.g. droppings, scratch marks, grease marks or urine staining.
1*	Trees with multiple, highly suitable features capable of supporting larger roosts.
1	Trees with definite bat potential, supporting fewer suitable features than Category 1* trees or with potential for use by single bats.
2	Trees with no obvious potential although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats.
3	Trees with no potential to support bats

Please note that Tables 4.1 and 4.2 identify what are generally considered to be the most important influences on bat roost preferences. There are 18 species of bats in the UK, each with its own specific requirements. Additionally males generally have different roost preferences to females and, therefore, it is not practical to assess a feature against all the possible permutations of an 'ideal' roost.

Limitations

The trees which the survey focused on were all those within the proposed development site boundary as those most likely to be affected by the development, if proposed plans are changed, further surveys may be required.

The survey will remain valid for 12 months, if works or further surveys have not commenced within this time, it is recommended that an update survey is completed to determine whether their potential value to roosting bats has changed.

Results

Desktop Study

Sussex Biological Records Centre (SxBRC) returned records of up to eight species of bat recorded within 2 km of the site, comprising an unidentified pipistrelle (*Pipistrellus sp.*), common pipistrelle (*Pipistrellus pipistrellus*), brown long-eared bat (*Plecotus auritus*), Natterer's bat (*Myotis Nattereri*), whiskered bat (*Myotis mystacinus*), barbastelle (*Barbastelle barbastellus*) and a serotine (*Eptesicus serotinus*). The nearest record is of a common pipistrelle, located approximately 1.2 km south east of the site at Wallace Road, Rustington.

Consultation with SxBRC provided the following records for bats (see below, Table 5).

**Table 5:** Bat Species within 2km of the site

Date	Grid Ref	Distance (Km) and Direction from site.	Species details
2006	TQ042062	1.8 km north of the site	Whiskered Bat
2006	TQ042062	1.8 km north of the site	Natterer's Bat
1998	TQ054031	1.2 km south-east of the site	Common Pipistrelle
2006	TQ042062	1.8 km north of the site	Serotine
2006	TQ042062	1.8 km north of the site	Pipistrelle sp.
2006	TQ042062	1.8 km north of the site	Barbastelle
2006	TQ042062	1.8 km north of the site	Brown long-eared

Survey Results

The results of the tree assessment are given below:

Known Confirmed Roosts

No trees were identified as confirmed roosts at the time of the bat roost assessment.

*Category 1**

There were no trees identified within this area of the site as Category 1*.

Category 1

There were no trees identified within this area of the site as Category 1.

Category 2

There were no trees identified within this area of the site as Category 2.

Category 3

The bat potential of the trees within this area of the site falls under this category, and have negligible potential to support roosting bats.

In addition no evidence of roosting bats was identified within the bat boxes located on-site, this was attributed to the poor condition of the artificial roost provisions at the time of the survey. These roosting provisions were then subsequently removed due to their state of disrepair.

Conclusions and Recommendations

Impacts



No trees offering potential to support roosting bats will be felled as a result of the development proposals.

Mitigation and Enhancement Measures

The proposed mitigation and enhancement measures are stated below:

- Where hedgerows are to be bisected to accommodate the Fitzalan Link road, tall mature trees or tree stands are to be retained or planted to create a vegetated 'hop-over'. These will maintain connectivity for commuting and/or foraging bats by guiding the bats up and over the link road and the height of traffic.
- The creation and enhancement of a 'bat-friendly' habitat through the planting of specific flora species to increase the presence of potential food sources for bats.
- Adequate consideration should be given to the type and position of lights to minimise the impact on bats that may be roosting, foraging or commuting in the area. Lights should only be used in those areas where it is necessary for Health and Safety and avoided in areas which are found to support bats. Light spillage should be controlled through the use of hoods and appropriate angling of the light itself and low or high pressure sodium lamps should be used instead of mercury or metal halide lamps. For further technical detail see the Institute of Lighting Engineers (ILE) *Guidance Notes For The Reduction Of Obtrusive Light* (2011).

Invertebrate Assessment

The site is dominated by semi-improved grassland with ruderal vegetation and scrub at the margins of the site. Several large poplar trees are also present to the east of the site. It is considered unlikely that any notable species of invertebrates are present on site; it is more likely that a range of widespread and common species are present on site due to the relatively low botanical diversity present on site. The provision of floristically rich habitats on site as part of the proposals is likely to increase the invertebrate diversity at the site.

Please do not hesitate to contact us if you wish to discuss this further.

Yours sincerely,



Ben Cooke
Assistant Ecologist
for and on behalf of WYG

David West MCIEEM
Principal Ecologist



References

Froglife (1999). *Reptile Survey: Planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

Gent, T. and Gibson, S. (2003). *Herptofauna Workers Manual*. Joint Nature Conservation Committee, Peterborough.

Hundt (2012). *Bat Surveys, Good Practice Guidelines 2nd Edition*, Bat Conservation Trust, London.

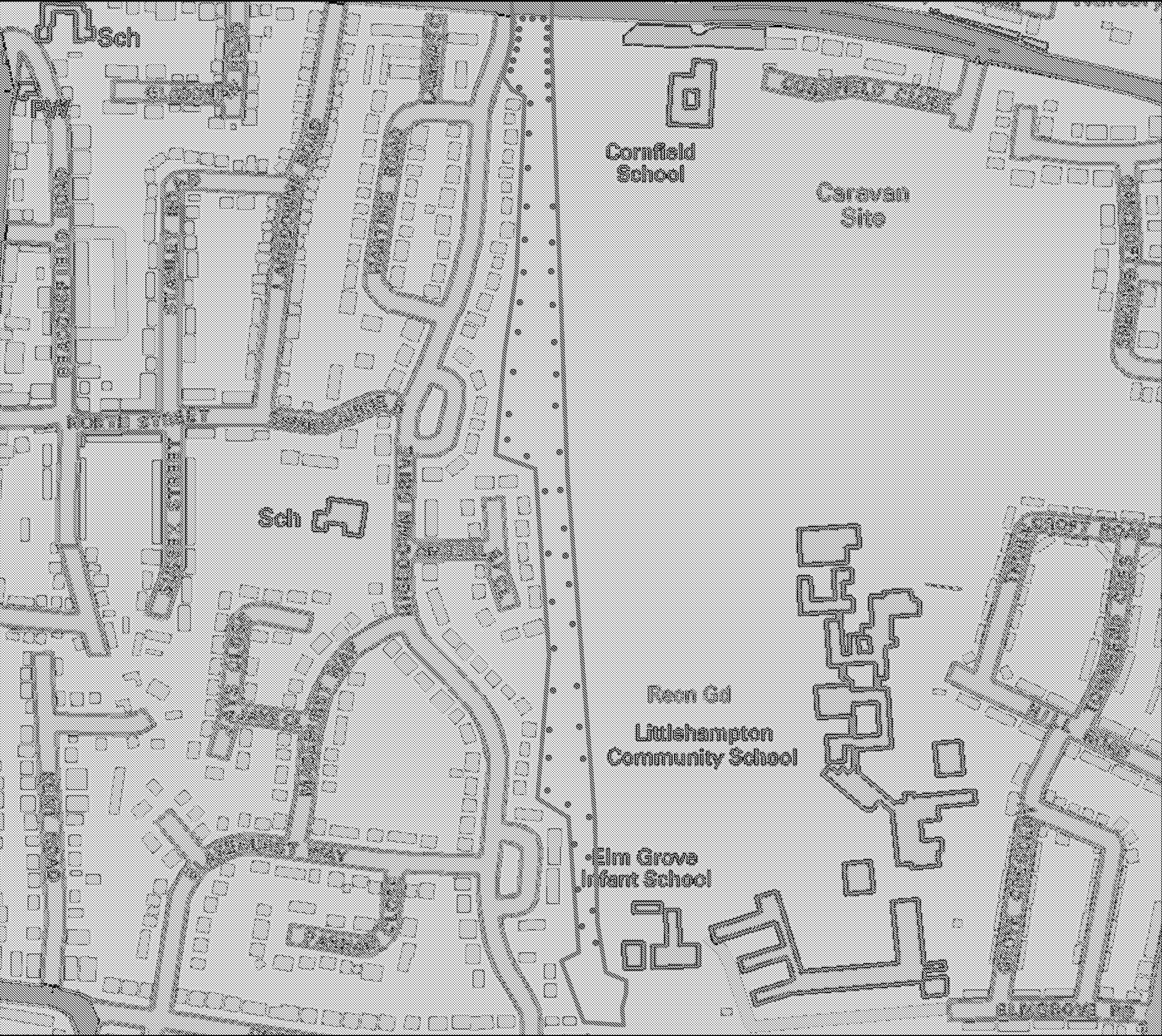
Institute of Lighting Professionals (ILP). (2011). *Guidance for the Reduction of Obtrusive Light*, ILP, Rugby.

Mitchell-Jones, A.J. & McLeish, A.P. (Eds) (2004). *Bat Workers Manual*, 3rd Edn. JNCC, Peterborough.

WYG (2014) *Update Ecological Constraints Appraisal*, Southampton.



Appendix A



Legend

- Fitzalan Link Refugia
- Site Boundary



The Pavillion, 1st Floor
Botleigh Grange Office Campus
Hedge End
Southampton
Hants
SO30 2AF

WYG Planning & Environment



creative minds safe hands

Toddington Lane, North Littlehampton

Fitzalan Link- Reptile Refugia Locations

Project No:		Office	Type	Drawing No.	Revision
A086068		45	94	Figure 1	

Base map provided by Persimmon Homes