

DOMUSEA DEVELOPMENTS

Clays Farm, Yapton, West Sussex

- Reptile Presence / Absence Survey Report

Planning Issue

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SUMMARY

Lizard Landscape Design and Ecology has been commissioned By Domusea Developments to undertake a *Reptile Population Class Assessment Presence / Absence Survey* of the land at Clays Farm, Yapton, West Sussex (*Grid Reference: SU 977 038 – hereafter referred to as 'the site'*).

The surveys were recommended within the Preliminary Ecological Appraisal undertaken by Lizard Landscape Design and Ecology on the 11th June 2018, due to habitats on-site being identified as having the potential to support protected species of reptiles.

The site comprises a series of horse paddocks, with associated barn and stable buildings. The vegetation is dominated by improved grassland, with patches of tall ruderal vegetation, scattered trees and defunct hedges to the boundaries.

30 no. artificial reptile refugia were laid out around the site within areas which had potential to support reptiles on 15th April 2019 and allowed to settle for 14 days prior to commencement of the survey. 07 no. site visits were conducted, where the number, species, age and sex of any reptiles present was recorded.

A peak count of one slow-worm was recorded during the survey undertaken during May 2019. The survey suggests that, whilst reptiles are not using the vast majority of the site, there is a 'low' population using some of the marginal vegetation. A single slow-worm was recorded in a similar location on two occasions, on the south-eastern boundary where the site is bounded by defunct hedge and dense scrub. It is considered likely that the reptiles live within the scrub and adjacent grassland further to the east which does not appear to be subject to grazing. There is a 'low' risk of killing and / or injuring reptiles during the construction process in the absence of mitigation measures.

The survey was undertaken during late spring within suitable weather conditions; the results are considered to be representative. A mitigation plan has been developed to ensure the development can proceed without contravention of the legal framework protecting reptiles within England and Wales (*The Wildlife and Countryside Act 1981*) and with due consideration to the conservation status of the local reptile population.

1.0 INTRODUCTION

- 1.1 Lizard Landscape Design and Ecology has been commissioned By Domusea Developments to undertake a Reptile Population Class Assessment Presence / Absence Survey of the land at Clays Farm, Yapton, West Sussex (*Grid Reference: SU 977 038 – hereafter referred to as 'the site'*).
- 1.2 The surveys were recommended within the Preliminary Ecological Appraisal undertaken by Lizard Landscape Design and Ecology on the 11th June 2018, due to habitats on-site being identified as having the potential to support protected species of reptiles.
- 1.3 This report outlines the results of the reptile survey and has been prepared by George Sayer (*BSc(Hons) PgDip, Project Ecologist – Lizard Landscape Design and Ecology*). The report has been reviewed by Joe Jackson; (*Landscape Architect BA (Hons) LA DipLA CMLI; Principal; Lizard Landscape Design and Ecology*).

Site Description

- 1.4 The site comprises a series of horse paddocks, with associated barn and stable buildings. The vegetation is dominated by improved grassland, with patches of tall ruderal vegetation, scattered trees and defunct hedges to the boundaries.
- 1.5 The site is square and covers approximately 1.0 hectares (*ha*) in size. The site is located to the north of the village of Yapton. Soils on site are described as *freely draining slightly acid loamy soils*.

Survey Rationale

- 1.6 The development scheme proposes the removal and disturbance of areas of suitable reptile habitat throughout the site; without suitable mitigation this could result in a contravention of *The Wildlife and Countryside Act 1981 (As Amended)*. The habitats on-site considered to hold potential for reptiles consist of: tall ruderal and grassland marginal habitats to the edges of the site and around buildings. The habitats are recorded within *Figure No. 01 – Location of Artificial Reptile Refugia*.

Development Proposals

- 1.7 The proposals include the construction of a small housing estate of 33 no. detached and semi-detached dwellings; the dwellings will be accompanied by a new access road and walkway; access paths; parking areas; gardens and open / amenity space. It is determined that the majority of the boundary vegetation will be retained within the final development scheme, and reinforced where appropriate. The other vegetation and habitats within the site would require removal; this would result in the loss of the improved grassland field; much of the marginal tall ruderal vegetation; and a very small number of scattered trees.

Widespread Reptiles & Legislation

- 1.8 The common or viviparous lizard (*Lacerta vivipara*) has a wide range over most of Europe. Its body can reach 7.0 cm in length and can have very variable patterns and colour. Slow worm (*Anguis fragilis*) is also found over most of Europe; it can reach lengths of up to 50.0 cm and is typically brown, grey, or reddish, with females frequently having a dorsal stripe. Grass snake (*recently re-described as* *Natrix helvetica*) may reach up to 120.0 cm in length and is thick-bodied – many have a distinct yellow-black bordered collar around the neck. Adders (*Vipera berus*) have a characteristic diamond pattern along their backs.
- 1.9 Adders, grass snakes, common lizards and slow worms are protected against killing, injury or sale under *The Wildlife and Countryside Act 1981*. Developments that could predictably kill or injure reptiles could result in an offence. Furthermore, these species are targets of UK and Local Biodiversity Action Plans and listed as *Species of Principle Importance* under *Section 41* of the *Natural Environment and Rural Communities Act 2006*. This obligates local authorities to have regard to the purpose of conserving biodiversity, with particular emphasis on targeted species.

2.0 SCOPE OF THE SURVEY

2.1 The aim of the reptile survey was:

- *To identify the presence / absence of reptile species within the site as a whole;*
- *To estimate population size classes for said populations; and;*
- *To advise mitigation for reptiles within the proposed development scheme.*

3.0 METHODOLOGY

3.1 30 no. artificial reptile refugia (*roofing felt; 0.5 x 0.5 m*) were laid out around the area on 15th April 2019 and allowed to settle for 14 days prior to commencement of the survey.

3.2 07 no. site visits were conducted during May 2019, where the number, species, age and sex of the reptiles present were recorded.

3.3 Surveys were undertaken during recommended times (*08:00–11:00 and 16:00–18:30 unless weather conditions dictated otherwise*) with suitable weather conditions for surveying reptiles (*guidelines recommend temperatures 9-18°C with intermittent or hazy sunshine during warm days*). Weather conditions recorded at each survey visit are shown in Table No. 1 below.

Table No. 1 - Details of Weather Conditions during the Reptile Surveys

Survey	Date of Visit	Time	Weather	Temperature	Wind
1	01.05.19	11:00	Overcast	13°C	F1
2	03.05.19	11:00	Light Cloud	14°C	F0
3	07.05.19	09:30	Light Cloud	12°C	F0
4	09.05.19	14:30	Light Cloud	15°C	F1
5	16.05.19	09:30	Light Cloud	14°C	F0
6	20.05.19	09:00	Clear & Sunny	12°C	F1
7	28.05.19	09:15	Clear & Sunny	14°C	F1

- 3.4 Debris piles on-site considered suitable as reptile refugia were checked during the surveys, and repeated walkovers of the site were used to search for active reptiles.

3.5 Evaluation Methodology

- 3.5.1 Despite its withdrawal, *Natural England Technical Information Note TIN102* still provides a valuable resource tool to allow the comparison and evaluation of reptile populations on site. A population size class category has been derived using guidance provided by the *Key Reptile Site Register Mechanism (Froglife – Advice Sheet 10)*, designed to promote the protection of key reptile areas.
- 3.5.2 The criteria for key reptile site selection include:
- 1) *supports 3 or more reptile species;*
 - 2) *supports 2 snake species;*
 - 3) *supports an exceptional population of one species (see Table No. 02);*
 - 4) *supports an assemblage of species scoring at least 4 (see Table No. 02);*
 - 5) *supports a local rarity or even adder with low population score.*
- 3.5.3 The population size classes used in this instance are provided in *Froglife – Advice Sheet 10* and displayed in Table No. 02.

Table No. 02 – Population Scores for Selection of Key Reptile Sites

Species	'Low' Score 1	'Good' Score 2	'Exceptional' Score 3
Adder	< 5	5 – 10	> 10
Grass Snake	< 5	5 – 10	> 10
Common Lizard	< 5	5 – 20	> 20
Slow Worm	< 10	10 – 20	> 20

- 3.5.4 Figures in Table No. 02 refer to the maximum number of reptile adults seen by observation and / or under refugia by one person during one survey visit with artificial refugia placed at a maximum density 10/ha.

4.0 RESULTS

4.1 Background Information

- 4.1.1 There are records of slow worm (*Anguis fragilis*), grass snake (*Natrix helvetica*) and adder (*Vipera berus*) within 2.0km of the site. Widespread reptiles might be assumed to be present in suitable habitat such as field margins and roadside verges within the local landscape.

4.2 Field Survey

- 4.2.1 A peak count of one female slow-worm was recorded during the surveys undertaken in May 2019. A single slow-worm was recorded on two of the seven visits.
- 4.2.2 In addition to the refugia surveys undertaken during May 2019, a number of spot searches of the site were undertaken on the same days as refugia surveys. These involved searching piles of debris and rubbish on the site which were deemed suitable for reptiles. These searches uncovered no reptiles or evidence of reptiles.

Constraints and Limitations

- 4.2.3 No major constraints or limitations were encountered during the survey. The time of year during which the surveys were undertaken is generally considered 'optimal'. Surveys were carried out during optimal weather conditions at appropriate times of day.

5.0 EVALUATION

- 5.1 A peak count of one slow-worm was recorded during the survey undertaken during May 2019.
- 5.2 A single slow-worm was recorded in a similar location on two occasions, on the south-eastern boundary where the site is bounded by defunct hedge and dense scrub, with large gardens beyond. No reptiles were recorded within ruderal vegetation either surrounding the buildings to the south, beneath the windbreak trees to the north, beneath the pine trees to the north-west or within the defunct hedge and field margins to the south-west. The survey suggests that, whilst reptiles are not using the vast majority of the site, there is a 'low' population using some of the marginal vegetation.
- 5.3 It is considered likely that the reptiles live within the scrub and adjacent grassland gardens further to the east which does not appear to be subject to grazing. Very low numbers of reptile appear to venture into the marginal vegetation of the site, or commute through this vegetation. The vegetation is too limited in scale and quality to support a viable population in itself. The majority of the site is too heavily-grazed and otherwise managed to provide suitable habitat. The vegetation is considered to be of importance to reptiles within the site and immediate surroundings.
- 5.4 There is a 'low' risk of killing and / or injuring reptiles during the construction process in the absence of mitigation. Due consideration must also be given to reptiles during the planning process. To ensure that reptiles are not harmed through construction, and that the conservation status of the local population is not affected, a mitigation plan is proposed.

6.0 REPTILE MITIGATION STATEMENT

- 6.1 A peak count of one slow-worm was recorded during the survey undertaken during May 2019. The survey suggests that, whilst reptiles are not using the vast majority of the site, there is a 'low' population using some of the marginal vegetation. There is a 'low' risk of killing and / or injuring reptiles during the construction process in the absence of mitigation.

Mitigation Against Harm

- 6.2 Clearance of any suitable reptile vegetation (*as determined by the ecologist*) shall be reduced by hand strimmer first to a height of 15.0 cm before being cut with hand mower or strimmer to <5.0 cm height and kept low throughout the construction phase. Clearance of suitable vegetation shall be carried out under ecological supervision.

Habitat Re-provision

- 6.3 The line of windbreak trees to the north of the site are proposed for retention within an area of soft landscape 'buffer' zone. The buffer is south-facing and currently consists of grazed improved grassland. The buffer runs along the western boundary before joining an open space with LAP/LEAP provision. It is recommended that at least half of this buffer zone (*5m width or equivalent area*) is enhanced for reptiles, through allowing the grass to grow longer, seeding with additional wildflowers, planting of a hedge along the northern boundary and provision of reptile hibernacula and refugia such as log and compost piles. Tree protective fencing would protect this area during construction, and once the habitats become suitable the area would be colonised by reptiles.
- 6.4 The above proposed mitigation plan would result in a net benefit for reptiles and other biodiversity such as invertebrates on the site in the medium-long term.

7.0 REFERENCES

Griffiths, R. A. and Inns, H. (1998): Surveying - Herpetofauna Workers' Manual

Gent, A. H. & Gibson, S. D. (Eds.): Joint Nature Conservation Committee, Peterborough, Pp. 1–6

www.arc-trust.org: Herptile Conservation Trust and Froglife Merged in 2009

Guidelines from Froglife (Factsheet 10): Froglife; 1999

Natural England Technical Information: Note TIN102; Natural England; 2011

Surveyor	George Sayer			
Date	01.05.19			
Time	11:00			
Temperature	13°C			
Wind	F1			
Weather	Overcast			
Tile No.	Species	Ad/J	Sex	Notes
Nothing				

Surveyor	George Sayer			
Date	03.05.19			
Time	11:00			
Temperature	14°C			
Wind	F0			
Weather	Light Cloud			
Tile No.	Species	Ad/J	Sex	Notes
4	Slow Worm	Adult	Female	

Surveyor	George Sayer			
Date	07.05.19			
Time	09:30			
Temperature	12°C			
Wind	F0			
Weather	Light Cloud			
Tile No.	Species	Ad/J	Sex	Notes
Nothing				

Surveyor	George Sayer			
Date	09.05.19			
Time	14:30			
Temperature	15°C			
Wind	F1			
Weather	Light Cloud			
Tile No.	Species	Ad/J	Sex	Notes
Nothing				

Surveyor	George Sayer			
Date	16.05.19			
Time	09:30			
Temperature	14°C			
Wind	F0			
Weather	Light Cloud			
Tile No.	Species	Ad/J	Sex	Notes
Nothing				

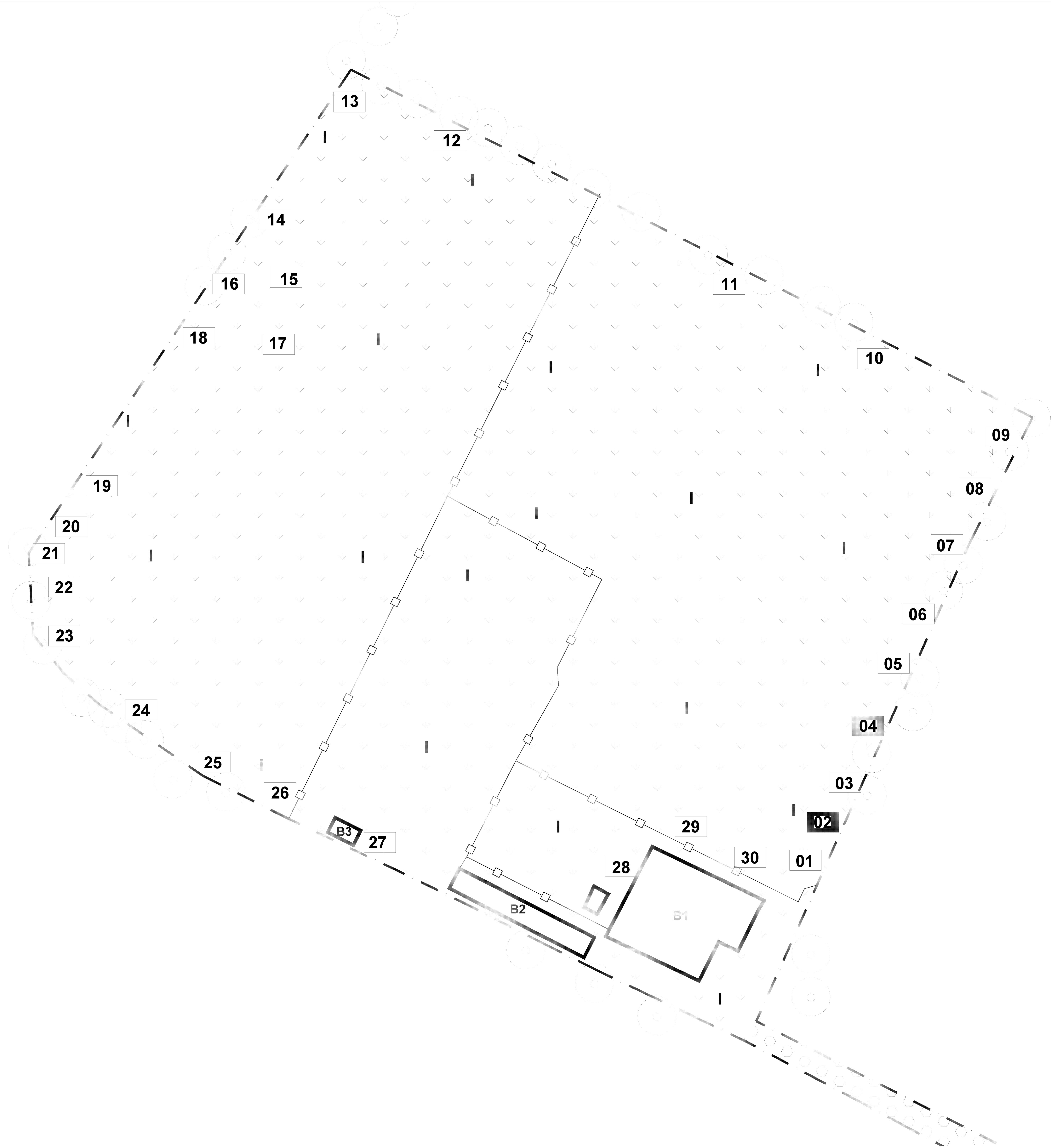
Surveyor	George Sayer			
Date	20.05.19			
Time	09:00			
Temperature	12°C			
Wind	F1			
Weather	Clear & Sunny			
Title No.	Species	Ad/J	Sex	Notes
Nothing				

Surveyor	George Sayer			
Date	28.05.19			
Time	09:15			
Temperature	14°C			
Wind	F1			
Weather	Clear & Sunny			
Title No.	Species	Ad/J	Sex	Notes
2	Slow Worm	Adult	Female	

Summary

Visit No	SW	GS	CL	A
1	0	0	0	0
2	1	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	1	0	0	0
Peak Count	1	0	0	0

SW= Slow Worm, GS= Grass Snake, CL= Common Lizard, A= Adder



Legend

- Development Site Boundary / Survey Area.
- Existing Buildings and Walls.
- Fenceline.
- Improved Grassland.
- Hard / Bare Ground.
- Scattered Trees.
- Reptile Refugia.
- Reptile Refugia; Protected Species Slow worm *Anguilla fragilis* found

PLANNING ISSUE

Rev.	Description	Date	Initials
00	Planning Issue	28.05.19	WM

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Client Domusea Developments	Scale 1:250@A0	Drawn WM	Approved GS	Date 28.05.19
Project Title and Location Clays Farm, Yapton, West Sussex	Drawing No. LLD1472-ECO-FIG-001	Revision 00		

**Figure No.01- Location of Artificial Reptile Refugia
Clays Farm, Yapton, West Sussex**