



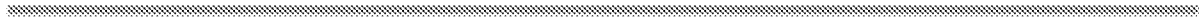
Reptile Survey Report

Wings Nursery

Woodgate

West Sussex

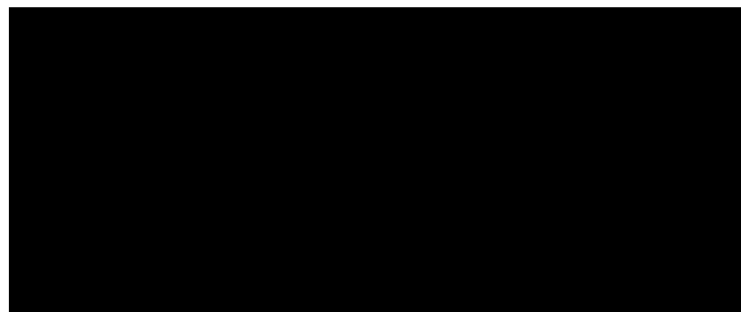
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19th October 2017

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Notice to Interested Parties

To achieve the study objectives stated in this report, we were required to base our conclusions on the best information available during the period of the investigation and within the limits prescribed by our client in the agreement.

No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations completely defined the degree or extent of e.g. species abundances or habitat management efficacy described in the report.

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EXECUTIVE SUMMARY

- 0.1 Arbeco Ltd. were commissioned by ADM Architects to carry out reptile presence / suspected absence surveys at Wings Nursery, Woodgate, West Sussex, PO20 3SU to help inform the proposed the outline planning proposal for 50 new residential properties on site.
- 0.2 A preliminary ecological appraisal undertaken by Arbeco Ltd in July 2017 identified the need for further ecological surveys at the site. The assessment considered that the site had suitable terrestrial habitat for reptiles and, therefore, further presence/absence surveys were recommended.
- 0.3 The reptile surveys followed the recommended methodology outlined in the Herpetofauna Workers' Manual (JNCC, 2003) and Froglife's Advice Sheet 10 (1999).
- 0.4 The surveys were undertaken in September and October 2017 and recorded a peak count of five common lizard *Zootoca vivipara* and seven slow worm *Anguilla fragilis* present on site.
- 0.5 Following guidance from the Froglife Active Sheet 10 (1999), the site is not considered a Key Reptile Site but does currently supports a low population of common lizard and of slow worms.
- 0.6 In the absence of mitigation, the reptile population in the local area may be negatively impacted by the development works.
- 0.7 A mitigation strategy is therefore outlined in Section 6 of this report to ensure that no reptiles are harmed during works and that onsite population of slow worms and common lizard is retained through maintenance and enhancement of retained habitat on the west and south boundaries as well as a receptor site in the south west section.
- 0.8 The habitat links to the wider landscape will be maintained through the retention of a 3 m strip along the west and south site boundary with a habitat corridor linking this area to the receptor site/wildlife zone.
- 0.9 The mitigation strategy will include measures such as the creation of a wildlife pond, hibernacula and log piles in the receptor area, appropriate timings of site clearance to avoid the reptile hibernation period and the directional strimming of the site from north-east to south-west to encourage the dispersal of reptiles to the receptor area.

1 INTRODUCTION

- 1.1 Arbeco Ltd. were commissioned by ADM Architects to carry out reptile presence / suspected absence surveys at Wings Nursery, Woodgate, West Sussex, PO20 3SU to help inform the proposed the outline planning proposal for 50 new residential properties on site.
- 1.2 The objectives of the reptile surveys were to assess whether reptiles were present on site and assess the population size of any species that were present. This will ensure that reptiles, if present, are not detrimentally impacted by the proposed works on the site, that there is no loss of ecological viability and that the favourable conservation status of the species in the local area is not affected by the proposed re-development.

Background

- 1.3 A preliminary ecological appraisal undertaken by Arbeco Ltd in July 2017 identified the need for reptile surveys at the site. The site had suitable terrestrial habitat for reptiles including semi-improved grassland, tall ruderal vegetation, scrub and rubble debris, therefore further presence/absence surveys were recommended.

Site Description

- 1.4 The site is located within Woodgate, West Sussex, approximately 4.8 km due north of Bognor Regis and 5.9 km east of Chichester (Ordnance Survey Grid Reference for the centre of the site: SU 93718 04134). The site is approximately 2.4 ha in area and consists of areas of grassland, tall ruderal vegetation, scrub and hardstanding with scattered trees on site and along the boundary as well as a large glasshouse building situated in the southeast section.
- 1.5 The location of the site is shown in Figure 1.1 and the extent of the site boundary is shown in Figure 1.2.
- 1.6 The site is bordered to the north by two small fields and a railway track, to the east by Lidsey Road with residential properties beyond, to the south by a small number of bungalow properties and to the west by a large plant nursery.
- 1.7 The habitats in the wider landscape are dominated by agricultural fields and grassland areas bordered by intact hedgerows and occasionally divided by water filled ditches with farm buildings occasionally scattered amongst the fields. A railway line is located approximately 90 m to the north of site runs from east to west through Woodgate. There are small areas of deciduous woodland within the wider landscape, the closest of which is approximately 0.46 km to the north east.

Legislation

- 1.8 Certain habitats and species including reptiles, are protection under the Conservation of Habitats and Species Regulations 2010 and the Wildlife & Countryside Act (1981), as amended.
- 1.9 In general, the above legislation makes it an offence to:
 - Deliberately/intentionally or recklessly kill, injure or take a protected species;

- Intentionally or recklessly damage, destroy or obstruct access to any place that a protected species uses for shelter or protection whether the species is present or not;
- Intentionally or recklessly disturb a protected species while it is occupying a structure or place that it uses for shelter or protection;
- Deliberately take or destroy the eggs of species protected by this legislation

1.10 Section 41 of the Natural Environment and Rural Communities Act (2006) lists the species and habitats of principal importance for the conservation of biodiversity in England and acts as a guide to local authorities in implementing their duties under Section 40, to have regard to the conservation of biodiversity in England.

1.11 Under The National Planning Policy Framework (NPPF) 2012 protected sites and species are a material consideration in determining planning applications.

1.12 Further details of the legislation are outlined in Appendix A.

Development Proposals

1.13 The outline development proposals comprise the construction of 50 new residential properties on the site with associated recreational areas and hardstanding areas. The proposals will result in the loss of approximately 1.6 ha poor semi-improved grassland, 0.3 ha good semi-improved grassland, 0.2 ha tall ruderal vegetation and 0.1 ha scrub habitat to facilitate the proposed development.

1.14 The boundary habitats will not be affected by the proposed development and there are plans to include the construction of a waterbody in the centre of the site.

2 METHODS

Reptile Survey

- 2.1 The reptile survey was carried out in accordance with the recommended methodology outlined in the Herpetofauna Workers' Manual (JNCC, 2003) and Froglife's Advice Sheet 10 (1999). The survey was undertaken by experienced ecologists throughout October 2016.
- 2.2 The survey was conducted using artificial refugia made from roofing felt measuring 50cm x 50cm. Refugia provide shelter and basking opportunities for reptiles, which can be recorded on or under the refugia during suitable weather conditions i.e. avoiding periods of strong wind, heavy rain or extreme temperatures, typically surveys are undertaken when air temperatures are between 9°C and 18°C.
- 2.3 On the 4th September 2017, 50 artificial refugia were placed in areas of suitable habitat for reptiles. The location of refugia is shown in Figure 2.1.
- 2.4 Whilst setting out the refugia, a visual search of all areas of suitable habitat for reptiles was also undertaken. The refugia were left to settle in for a period of ten days in order to provide time for reptiles to locate them and for the vegetation beneath them to become flattened, making it easier to observe reptiles.
- 2.5 In order to conform to the best practice guidelines for determining the presence or absence of reptile species, seven survey visits were undertaken to inspect the refugia. Each survey visit was conducted during suitable weather conditions.
- 2.6 On each of the seven visits, refugia were inspected for reptiles above and beneath the refugia. The species and, where possible, the age and sex of each reptile observed was recorded. Any reptiles observed whilst walking between refugia were also recorded.
- 2.7 The artificial refugia were removed from site after the final survey on the 5th October 2017.
- 2.8 The survey results were used to estimate population class size for any reptile species recorded and to assess if the site could be classified as a Key Reptile Site, as defined by Froglife (1999).

Survey Constraints

- 2.9 There were not considered to be any constraints to the reptile surveys.

3 RESULTS

Reptile Survey

- 3.1 Survey visits were undertaken on the 14th, 19th, 22nd, 26th, 29th of September and 3rd, 5th of October 2017. Findings of the surveys are detailed in Table 3.1 below.

Table 3.1: Reptile survey results

Date	Result	Weather conditions
14/09/2017	No reptiles recorded	Temperature (°C): 17 Cloud cover (%): 70 Wind (Beaufort Scale): 2 Rain: None
19/09/2017	Common lizard: 2 Slow worm, male: 1 Slow worm, juvenile: 3	Temperature (°C): 16 Cloud cover (%): 20 Wind (Beaufort Scale): 0 Rain: None
22/09/2017	Common lizard: 3 Slow worm, male: 1 Slow worm, female: 2 Slow worm, juvenile: 4	Temperature (°C): 15 Cloud cover (%): 0 Wind (Beaufort Scale): 0 Rain: None
26/09/2017	Common lizard: 3 Slow worm, female: 5 Slow worm, juvenile: 8	Temperature (°C): 18 Cloud cover (%): 20 Wind (Beaufort Scale): 1 Rain: None
29/09/2017	Common lizard: 5 Slow worm, male: 1 Slow worm, female: 6 Slow worm, juvenile: 11	Temperature (°C): 18 Cloud cover (%): 90 Wind (Beaufort Scale): 2 Rain: None
03/10/2017	Common lizard: 3 Slow worm, juvenile: 6	Temperature (°C): 16 Cloud cover (%): 10 Wind (Beaufort Scale): 0 Rain: None
05/10/2017	Common lizard: 1 Slow worm, female: 3 Slow worm, juvenile: 5	Temperature (°C): 15 Cloud cover (%): 20 Wind (Beaufort Scale): 0 Rain: None

- 3.2 Slow worms and common lizards were recorded during the seven visits with a peak count of seven adult slow worms and five adult common lizards recorded on the 29th of September 2017. The distribution of reptiles found on site is shown in Figure 3.1.

4 EVALUATION

- 4.1 Common species of reptile including common lizard, grass snake *Natrix natrix*, slow worm and adder *Vipera berus* are protected under Schedule 5, Section 9 of the Wildlife and Countryside Act 1981(as amended) against intentional injury or killing.
- 4.2 The habitats within the site boundary were identified as having potential to support reptiles during the Preliminary Ecological Appraisal undertaken by Arbeco Ltd in July 2017. The semi-improved grassland, tall ruderal vegetation, scrub, boundary are scattered debris recorded within site provide suitable shelter and foraging habitat for reptiles.
- 4.3 The reptile surveys undertaken in September and October 2017 recorded a peak count of seven adult slow worms and five common lizards on the same survey visit using 30 artificial refugia mats per hectare. The site is therefore considered to support a **low population** of slow worm and common lizards, as defined by Froglife (1999). As there were only two species identified on site, both of which have a low population, the site does not qualify as a Key Reptile Site.
- 4.4 The proposed development of the site includes the removal of habitats suitable for foraging and sheltering reptiles such as the semi-improved grassland, tall ruderal vegetation and scrub habitat. In the absence of mitigation, the works are likely to affect the favourable conservation status of reptiles in the local area.

5 CONCLUSION

- 5.1 The seven visits undertaken in September and October 2017 recorded a low population of slow worms and common lizards on site. However, as there were only two species of reptile, both with a low population size identified on site, the site does not qualify as a Key Reptile Site in the local area.
- 5.2 Recommendations on how to proceed with the proposed development are set out in Section 6 of this report to ensure the development does not negatively impact upon the local reptile population and ensure no individual reptiles are harmed during the works.

6 RECOMMENDATIONS

- 6.1 A low population of slow worms and common lizard were recorded using the site during the seven survey visits conducted in September and October 2017. The proposed development of the site will directly impact upon habitats suitable to support reptiles including the semi-improved grassland, tall ruderal vegetation and scrub. In the absence of a suitable mitigation strategy, the proposed development could cause direct injury or death of individual reptiles found on site as well as having a negative impact on the local population of slow worms and common lizard.
- 6.2 The mitigation strategy detailed below comprises the onsite retention of reptiles through maintenance and enhancement of retained habitat on the west and south boundary, installation of a wildlife zone in the centre of site with good connection to the retained habitat as well as ensuring that no reptiles are harmed during works.
- 6.3 As part of the outline planning proposals for the layout of the site, an area will be set aside in the centre of the site as a designated wildlife zone incorporating a pond, wildlife planting scheme, hibernacula and log piles to offset the potential impact of the development to the local reptile population. This area will be connected to retained habitat on the western boundary via a habitat corridor consisting of native species planting. Further information is detailed below in the mitigation strategy.
- 6.4 The retained habitat connecting the site to the wider landscape along the western and southern boundaries will be maintained through the retention of a 3 m strip containing the hedgerow and scrub habitats as shown in Figure 6.1. These areas will be fenced off using suitable reptile fencing to prevent reptiles from re-entering the site, and will be further protected using Heras fence to ensure construction traffic do not damage the barrier.

Mitigation Strategy

- 6.5 Prior to development works commencing, the wildlife zone in the middle of the site should be created to include a pond, hibernacula, log piles and native grassland species planted which will further enhance the site for the local wildlife populations. This area should be created first in order to provide a suitable receptor site for any reptiles found during clearance works.
- 6.6 The wildlife zone/enhancement area should be well connected to the wider landscape via a habitat corridor located to the west which attaches to the west retained boundary.
- 6.7 Once the pond, reptile enhancements and habitat corridor are created, this area and the retained boundary habitats should be fenced off using a temporary polythene plastic reptile fence in order to prevent recolonising of the site during the construction phase, as shown in Figure 6.1.
- 6.8 No equipment, machinery or materials should be brought into the area of retained habitat on the west and south boundary, or in the receptor area. The receptor site, retained habitat and habitat corridor will be securely marked and fenced-off with appropriate temporary fencing (e.g. 'Heras' fences) prior to works commencing and left in situ for the duration of the works to prevent access and incidental damage by site vehicles, equipment, materials and personnel.

- 6.9 Site clearance and vegetation removal works should not commence until the beginning of the reptile active period (March to October, when night time temperatures are above 5°C). All debris and vegetation clearance should be carried out under the supervision of a suitably qualified ecologist. Construction and project staff should be made aware of reptile constraints on site.
- 6.10 Immediately prior to the debris and vegetation clearance the onsite ecologist should walk the area to be cleared to check for reptiles, and dismantle by hand any features that could be used as refuges. Any reptiles found should be recovered by the onsite ecologist and moved to the receptor area.
- 6.11 Vegetation clearance should be undertaken in a phased way to allow reptiles to move out of the area to be cleared:
- The vegetation should be cut directionally, starting on the north-eastern end of the site and moving north-west to encourage reptiles to move away from the development footprint to suitable retained habitat in the north-eastern part of the site as shown in Figure 6.1.
 - The vegetation should be first cut to a height of approximately 15-20 cm.
 - After a period of at least 24 hours from the first cut, the vegetation should be cut to ground level.
- 6.12 Vegetation clearance works should be supervised by an ecologist and undertaken using hand tools only, including brush cutters and strimmers, and piles of cleared vegetation should be removed from the work area and disposed of off-site or in the retained habitat in the north-western part of the site.
- 6.13 The retained habitat should be maintained post-development and appropriately marked immediately after the removal of temporary fencing to prevent access and incidental damage.

REFERENCES

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English Nature (1998) *Translocation of slow-worms – A Species Handbook*.

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

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

FIGURES

Figure 1.1: Location of site

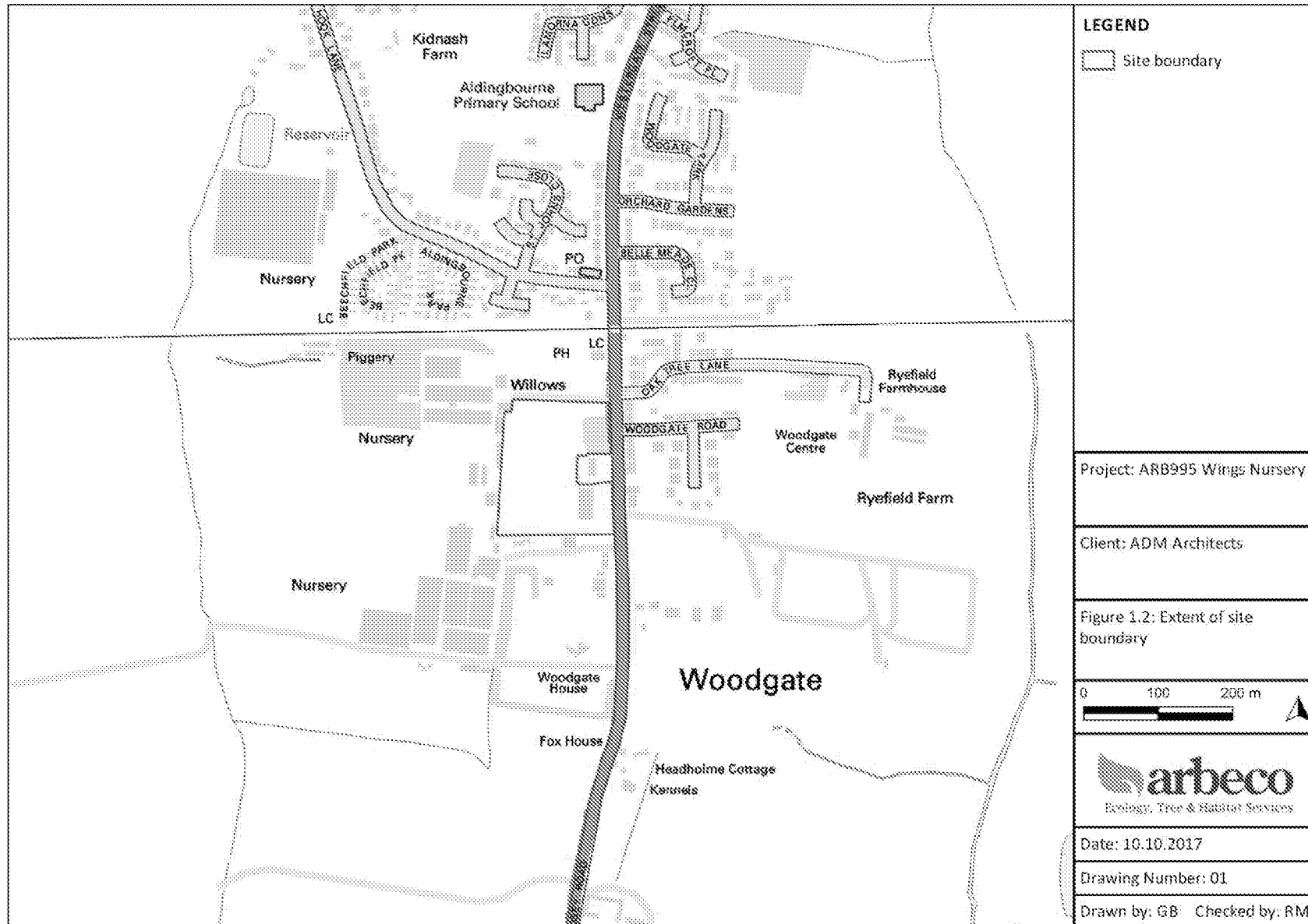
Figure 1.2: Extent of site boundary

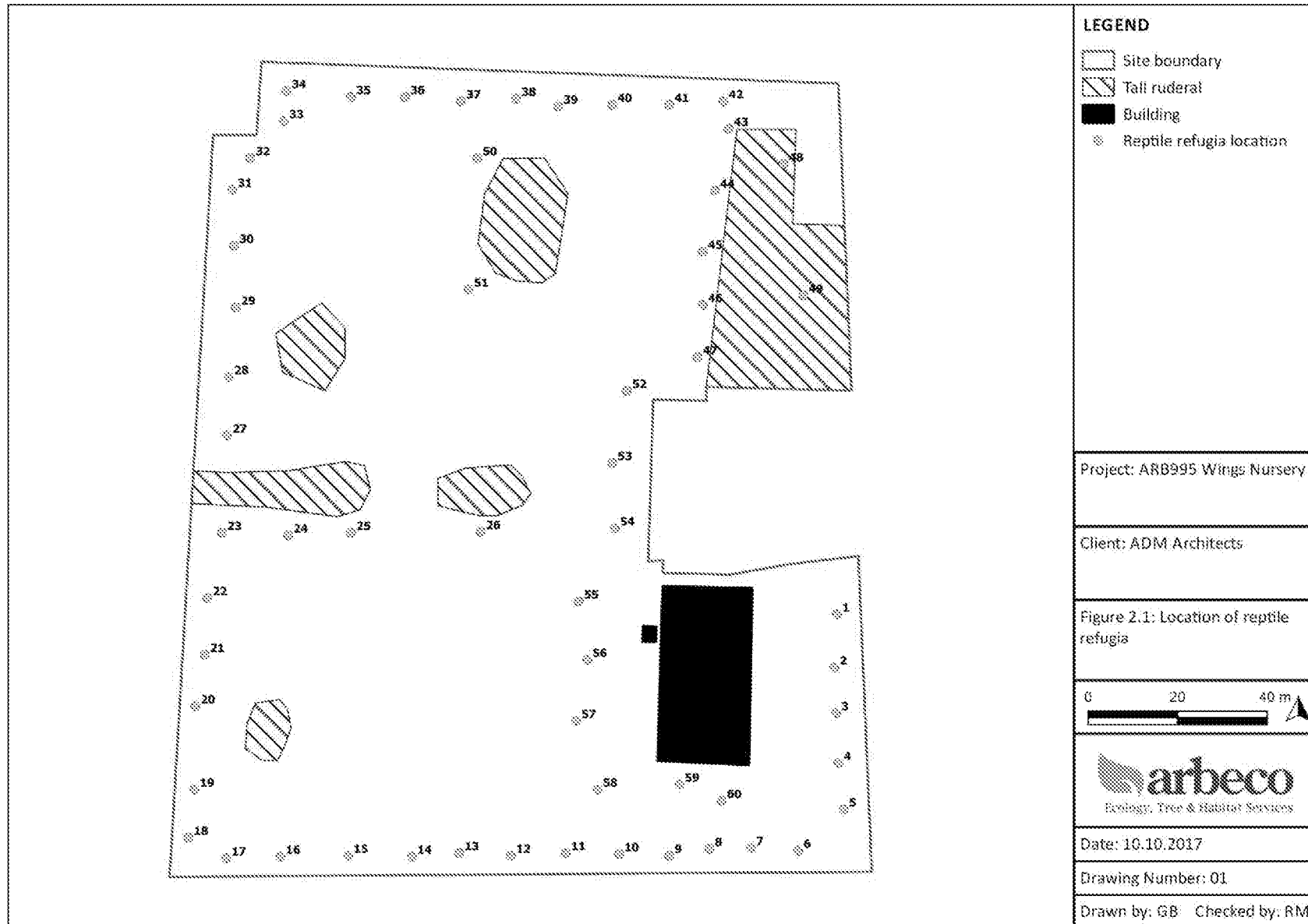
Figure 2.1: Location of reptile refugia

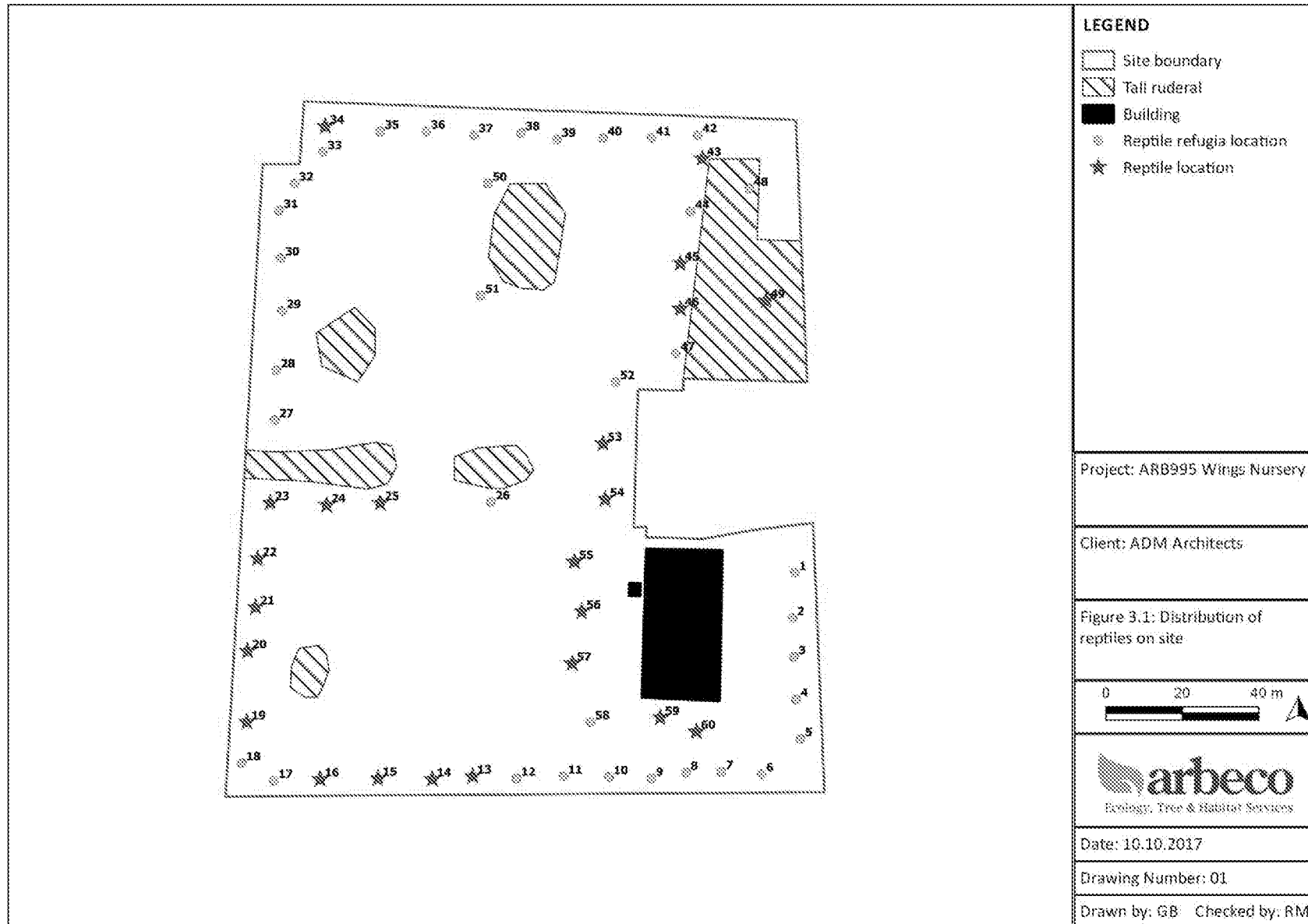
Figure 3.1: Distribution of reptiles on site

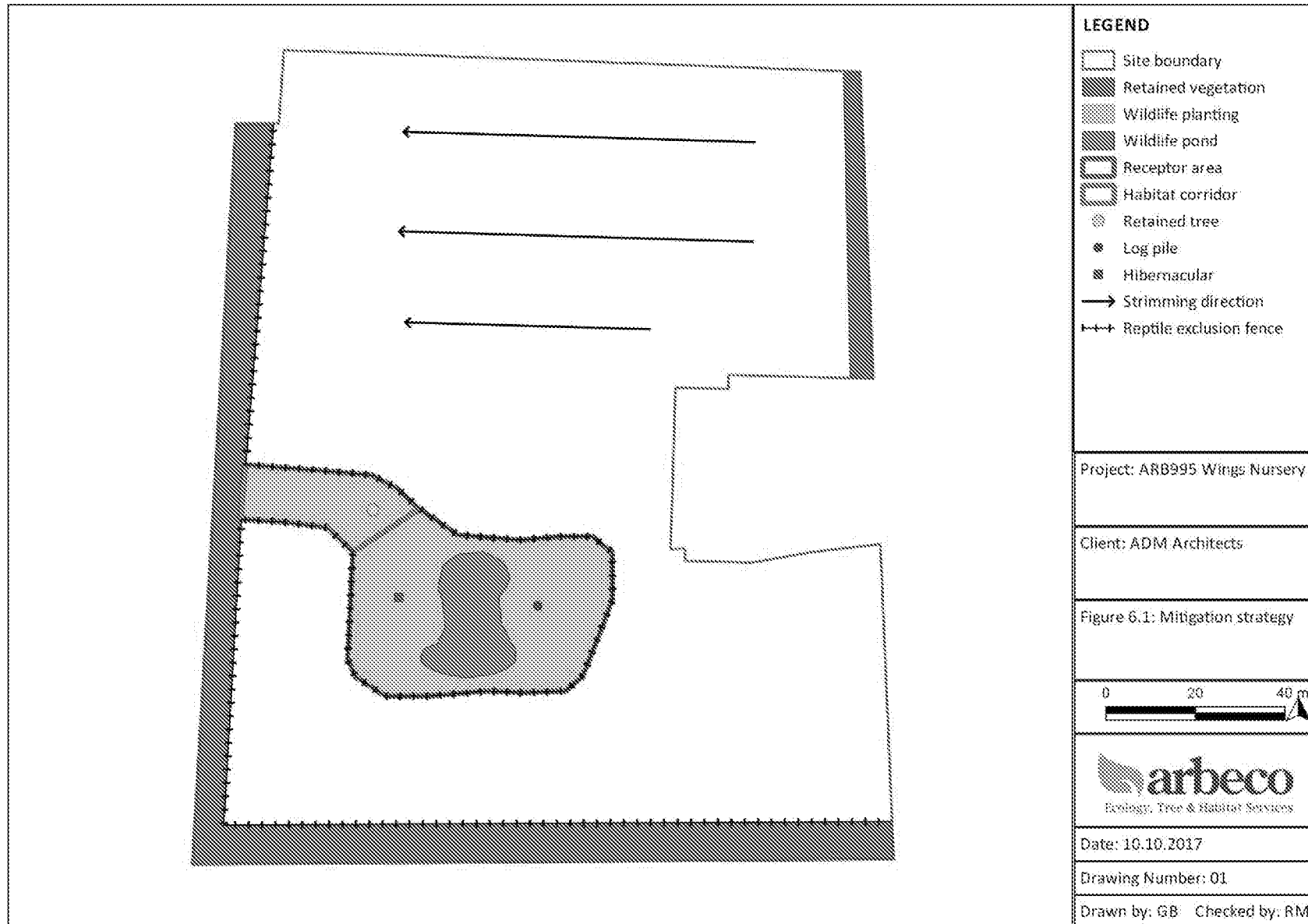
Figure 6.1: Mitigation strategy











APPENDIX A Wildlife Legislation

The Wildlife and Countryside Act 1981 (as amended)

Schedule 1

Applies to all wild birds where it is an offence:

- to take, damage or destroy a nest whilst it is being built or in use;
- to kill, injure or take any wild bird (subject to certain exceptions); and
- to take or destroy the egg of any wild bird.

It is also an offence to disturb any wild bird listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended):

- while it is nest building;
- at a nest containing eggs or young; and
- to disturb the dependant young of any such bird.

Schedule 5

For animals fully protected under Schedule 5 which includes the smooth snake, sand lizard and natterjack toad. It is an offence:

- to intentionally kill or injure or take these species;
- to intentionally or recklessly damage or destroy or obstruct access to any structure or place which a species uses for shelter or protection, at any time even if the animal is not present; and
- to intentionally or recklessly disturb whilst it is occupying a place which it uses for shelter or protection.

Adder, grass snake, common lizard and slow worm are protected from being killed or injured and the white-clawed crayfish is protected from being taken.

Schedule 8

Specific species of plants listed in Schedule 8 are protected. It is an offence: to intentionally pick, uproot or destroy a wild plant listed in Schedule 8.

Schedule 9

Invasive non-native species are listed under Schedule 9. It is an offence:

- to plant or otherwise cause to grow in the wild.

If soils are contaminated by invasive non-native plant species it becomes classified as 'controlled waste' under the Environmental Protection Act 1990 (England, Wales & Scotland), and must be disposed of accordingly.

The Conservation of Habitat and Species Regulations 2010

Schedule 2 applies to all European Protected Species (EPS) which included all bat species, great crested newts, dormice, otters, sand lizards, smooth snake and natterjack toad. The protection afforded is overlapping but separate from the Wildlife and Countryside Act (1981), as amended.