

THE LILLIES YAPTON RD BARNHAM

ECOLOGICAL MITIGATION AND ENHANCEMENT STRATEGY



Ecology
Archaeology
Arboriculture
Landscape Architecture



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1.0 EXECUTIVE SUMMARY

- 1.1 This document is intended to be submitted to clear condition 16 of outline planning permission Application Ref: BN/32/15/OUT for the erection of 38 No. dwellings including open space, landscaping & new access.
- 1.2 On 23.06.17, ACD Environmental Ltd updated a previous ecological survey carried out by Ethos Environmental Planning in May 2015.
- 1.3 The site comprises a 1.12-hectare former caravan park. The site currently contains a mixture of hardstanding, disturbed ground, spoil heaps, trial excavation pits, ruderal vegetation and grassland.
- 1.4 Despite no evidence of reptiles previously being found, a shed slow worm skin was found during the updated walkover survey. On-site habitats for slow worms were largely restricted to small pockets of grassland in the south of the site. Common species of reptiles are protected against killing and injury only. Given that the site has outline planning permission, we do not advocate a full reptile survey or a programme of trapping. We do advocate a controlled programme of reasonable avoidance measures (RAMs), by way of habitat manipulation by progressive strimming, and sensitive excavation, to disperse reptiles from the construction footprint and avoid any harm. A toolbox talk has also been provided.
- 1.5 No other evidence of protected species was found on site. Other precautionary measures will be used to prevent any harm to wildlife, including covering up excavation pits to prevent badgers becoming trapped, and checking for nesting birds prior to any work to hedgerows.
- 1.6 This document includes a scheme of ecological enhancements, including provision of bird nesting and bat roosting boxes, in conformity with the NPPF, which encourages new developments to provide net gains for biodiversity.

2.0 INTRODUCTION, CONTEXT AND PURPOSE

Introduction

2.1 In June, 2017, ACD Environmental Ltd was commissioned by Matthew Homes to carry out an ecological walkover survey and scheme of enhancements for a parcel of land at The Lillies, Yapton Road, Barnham (OS site centre Grid Ref SU 96376 04015), hereinafter referred to as the Application Site.

2.2 The Application Site comprises a former caravan park, which has outline planning permission (Application Ref: BN/32/15/OUT) for all matters reserved for the erection of 38 No. dwellings including open space, landscaping & new access.

Context

2.3 The report has been produced to discharge planning condition 16 which states:

'Prior to the commencement of construction works on each phase of the development of any preparatory works a detailed ecological enhancement scheme (which shall include the installation of bat boxes throughout the site) shall be submitted to the LPA for approval and will be based on the recommendations within the supporting ecological statement and as appropriate. All approved details shall then be implemented in full and in accordance with the agreed timings and details'

Purpose

2.4 The purpose of this assessment is to:

- Identify any changes in ecological baseline findings that could result in potential harm to protected species without appropriate mitigation in place.
- Provide a scheme of ecological enhancements in conformance with the NPPF.

3.0 METHODOLOGY

Names and qualifications of surveyors

3.1 The survey was carried out by Daniel Wood (MCIEEM) of ACD Environmental. Daniel is a Principal Ecologist for ACD Environmental and oversees all work carried out by the ACD Environmental team. Daniel has 10 years' experience working for commercial consultancies and specialises in European Protected Species legislation and mitigation. Daniel holds Natural England Class Licences for bats, great crested newts, hazel dormice and barn owls. Daniel has extensive development project experience, on sites of varying sizes from individual dwellings to strategic land allocations involving a wide range of issues. He has experience of projects from pre-acquisition, planning applications, Preliminary Ecological Appraisal (PEA), Ecological Impact Assessment (EclA), Environmental Statements (ES) for EIA, and Appropriate Assessment (AA).

Habitat Survey

3.2 The Application Site was surveyed on 23rd June 2017 using the Joint Nature Conservation Committee (JNCC) Phase I habitat survey methodology¹. This 'extended' Phase I technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail. The vegetation present was clearly visible and allowed an accurate assessment to be made.

3.3 Using the above method, a relative comparison of the Application Site was made, with due regard to the ecological baseline recorded by Ethos Environmental Planning in May 2015.

Fauna

3.4 Incidental records of fauna were made during the survey and the habitats were evaluated for their potential to support legally protected species and other species of conservation concern, including UK Biodiversity Action Plan Priority species.

¹ JNCC, (2010), *Handbook for Phase 1 habitat survey - a technique for environmental audit*. JNCC, Peterborough.
ACD Environmental

4.0 RESULTS AND EVALUATION

Survey Results

Habitats

4.1 The site supports the following habitats:

- Buildings and hard standing;
- Bare ground;
- Semi-improved Grassland
- Ruderal vegetation; and
- Hedgerows.

4.2 The habitats were previously described in the Ecological Appraisal by Ethos Environmental Planning (2015) as a mosaic of hard standing, static caravans and caravan pitches, a shower block, a garage building, a strip of scrub running west to east through the centre of the site, and grassland (some of which was unmanaged). In the 2015 report, Ethos Environmental Planning commented that previous surveys in 2012 described the grassland as regularly cut, but the grassland had started to become coarse by 2015.

4.3 Following the walkover survey carried out in June 2017 by ACD Environmental, the habitats are largely as previously described, albeit the static caravans have now been removed, along with the majority of concrete hardstanding caravan pitches. The shower block, and garage have also been removed.

4.4 In June 2017, the north of the application site contained a mixture of hardstanding, compacted and bare ground, piles of aggregate and piles of earth (Photographs 1-3). The timber shed still exists (Photograph 4). The recently disturbed ground comprised patches of bare earth, whilst in other areas it was covered with patches of tall ruderal vegetation (Photograph 5).

4.5 The Application Site contained some unmanaged grassland in the southern section (Photographs 6 and 7), along with a pile of wood chippings.

- 4.6 A small number (2-3) of trial excavation pits (approximately 1.5 metres wide x 1.5 metres deep) were present central and southern parts of the Application Site.



Photograph 1: Hard standing (north of site)



Photograph 2: Compacted ground (north of site)



Photograph 3: Bare ground (north of site)



Photograph 4: Timber shed



Photograph 5: Ruderal vegetation and undulating ground (north of site)



Photograph 6: Grassland (south of site)



Photograph 7: Grassland (south of site)



Photograph 8: Grassland and wood chippings (south of site)

Fauna

- 4.7 For ease of reference, descriptions of the fauna have been described alphabetically, below.

Reptiles

- 4.8 During the survey, one slow worm slough (shed skin) was found in the grassland. This indicates that slow worms are present in the Application Site, however given the historic management, it is reasonably likely that only small numbers of reptiles have colonised areas of grassland habitat that have not been disturbed by management operations, in the intervening period since the site has ceased to function as a caravan site.



Photograph 9: Slow worm skin

- 4.9 The Developer has an obligation to protect reptiles during construction. Common reptiles are protected against killing and injury, as stipulated in the Wildlife and Countryside Act 1981 (as amended). Common reptile habitat is not protected in its own right. Given that the Application Site has outline planning permission, the most appropriate way to prevent harm to reptiles is considered to be habitat manipulation rather than trapping, which is outlined in the Mitigation section.

Nesting birds

4.10 The strip of scrub as previously described in 2015 by Ethos Environmental Planning has since been cleared. The Application Site contains boundary hedgerows. Should any hedgerows need to be cut back to facilitate development, obligations in regard to nesting birds (which are protected under the Wildlife and Countryside Act) will be followed (outlined in the Mitigation section).

5.0 LEGISLATION AND PLANNING POLICY

5.1 This section summarises the legislation and national, regional and local planning policies, as well as other reference documents, relevant to the baseline ecology results.

Legislation

5.2 Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:

- The Wildlife and Countryside Act 1981 (as amended);
- The Natural Environment and Rural Communities Act 2006.

5.3 Where relevant, the assessment takes account of the legislative protection afforded to specific habitats and species.

Wildlife Legislation

Non-European Protected Species

5.4 Widespread amphibians (including smooth newts, palmate newts, common toad and common frogs) are all protected under the Wildlife and Countryside (WCA) Act 1981 (as amended). It is therefore an offence to trade or sell specimens.

5.5 All wild birds² and their nests are protected under the WCA as amended. It is an offence to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built;
- intentionally take or destroy the egg of any wild bird;
- have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act or

² <https://www.gov.uk/wild-birds-protection-surveys-and-licences>

the Protection of Birds Act 1954;

- have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- use traps or similar items to kill, injure or take wild birds;
- have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations (see *Schedules*); or
- intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Planning Policy

National Planning Policy Framework

5.6 The National Planning Policy Framework³ sets out planning policies on protection of biodiversity and geological conservation through the planning system for local authorities in England. The NPPF outlines the role of the decision maker in considering the requirements of wildlife legislation to protect wildlife.

5.7 The Framework states that the planning system should contribute to and enhance the natural and local environment, by measures including the following:

- 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;
- Establishing coherent ecological networks that are more resilient to current

³ Department for Communities & Local Government (2012). *National Planning Policy Framework*. [Online]. Available at <<http://www.communities.gov.uk/publications/planningandbuilding/nppf>> [Accessed 19th June 2012].

and future pressures; and

- Recognising the wider benefits of ecosystem services.

5.8 The Framework states that when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying principles including the following:

- If significant harm from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated for, or, as a last resort, compensated for, then planning permission should be refused.
- Opportunities to incorporate biodiversity in and around developments should be encouraged.

5.9 The Government Circular 06/2005⁴ accompanies the National Planning Policy Framework and sets out the application of the law in relation to planning and nature conservation in England.

⁴ Office of the Deputy Prime Minister (2005). *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*. [Online]. Available at: < <http://www.communities.gov.uk/documents/planningandbuilding/pdf/147570.pdf> > Accessed: 19th June 2012.

6.0 MITIGATION

Fauna

Bats

6.1 The timber shed in the Application Site has negligible potential for roosting bats, because it has a single-skinned frame and a metal roof, which are generally not suitable for roosting bats. However, given that the shed has been disused for a number of years, which increase the possibility of colonisation by bats, we advocate removal of the roof by hand. In the highly unlikely event that a bat is present, this would reduce the risk of harm.

6.2 Bat boxes will be incorporated into the design of the development to enhance the site for bats.

6.3 The following bat roost provision will be installed into the site:

- 4 x Schwegler 2FE bat shelters which will be fixed to new dwellings (Plots 34, 9 and Flat Block A).

Birds

6.4 The Application Site provides suitable habitat for nesting birds in regards to hedgerows. Any cutting back of hedgerows will be done outside of the nesting bird season where feasible.

6.5 Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). It is recommended that any hedgerow cutting is carried out between October and February when nesting birds are absent. If this is not possible then an experienced ecologist will inspect the hedgerow to confirm absence of nesting birds no more than 48 hours prior to construction.

6.6 The following bird boxes will be installed onto Flat Block A:

- 2 x Schwegler No.11 house martin terraces;
- 2 x Ibstock swift boxes; and

- 2 x Vivaro Pro Woodstone house sparrow nest boxes.

Reptiles

- 6.7 No reptiles were recorded during the 2015 Phase 1 Habitat Survey by Ethos Environmental Planning. Although a Phase 1 Survey does not include a reptile presence/absence survey (which is a separate entity requiring 7 separate visits specifically looking for reptiles), there being some suitable grassland habitats on site, Ethos Environmental Planning did carry out some searching under debris, which did not yield any positive results.
- 6.8 During the 2017 visit, one slow worm slough (shed skin) was found in the southern part of the site within long grassland. Other debris was searched but no other evidence was found. Long grassland is predominantly limited to the southern part of the Application Site.
- 6.9 According to the Ethos report, there was very limited suitable reptile habitat prior to 2014. Since 2014, although some grassland has established in the southern section, a significant portion of the Application Site has been recently disturbed by removal of caravan pitches and buildings, materials storage and excavation pits. Given this, it is considered likely that only small numbers of reptiles are present.
- 6.10 Given the above factors and that the Application Site has outline planning permission, we do not advocate reptile surveys, nor do we advocate a programme of trapping and relocation.
- 6.11 We have outlined Reasonable Avoidance Measures (RAMs), which are sensitive management techniques designed to avoid harm to reptiles during site clearance and construction works.

Reasonable Avoidance Measures (RAMs)

- 6.12 Within the development's construction zone, the following methods of working will be adopted (all of which will be carried out by a reputable environmental contractor experienced in reptile work):

- All clearance of long, tussocky grassland and vegetated spoil heaps will be undertaken when common reptiles are likely to be fully active i.e. during the April

to September period.

- Clearance of logs, brash, stones, rocks or piles of similar debris, will be undertaken with care.
- Clearance of tall grassland will be undertaken using a strimmer or brush cutter with all cuttings raked and removed the same day.
- Cutting will only be undertaken in a phased way which will include cutting vegetation over two consecutive days to a height of no less than 200mm at the first cut, and 100mm at the second cut.
- Following removal of tall vegetation using the methods outlined, remaining vegetation will be maintained at a height of 100mm through regular strimming to discourage common reptiles from returning. Management of the site should be kept up until commencement of construction.
- The final stage of site preparation is a destructive search. This is done by using an excavator with a toothed bucket. Firstly, the top few centimetres of the ground or first layer of rubble should be removed. Following this, larger and deeper excavations can be made. Care should be taken when emptying the bucket in case any reptiles are dug up with the soil.

6.13 During the construction phase measures should be in place to prevent colonisation by reptiles by: managing the grassland in a way that the habitat is unsuitable for reptiles i.e. mowing grassland so it is kept short and keeping materials tidy.

6.14 If reptiles are found works must stop and advice from a suitably qualified ecologist must be sought.

6.15 New wildflower grassland will create foraging opportunities for reptiles. With appropriate management (i.e. leaving the grass to grow long) they would be expected to colonise these habitats over time.

Badgers

6.16 No evidence of badgers was recorded but it is reasonably likely to expect badgers move through the site occasionally. Given this, we would highly recommend

covering the excavation pits up with appropriate materials to prevent any badgers (or other wildlife) becoming trapped. These preventative measures should also be employed during construction.

Hedgehogs

6.17 Areas of scrub and leaf litter within hedgerows should be checked before clearance.

6.18 The creation of log piles and refuge areas within hedgerows on site will enhance the site for hedgehogs. It is recommended that the garden should include features to allow the movement of wildlife between gardens. This can either be achieved by raising close board fencing above the ground or by cutting small holes cut in the fencing gravel boards allowing access for small wildlife such as hedgehogs.

6.19 With the above mitigation measures the impacts will be positive.

7.0 CONCLUSIONS

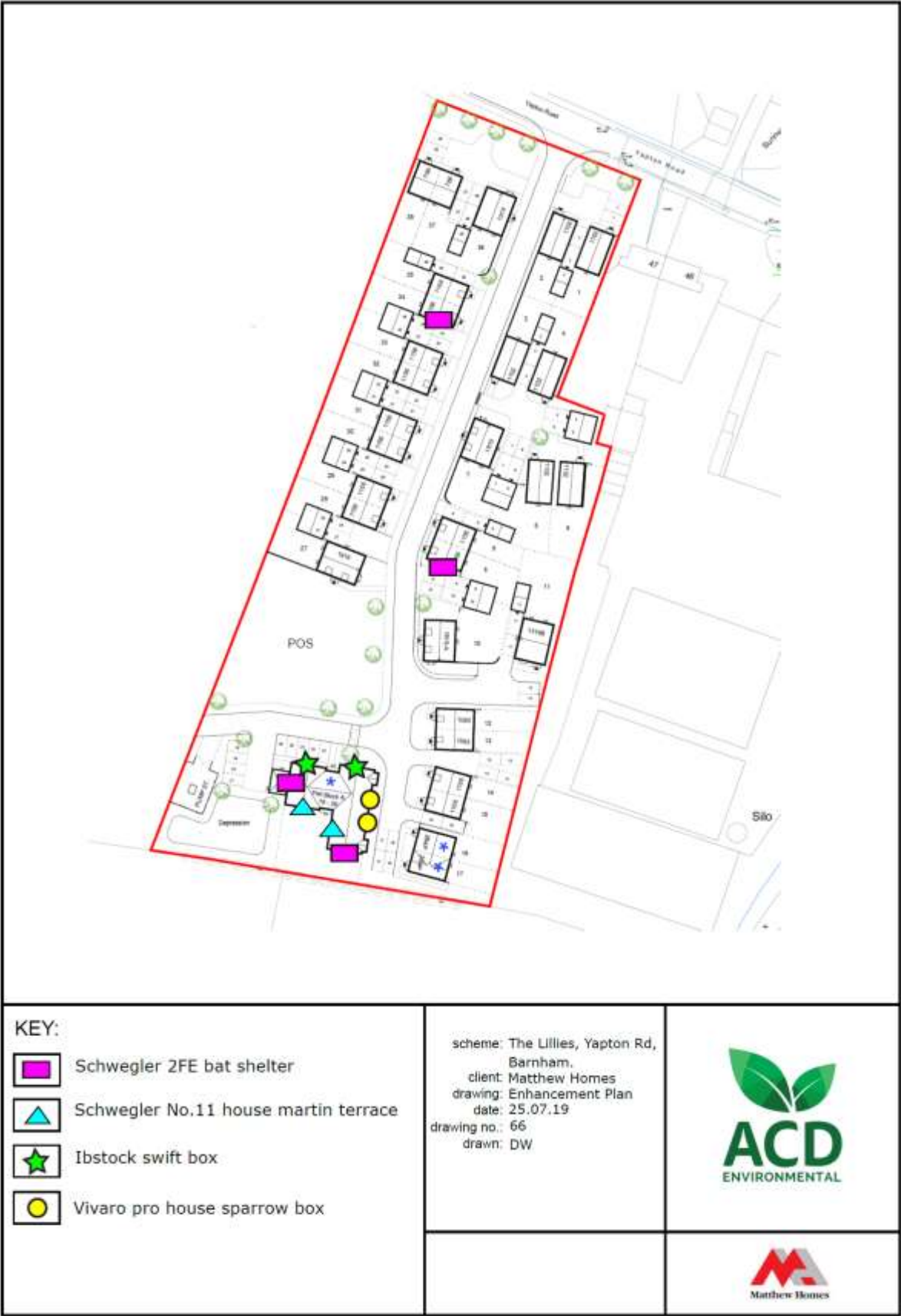
- 7.1 The Application Site contains some suitable reptile habitat and sensitive management to disperse reptiles to avoid harm is outlined in this document.
- 7.2 No badger setts were found on site but appropriate site practice to avoid trapping any badgers that are foraging on site at night should be employed. If mammal holes are discovered on site, an ecologist should be contacted immediately.
- 7.3 Measures to mitigate for impacts have been set out along with recommendations for enhancement of the site's ecological value.
- 7.4 Implementing the recommendations will ensure that there are no significant impacts upon protected species and that the proposals will be in conformity with relevant legislation and policy.

8.0 TIMETABLE FOR IMPLEMENTATION OF MITIGATION MEASURES

Activity	Timing	Comments	Sign/date when completed
Removal of timber shed	Any time of year. If during March-August, check by Ecologist for nesting birds prior to demolition	Remove by hand where possible (low risk of roosting bats)	
Removal of trees/scrub	Ideally September – February. If during March-August, check by Ecologist for nesting birds prior to removal	Leaf litter/piles of vegetation/logs should also be checked for hedgehogs prior to clearance	
Grass cutting	Keep grass low (100mm). Fortnightly cuts between March and September where required	To prevent reptiles from colonising the Site	
Hedgehog-friendly gravel boards	Jan-2020 to July-2021 (during construction of houses)	Installed into all rear garden fences	
Schwegler 2FE bat shelter	Jan-2020 to July-2021 (during construction of houses)	4No. units. Plots 9, 34 and Flat Block A	
Schwegler No.11 House Martin Terrace	Jan-2020 to July-2021 (during construction of houses)	2No. units. Flat Block A.	
Ibstock Swift Box	Jan-2020 to July-2021 (during construction of houses)	2No. units. Flat Block A.	
Vivaro Pro House Sparrow Box	Jan-2020 to July-2021 (during construction of houses)	2No. units. Flat Block A.	

APPENDIX 1

ECOLOGICAL ENHANCEMENTS PLAN



APPENDIX 2: HEDGEHOG-FRIENDLY GRAVEL BOARDS

<https://www.jacksons-fencing.co.uk/News/outdoor-living/new-hedgehog-friendly-gravel-boards-winter-news-topical-treats-and-more-6511.aspx>



<http://www.jarrettfencing.co.uk/product/hedgehog-gravel-board/>



APPENDIX 3: TOOLBOX TALK FOR SITE STAFF

REPTILES

- Small numbers of reptiles are likely to be present in the site, in particular slow worms (a species of legless lizard);
- All site staff will familiarise themselves how to identify slow worms (see Figure 1 and 2 below) and where they can be found;
- Slow worms spend the majority of their time in dense vegetation or underground, including long grass, banks and holes in the soil. Care should be taken during earth excavations because slow worms like to bury themselves in the thatch layer of grass, in rubble and loose earth;
- Slow worms will also hide underneath debris on the ground;
- To prevent any harm to slow worms, dense vegetation including long grass will be strimmed by an experienced environmental contractor over two consecutive days to a height of no less than 200mm at the first cut, and 100mm at the second cut, on warm, dry days when reptiles are active and able to respond immediately;
- All arisings should be removed from the site;
- Prior to construction, the site's vegetation should be managed as a short sward on a regular basis thereafter;
- Turf stripping and excavation of earth during construction, should be done using a machine with a toothed bucket and a banksman. The contractor should be briefed about reptiles prior to starting work;
- If reptiles are discovered at any time by site workers, an appropriately qualified ecologist should be contacted for advice.
- Reptiles should only be handled by experienced people. Slow worms are vulnerable to their tails coming off if handled incorrectly, which can cause damage and undue stress.



Figure 1: Juvenile slow worm



Figure 2: Adult slow worm



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