

**BROOK GARDENS, BARNHAM ROAD,
BARNHAM, WEST SUSSEX**
REPTILE SURVEY/TRANSLOCATION REPORT
OCTOBER, 2013



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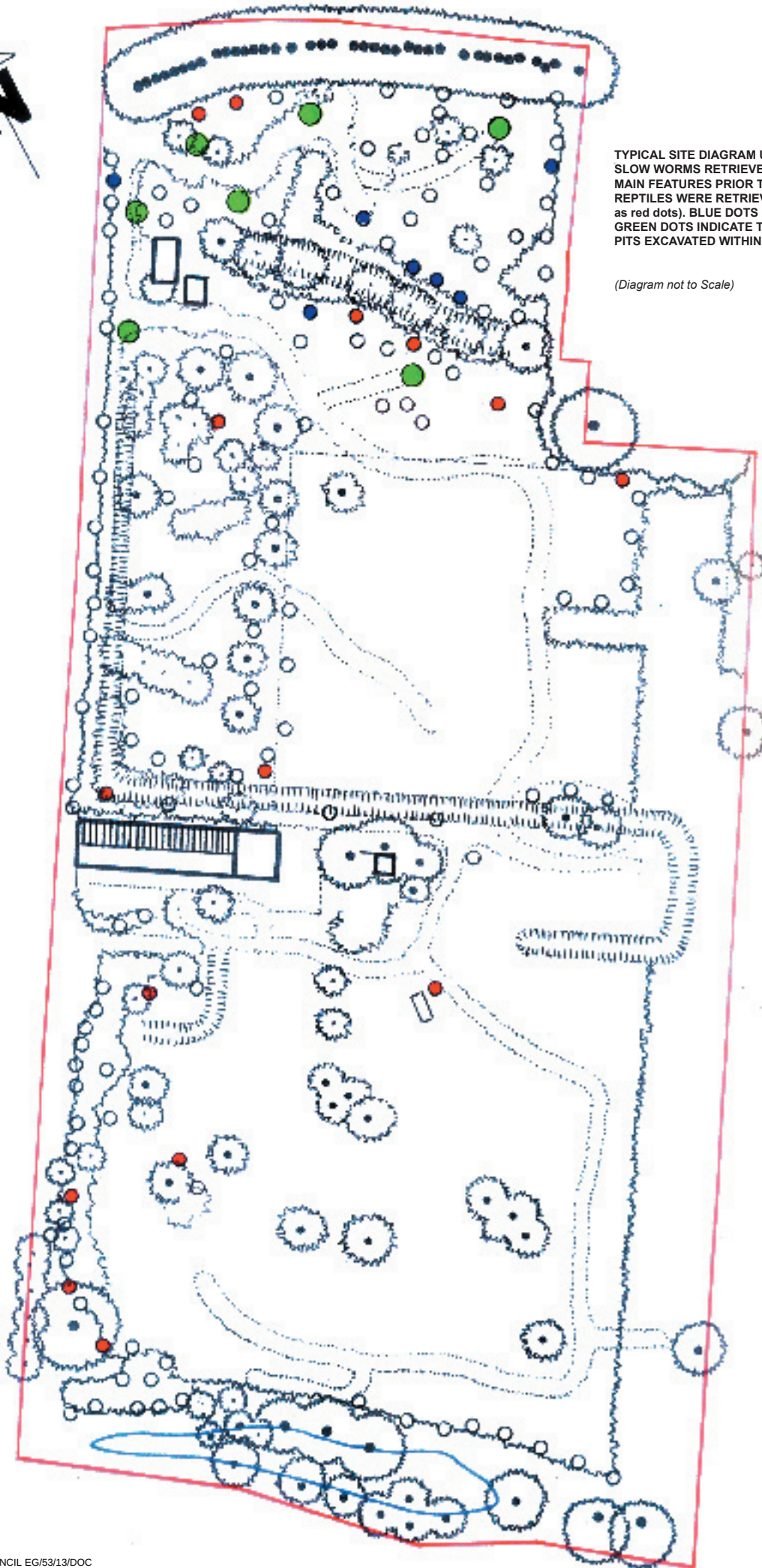


Author	BM	Approved	SL
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TYPICAL SITE DIAGRAM USED FOR THE DAILY SITE CHECKS OF SLOW WORMS RETRIEVED FROM THE DONER SITE SHOWING THE MAIN FEATURES PRIOR TO THE REPTILE DESTRUCTIVE SEARCHES. REPTILES WERE RETRIEVED FROM THE ARTIFICIAL REFUGIA (Shown as red dots). BLUE DOTS INDICATE SMALL MAMMAL ACTIVITY. GREEN DOTS INDICATE THE LOCATIONS OF THE SOIL SAMPLING PITS EXCAVATED WITHIN THE FRONTAGE OF THE SITE.

(Diagram not to Scale)

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TOP: A VIEW OF THE RUDERAL VEGETATION WITHIN THE FRONTAGE OF THE BROOK GARDENS SITE TYPICAL OF THAT FOUND THROUGHOUT THE SITE PRIOR TO THE REPTILE DESTRUCTIVE SEARCHES BEING CARRIED OUT WITH A MACHINE.
 ABOVE: A VIEW OF A SECTION OF THE WEST HARTING DOWN RECEPTOR SITE FROM THE WOODLAND EDGE SHOWING THE EXTENT OF VEGETATION AND THE TREE LINE ALONG THE WESTERN BOUNDARY.

1.0 INTRODUCTION/PURPOSE OF THE REPORT

1.1 BACKGROUND DETAILS

- 1.1.1 Brian Masterton, a Wildlife Consultant with many years of experience in dealing with protected species issues including reptiles and mammals, was instructed in August, 2013 by Julian Jones and Gary Webster of Barratt David Wilson Southampton to carry out reptile activity surveys of the site known as Brook Gardens, Barnham Road, Barnham, West Sussex (Grid Reference: 9530 0475), (the doner site), and to undertake the translocation of reptiles from this site to West Harting Down, (the receptor site), with the agreement of Stan Abbott of the Forestry Commission, Lyndhurst. The surveys were followed by the capture and translocation of slow worms from the doner site to the receptor site and then destructive searches for reptiles and small mammals were undertaken prior to soil sampling pits and archeological trenches being excavated and further destructive searches being undertaken by machines to ensure that ground dwelling species were not subjected to harm during these processes. Internal and external inspections of the delapidated former packing shed were also carried out to confirm the absence of protected species which included bats, owls and common bird species.
- 1.1.2 Surveys were conducted from 13 August, 2013 which confirmed the presence of slow worms (*Anguis fragilis*) in a number of locations within the boundaries of the Brook Gardens site. Grass snakes (*Natrix natrix*) remain present in small numbers and a single common lizard (*Lacerta vivipara*) was also observed within the site. No other species of snakes or lizards were found within the site during the surveys or during the destructive searches. Amphibian species were also found to be absent from the site.
- 1.1.3 The purpose of this Report Document is to confirm the presence of protected reptile species observed during the course of the reptile surveys and to describe the translocation process, including the destructive searches undertaken to ensure the safe removal of the reptiles found on the site. Mammal species including bats, and small mammals and common bird species have also been noted and this report describes the details of the surveys and indicates the locations where reptiles have been found inhabiting the site. A description is also included which details the Methodology used, a description of the doner site and the receptor site, and the process of releasing the translocated specimens retrieved from the doner site into the receptor site.
- 1.1.4 Reptiles such as slow worms in Britain are protected under the Wildlife and Countryside Act against harm and their wellbeing should be carefully considered prior to any change to their existing habitat. This includes any alteration, ground clearance or removal of trees within the site and any subsequent capture and removal of this species which may be considered as part of a mitigation programme for a site that is subject to future development. All reptile species in Britain, including three species of snake and four lizards are protected under current legislation and are deemed to be a material consideration within the planning process. It is therefore considered both a precautionary measure and an element of Best Practice to confirm whether protected species are present or absent from a site due for development prior to alteration or demolition of buildings, ground clearance or the removal of trees, etc. Three of the species of reptiles were found to be present within the site following the initial surveys in August, 2013 and a number of subsequent reptile surveys undertaken throughout August and September, 2013. The adder or northern viper (*Vipera berus*), the smooth snake (*Coronella austriaca*), the green lizard (*Lacerta Viridis*), the sand lizard (*Lacerta agilis*) and the wall lizard (*Podarcis muralis*) have not been discovered on the site during the 2013 surveys, or throughout the destructive searches subsequently undertaken as part of the translocation process.
- 1.1.5 The details of the methodology used, observations from the surveys, the provision of artificial refugia within the sites, the destructive searches undertaken and the results from the site checks/visits, are described within this report document.



SITE DIAGRAM SHOWING THE MAIN FEATURES PRIOR TO THE REPTILE DESTRUCTIVE SEARCHES SHOWING THE LOCATIONS OF ARTIFICIAL REFUGIA (Shown as red dots) PLACED WITHIN THE AREAS WHERE REPTILES WERE FOUND TO BE PRESENT. THE WHITE AREAS COMPRISE THE TALL RUDERAL VEGETATION WITH THE PATHWAYS ALSO SHOWN. WITH THE EXCEPTION OF THE EARTH BUND IN THE CENTRE OF THE EASTERN BOUNDARY, WHERE TWO SLOW WORMS WERE RETRIEVED DURING THE DESTRUCTIVE SEARCHES, NO REPTILES WERE FOUND ALONG THE EASTERN BOUNDARY.

(Diagram not to Scale)

2.0 THE DONER SITE

2.1 DESCRIPTION

- 2.1.1 The site extends south beyond a row of mature Leyland Cypress (*Cupressocyparis leylandii*) trees which forms the northern boundary and faces onto the A2024 Barnham Road. The site is flat and has comprised a disused nursery abandoned over forty years ago and left in a derelict condition whereby general scrub and tall ruderal vegetation has become established within formerly well cultivated soils rather than being previously natural habitat. This may have a bearing upon the small numbers of ground dwelling species found to be present, relative to the size of the site, which includes three species of small mammals and limited numbers of reptiles which includes slow worm and small numbers of common lizard and grass snake.
- 2.1.2 The site has comprised a number of access pathways previously cut at ground level from the tall ruderal vegetation which has previously been considered to be of limited ecological value and which has formerly covered much of the site. A number of earth bunds have previously been located throughout the site and a small area was colonised by Japanese Knotweed (*Fallopia Japonica*) which was located to the west of the delapidated former packing shed. There were two small areas of low grade asbestos in the form of broken corrugated roofing panels which had been previously dumped.
- 2.1.3 Access to the site is from a double gate from the north west corner of the northern boundary onto the A2024 adjacent to the row of tall Leyland Cypress trees.
- 2.1.4 The surrounding areas beyond the northern, western and eastern boundaries mainly comprise established residential development with the commercial nursery adjacent to the site towards the north west.

2.2 THE FLORA ON-SITE

- 2.2.1 Tree and shrub cover, which was dominated by Elder throughout the site included:

Blackthorn	<i>Prunus spinosa</i>	Holly	<i>Ilex aquifolium</i>
Common Hawthorn	<i>Crataegus nonogyna</i>	Horse chestnut	<i>Aesculus hippocastanum</i>
Elder	<i>Sambucus nigra</i>	Italian alder	<i>Alnus cordata</i>
English oak	<i>Quercus robur</i>	Sweet chestnut	<i>Castanea sativa</i>
Field maple	<i>Acer campestre</i>	Sycamore	<i>Acer pseudoplatanus</i>
Goat willow	<i>Salix caprea</i>	Wild cherry	<i>Prunus avium</i>
Hazel	<i>Corylus avellana</i>		

- 2.2.2 Tall, ruderal vegetation was dominant throughout the site which included:

Burdock	<i>Arctium sp.</i>	Prickly sow-thistle	<i>Sonchus asper</i>
Common comfrey	<i>Symphytum officinale</i>	Square-stalked	<i>Hypericum tetrapterum</i>
Common mallow	<i>Malva sylvestris</i>	St. John's-wort	
Common nettle	<i>Urtica dioica</i>	Stinking iris	<i>Iris foetidissima</i>
Common ragwort	<i>Senecio jacobaea</i>	Teasel	<i>Dipsacus sylvestris</i>
Dark mullein	<i>Verbascum nigrum</i>	Thistle	<i>Cirsium arvense</i>
Field forget-me-not	<i>Myosotis arvensis</i>	Thistle	<i>Cirsium vulgare</i>
Figwort	<i>Scrophularia sp.</i>	Tutsan	<i>Hypericum androsaemum</i>
Great mullein	<i>Verbascum thapsus</i>	Willowherb	<i>Epilobium sp.</i>
Ground ivy	<i>Glechoma hederacea</i>	Wood avens	<i>Geum rivale</i>
Pendulous sedge	<i>Carex pendula</i>		



TOP: A VIEW OF THE EASTERN AND SOUTHERN ELEVATIONS OF THE DELAPIDATED FORMER PACKING SHED SHOWING ITS CONDITION PRIOR TO DEMOLITION.

ABOVE: A VIEW OF THE SOUTHERN ELEVATION OF THE TWO-STOREY BUILDING AND THE SURROUNDING RUDERAL VEGETATION.

INSET TOP: A VIEW OF PART OF THE COLLAPSED INTERIOR.

INSET ABOVE: SOME OF THE TAWNY OWL PELLETS FOUND ON THE FIRST FLOOR NEAR THE EASTERN ELEVATION.

2.3 THE BUILDINGS ON-SITE

- 2.3.1 There are three small structures located near the frontage and near the centre of the site to the eastern side of the two-storey former packing shed which comprise a delapidated wooden building and two brick and block-built former toilet blocks also in a derelict condition. The toilet block located to the eastern side of the former packing shed has a number of low grade corrugated asbestos roofing panels placed vertically to the western side. None of these structures have protected species issues associated with them.
- 2.3.2 The two-storey former packing shed is brick-built and comprises a pitched roof of translucent fibre glass with the roof section towards the eastern end having collapsed through the upper floor to the base of the building. The windows and doors to this structure have been sealed with cemented breeze blocks but the building was accessed by way of a small entry through the brickwork near the western end of the northern elevation. The building had not previously been assessed for the presence/absence of protected species, although suggestions have been made that it had 'potential' for bat roosting and was considered to be occupied by barn owl (*tyto alba*) although no confirmation of the presence of barn owls had been confirmed during previous surveys. The building was accessed on a number of occasions during the 2013 Surveys from 20 August while strimming was being undertaken. The building was also accessed by Steve Akehurst of Barratt David Wilson Southampton and a colleague during a site inspection carried out on Thursday, 10 October.
- 2.3.3 Following the inspections externally and internally of the former packing shed, using high powered torchlight within the building to check the upper timberwork and flooring for signs of bat droppings, etc. it was assessed as not being previously occupied by bats or barn owls. No signs of droppings or any other signs of bat occupation were found within either the ground floor or the upper storey. The translucent roof is likely not to be conducive to bat roosting although old owl pellets were found on the upper wooden floor near to the eastern end of the building during the inspection on 20 August, 2013. Upon further examination the pellets were confirmed to be that of a tawny owl (*Strix aluco*) but the building was not in current use by any protected species.





TOP: A VIEW OF THE UPPER FLOOR INTERIOR OF THE DELAPIDATED FORMER PACKING SHED WHERE THE ROOF HAD COLLAPSED AT THE EASTERN END OF THE BUILDING.

ABOVE: CUT SHEETS OF ROOFING FELT WERE PLACED AROUND THE SITE FOR MONITORING AND RETRIEVING THE REPTILES.

INSET TOP: ONE OF THE SIX GRASS SNAKES FOUND UNDER THE ARTIFICIAL REFUGIA.

INSET ABOVE: ONE OF THE ADULT SLOW WORMS RETRIEVED FROM THE BROOK GARDENS SITE AND TRANSLOCATED TO THE RECEPTOR SITE AT WEST HARTING DOWN.

3.0 THE SITE SURVEYS

3.1 METHODOLOGY

- 3.1.1 The purpose of the site surveys is initially to carry out visual inspections during daylight hours on a number of occasions and in varying weather conditions of all the features of the site particularly the areas of tall ruderal vegetation, the shrub cover along the boundaries and the wooded margins, etc. for evidence of reptile activity. In addition, searches for the presence of other species was also undertaken. A general mammal survey was conducted as part of the initial reptile surveys whereby the presence of foxes, roe deer and small mammals were confirmed. Bat and owl activity was not evident within the upper timberwork of the detached two-storey delapidated former packing shed when inspected internally and externally and none of the trees were found to have bat roost potential during the surveys. The former packing shed was accessed on a number of occasions whereby internal inspections confirmed that bats were not using the building for roosting or resting while out foraging in the area, although bats are thought to feed along the boundary tree canopies and around the nearby established residential developments. With the exception of a number of old owl pellets found on the flooring in the upper storey of the building, which were confirmed as those from tawny owl, no protected species were found to be currently occupying the building.
- 3.1.2 The site surveys/visits have included systematically searching the entire site by means of walk-over inspections in line with accepted guidelines for signs of reptile, mammal, bird and invertebrate activity, which include noting any signs of ecological interest. Artificial refugia, which comprise cut sheets of roofing felt laid throughout the site where reptiles were considered to be present, were frequently inspected and any reptiles found basking under the refugia were initially noted together with air and ground surface temperatures under the refugia.
- 3.1.3 The initial reptile surveys confirmed the presence of three reptiles which included a small number of grass snakes (*Natrix natrix/helvetica*) (6 specimens), a single common lizard (*Lacerta vivipara*) and a larger number of slow worms (*Anguis fragilis*). All four species were observed either under items of debris or under the artificial refugia placed throughout the site for monitoring and the subsequent capture of slow worms for translocation. Two dead specimens of slow worm were also observed, one on top of a sheet of felt and one on the ground surface near the north side of the former packing sheet having been predated.
- 3.1.4 Once reptiles were found to be present the established method of determining the density of the reptiles was undertaken by laying additional artificial refugia, initially at random within the ruderal vegetation near the frontage of the site and subsequently elsewhere within the shrub margins around the site. The refugia comprise sheets of roofing felt cut to approximately 500 mm x 800 mm. Roofing felt is normally used as it warms more quickly from sunshine than corrugated metal, a material previously used for checking and capturing reptiles but now superseded by the use of roofing felt. Roofing felt gains heat more quickly than the surrounding vegetation, particularly in sunny weather conditions during spring and autumn. The reptiles, being 'cold blooded', migrate from the vegetation to the sheets of roofing felt to warm their bodies under these materials. Once the reptiles have increased their body temperature they may become more active and are able to search for prey within the surrounding habitat. They may also continue to bask under the refugia until temperatures begin to drop during late afternoon or early evening.
- 3.1.5 The refugia are numbered and a diagram is produced showing the main site features including areas of vegetation such as tree and shrub cover, bramble and grassland. The locations of each of the artificial refugia are indicated within the diagram so that accurate records of where each reptile is found basking under the sheets is noted. The data collated includes weather conditions, air temperatures and ground surface temperatures under the refugia, where considered appropriate, and the animals observed basking under the refugia are recorded as Adult Males, Adult Females, Young Adult Males, Young



TOP: A CLOSE-UP VIEW OF AN ADULT SLOW WORM RETRIEVED FROM THE FRONTAGE OF THE SITE DURING THE INITIAL STAGES OF THE DESTRUCTIVE SEARCHES.

ABOVE: AN ADULT MALE SLOW WORM BEING PLACED IN THE CONTAINER. ON-SITE PRIOR TO TRANSLOCATION TO THE RECEPTOR SITE.

INSET TOP: A JUVENILE SLOW WORM FOUND BASKING UNDER ONE OF THE ARTIFICIAL REFUGIA.

INSET ABOVE: ONE OF THE ADULT FEMALE SLOW WORMS WITH A SHORTENED TAIL RETRIEVED FROM THE BROOK GARDENS SITE.

Adult Females, Juveniles and Babies. A note of common lizards and slow worms that have previously lost their tails (A natural process known as *Autotomy* whereby lizards are able to avoid becoming victims of predators by detaching the tail), is recorded in order to gauge levels of attempted predation. Colour variation in individual specimens is also recorded.

- 3.1.6 Following the initial assessment, moving or increasing the number of refugia, confirms whether animals are present in particular locations within the site. When precisely recorded such information provides an accurate indication of numbers of specimens and the locations where the animals prefer to bask.
- 3.1.7 The techniques used are based where relevant on those recommended by The Herpetofauna Groups of Britain and Ireland: *Evaluating local mitigation and translocation programmes; maintaining best practice and lawful status* and on a considerable number of years of experience of studying reptiles and other species in their natural habitat and undertaking numerous reptile translocation programmes. This ensures that the most credible and accurate data is recorded and all aspects and processes are carried out to the highest standards when dealing with reptiles, particularly their wellbeing, and to ensure that lawful status is maintained at all times.
- 3.1.8 Experience in reptile translocation has confirmed that some aspects of the guidelines are not always relevant to particular issues related to a site as each site is different and may have varying habitat issues or even have certain constraints associated with the site. Site specific issues require close attention to detail and intensive or long term monitoring may alter the detail of a particular project.
- 3.1.9 It should be noted that reptiles can be found basking under artificial refugia in wet weather conditions when skies are dull and overcast and that it is not necessary to restrict the monitoring of reptiles to sunny weather which is often wrongly referred to as 'suitable dry weather conditions' within the guidelines. One young female slow worm was found late on the evening of 11 June, 2013 basking on pond weed at the edge of a pond on a site in Bordon in Hampshire. It was observed entering the water and disappearing quickly beneath the surface water when an attempt was made to photograph the specimen. It is in fact ground surface temperatures under the refugia that are relevant to the presence or absence of reptiles. There are no specific times during the day that reptiles may be absent or less likely to be found within suitable habitat. Weather patterns constantly change and the warmth from the sun may alter frequently hour by hour throughout the day. Some refugia will be found at times in shaded, or partially shaded locations with reptiles basking underneath them while reptiles may be absent from refugia placed in sunny locations. Reptiles will bask on occasions from early morning and at any time throughout the day until late afternoon or when evening temperatures begin to fall, contrary to suggestions made within some guidelines.
- 3.1.10 Photography is used to record some of the specimens found during the site visits and other aspects of the survey and monitoring process which also includes recording and photographing the main site features, etc. Identification of some individuals when observed within the site during the surveys, may be relevant as later identification during the post monitoring process or when translocation to a receptor site is undertaken may provide useful additional data.
- 3.1.11 There is always a risk that some form of disruption is carried out during the process of monitoring reptiles using artificial refugia. Nine of the felts were removed overnight within the front section of the site during the initial stages of the monitoring process, presumably by a local resident gaining access to the site through the open gateway or through the western boundary. The potential for human interference is another reason why roofing felt is used as opposed to corrugated metal sheets which when lifted and revealing a reptile basking under the metal, if the sheet is then dropped carelessly this is likely to cause injury or death to the reptile(s) basking under the corrugated metal sheet. Roofing felt is easier to move around a site than metal and is cheaper to replace if taken from a site.



TOP: AN ADULT GRASS SNAKE OBSERVED BASKING UNDER A PIECE OF CORRUGATED METAL SHEETING NEAR THE NORTH WEST CORNER OF THE DELAPIDATED FORMER PACKING SHED DURING THE INITIAL REPTILE SURVEY.
 ABOVE: AN ADULT SLOW WORM WITH A SHORTENED TAIL FOUND UNDER A SHEET OF ROOFING FELT ON THE WESTERN BOUNDARY OF THE BROOK GARDENS SITE.

4.0 THE SURVEY EVALUATION

4.1 THE REPTILES

- 4.1.1 The grass snake (*Natrix natrix/helvetica*), a single common lizard (*Lacerta vivipara*) and slow worm (*Anguis fragilis*) were initially found to be distributed throughout the ruderal vegetation that covered most of the site. Small mammals such as common field vole (*Microtus agrestis*), common shrew (*Sorex araneus*) and wood mice, or long-tailed field mouse (*Apodemus sylvaticus*), were also observed within runs that they had created, or within nests under the artificial refugia.
- 4.1.2 The results of the site checks/visits undertaken during August, 2013 confirmed that there was a number of slow worms scattered throughout the site, and a small number of mainly young adult grass snakes located on the western boundary, and towards the centre of the site.
- 4.1.3 It should be noted that only part of a population of reptiles will be found during an initial survey or during subsequent site checks/visits for checking refugia on any given day. Consideration of factors such as weather conditions (although it should be noted that slow worms will be present in wet weather providing that the air temperatures and the ground surface temperatures under the refugia remain mild), the quality of the habitat, the number of site checks and the locations and density of artificial refugia, will lead to it being possible to roughly estimate the population of reptiles occupying a particular area.
- 4.1.4 From the site checks/visits and comparisons with other sites comprising similar habitat and from which successful translocation programmes have previously been undertaken, an estimate of numbers of reptiles can also be assessed. This process is undertaken in line with the HGBI Reptile Mitigation Guidelines, and the standards set by way of a considerable number of years of experience with observing reptiles in the wild, and with consideration for the size of the reptile habitat present throughout the site. The highest figure of slow worms recorded was less than twenty specimens on one single day and it therefore would be prudent to assess that there are at least 80-100 slow worms around the site which is considered to be a large population. The numbers of grass snakes was initially 2 specimens on a single day.

4.2 AMPHIBIANS

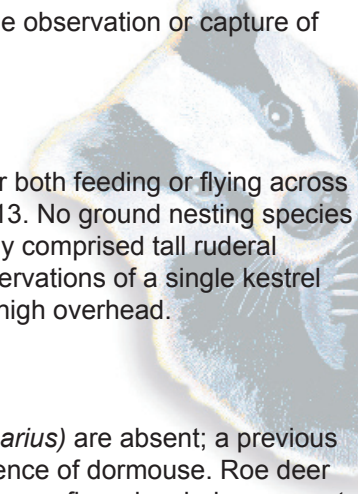
- 4.2.1 Despite the presence of a pond located on the southern boundary, no amphibian species were found anywhere on the site during the surveys or throughout the destructive searches. No adult or juvenile great crested newts (*Triturus cristatus*), were found during the site checks/visits, during 2013. Smooth, or common newts (*Triturus vulgaris*), palmate newts (*Triturus helveticus*), common frogs (*Rana temporaria*) and common toads (*Bufo bufo*) were not observed anywhere around the site during the site checks/visits. These species may be found on occasions under refugia laid for the observation or capture of reptiles.

4.3 BIRDS

- 4.3.1 Common bird species have been observed using the site for both feeding or flying across the site within the boundary tree and shrub cover during 2013. No ground nesting species were present due partly to much of the site having previously comprised tall ruderal vegetation and disturbed surface soil. There have been observations of a single kestrel feeding within the site and buzzards have been seen flying high overhead.

4.4 MAMMALS

- 4.4.1 Badger (*Meles meles*) and Dormouse (*Muscardinus avellanarius*) are absent; a previous nest tube survey conducted in 2011 also confirmed the absence of dormouse. Roe deer (*Capreolus capreolus*), Hedgehog, Fox and Rabbit have been confirmed as being present.





TOP: A VIEW OF THE SOUTH FACING EDGE OF THE BEECH WOODLAND AT THE WEST HARTING DOWN RECEPTOR SITE SHOWING THE GRASSLAND COVER ALONG THE BASE OF THE TREE-LINE.
 ABOVE: A VIEW OF THE GRASSLAND COVER ALONG THE WOODLAND EDGE AT THE RECEPTOR SITE WHERE ARTIFICIAL REFUGIA HAVE BEEN LAID FOR THE PURPOSES OF MONITORING THE TRANSLOCATED SLOW WORMS FROM THE BROOK GARDENS SITE.

5.0 THE RECEPTOR SITE

5.1 DESCRIPTION

- 5.1.1 The Receptor Site, which was previously chosen for the translocation of the slow worms from Brook Gardens, Barnham is a woodland site on calcareous soils at West Harting Down, managed by The Forestry Commission and located within the South Downs, south west of the village of South Harting. The site is accessed from the B2146 Petersfield to South Harting Road from a narrow lane leading west towards Old Ditcham Farm where it turns south and heads up towards the downs and Sunwood Farm. At this point a track, which forms a section of the South Downs Way to Hundred Acres, leads in an easterly direction to a footpath through the edge of a beech woodland to the top of West Harting Down.
- 5.1.2 A section of the woodland has been cleared and there is now natural regeneration bordered by shrub and grassland cover and woodland edge. The open habitat and grassland cover to the base of the woodland edge and natural shrub margins forms viable habitat for reptiles, although natural colonisation by reptiles is in the early stages. The initial surveys prior to translocation confirmed the presence of similar plant species within ruderal vegetation as that within the donor site and small mammals and common toad were found to be present which may indicate that other amphibian species may also to be present.
- 5.1.3 The site provides natural features and shrub and grassland cover along the woodland edge suitable for reptiles and artificial refugia were placed along the margins within the grassland cover to allow for monitoring the translocated reptiles as they migrated out into the wider habitat. The felt sheets are to be left over the coming winter months to allow small mammals to use for their runs and any nesting by field voles during the early winter and for invertebrate species to use for shelter.





TOP: A VIEW OF PART OF THE SOUTH FACING EDGE OF THE BEECH WOODLAND AT THE WEST HARTING DOWN RECEPTOR SITE SHOWING THE GRASSLAND COVER EXTENDING OUT INTO THE AREA PREVIOUSLY CLEARED OF TREES.
 ABOVE: AN ADULT COMMON TOAD (*Bufo bufo*) OBSERVED UNDER ONE OF THE FELTS LAID ALONG THE WOODLAND EDGE FOR MONITORING THE TRANSLOCATED SLOW WORMS.
 INSET TOP: THE CONTAINER WITH TRANSLOCATED SLOW WORMS PLACED NEAR TO THE FELT SHEET USED FOR THEIR RELEASE.
 INSET ABOVE: A BABY SLOW WORM BEING RELEASED UNDER A FELT SHEET AT THE RECEPTOR SITE AT WEST HARTING DOWN.

6.0 THE RECEPTOR SITE

6.1 METHODOLOGY

- 6.1.1 Having received confirmation that the Receptor Site at West Harting Down had been agreed with the Forestry Commission and permission for access had been granted, initially ten cut sheets of roofing felt were placed along the woodland edge for use as artificial refugia. The felts were subsequently inspected in line with the surveys undertaken within the Doner Site at Brook Gardens, Barnham. This was followed by placing additional felt sheets along the western shrub-line adjacent to the pathway and grassland strips in preparation for the release of slow worms to be retrieved from the doner site.
- 6.1.2 The same process as that used on the doner site of checking the artificial refugia was carried out. Each felt sheet was lifted in turn and any reptiles or amphibians found basking under the felts recorded. Photographs were taken of the site and the surrounding area and of any signs of ecological interest.
- 6.1.3 On each occasion when reptiles were transported to the site the container was placed on the ground near to the artificial refugia selected for the release of the reptiles. The foliage placed on top of the soil in the base of the container was placed under the artificial refugia. The reptiles were then carefully lifted out of the container and counted and individually inspected, some specimens were photographed before being released into the ground cover under the artificial refugia and observed moving into the undergrowth. The earth from the container was also placed under the felt sheet and the sheet was then replaced in position.
- 6.1.4 During subsequent site visits to release translocated specimens, the artificial refugia along the woodland edge were inspected to check the level of migration of the slow worms previously released. Within two days specimens were appearing under refugia placed forty paces away from the felt used for release. Further monitoring will take place during the spring of 2014, after emergence from hibernation, and into the summer, to record the success rate of the translocated slow worms and to check for other species that may appear within the established grassland margins. Data will be recorded and further reports will be produced as part of the translocation programme.





TOP: A VIEW OF PART OF THE CENTRE OF THE BROOK GARDENS SITE SHOWING AN AREA STRIMMED TO ABOVE GROUND LEVEL AS PART OF THE INITIAL STAGES OF THE TRANSLOCATION PROCESS.

ABOVE: A VIEW OF THE MACHINE PLACED ON AN AREA OF CLEARED GROUND BEING USED TO RAKE THE SURFACE VEGETATION WITH CONTAINERS PLACED NEARBY IN READINESS TO RETRIEVE ANY SLOW WORMS THAT MAY STILL BE PRESENT.

INSET TOP: THE TOOTHED BUCKET BEING USED TO RAKE THROUGH THE SURFACE VEGETATION WHILE A CHECK IS MADE FOR REPTILES.

INSET ABOVE: AN AREA OF EXPOSED SOIL AFTER BEING CLEARED BY THE MACHINE.

7.0 THE DESTRUCTIVE SEARCH

7.1 METHODOLOGY

- 7.1.1 Following the results from the inspections of the artificial refugia initially placed within the frontage of the site, to the south of the shrub and tree covered bund and throughout the eastern, western and southern margins of the site, strimming of the tall ruderal vegetation to above the ground surface was then undertaken in stages. This was carried out by experienced tree surgeons under supervision in order to prevent harm to both reptiles and small mammals that had been observed under the artificial refugia and from other observations within the site. As sections of the site were strimmed additional artificial refugia were then placed within the strimmed areas to observe the reptiles basking under the sheets of felt, and thus determine where the reptiles were concentrated. A diagram was produced showing the locations where the refugia were placed and where individual specimens were counted and recorded and where reptiles were retrieved during the translocation process.
- 7.1.2 Slow worms were subsequently retrieved from the refugia where they were found basking by carefully grasping them by the upper body. This is important as attempting to grab a moving slow worm, or other lizard, may force it to detach its tail which is unnecessary when handling these creatures. The captured slow worms were then placed within a deep open container which had loose soil placed in the bottom with vegetation taken from the site which was placed on top of the soil. Slow worms placed in the container will initially lay within the vegetation and may also move into the soil during transportation to the receptor site. The process used ensures that all the slow worms retrieved remain calm and are not harmed and that stress is kept to the absolute minimum prior to their release under refugia previously placed within the receptor site. Upon their release the slow worms were again inspected and counted and the time and location of their release is recorded.
- 7.1.3 The next stage is the process known as a Destructive Search. This is undertaken using a machine with a driver who preferably is experienced in this process. The machine is fitted with a toothed bucket and positioned on previously cleared ground. The bucket is used initially to slowly rake through the taller vegetation. This process and the natural vibrations from the machine will normally ensure that any animals present in the surface vegetation will tend to move away safely. A wildlife expert, preferably with a number of years of experience with dealing with reptiles and amphibians should be present at all times with the machine driver ready to stop the machine should any animal be seen as the machine is then used to rake through the surface soil. Following raking through the surface vegetation the toothed bucket is then used to slowly rake through the surface soil while the wildlife expert checks each movement of the machine's bucket in readiness to stop the machine should an animal be discovered in the surface soil. Upon completing this process the toothed bucket is then used to rake deeper into the surface soil and is then used to create a pile of vegetation and soil which is placed on the already cleared ground nearby. The cleared surface soil behind the machine and the piles of vegetation are checked a second time to ensure that no animals remain in these materials.
- 7.1.4 The process is continued with the wildlife expert continuing to check progress through the surface soil. All reptiles that come to the surface are retrieved carefully and placed safely in the open container, and the animal and the location where it is found is recorded. The process continues a section at a time working towards the rear of the site so that any animals initially disturbed by the movement and vibrations of the machine, or the movement of the soil, migrate towards areas of the site where the surface vegetation is deliberately left undisturbed for animals that may remain on the site.
- 7.1.5 While this process continues, artificial refugia are repositioned into the areas for subsequent searching by the machine and then inspected and any reptiles found retrieved safely before the machine is used to rake through the next section. When sufficient ground is searched the machine can then be used to excavate the exposed



TOP: THE MACHINE IS USED ON CLEARED AREAS OF GROUND TO RAKE MATERIAL INTO MOUNDS ONCE THE DESTRUCTIVE SEARCH PROCESS IS COMPLETED A SECTION AT A TIME.
 ABOVE: ARTIFICIAL REFUGIA ARE REPOSITIONED INTO VEGETATED AREAS FOR SUBSEQUENT CHECKING PRIOR TO THE MACHINE BEING USED TO RAKE THROUGH THE NEXT SECTION OF VEGETATION AS THE DESTRUCTIVE SEARCH IS CONTINUED.

areas of the site as reptiles and most other animals will not migrate into areas that have been cleared of vegetation. This method eleviates the need for reptile fencing as the animals will remain in the vegetated areas and will not migrate onto cleared areas comprising bare soil.

- 7.1.6 The machine may also be used to track up and down over the cleared areas to ensure that these parts of the site thusfar devoid of vegetation and animals remain unsuitable for ground dwelling species to continue to maintain a presence. This may be with the exception of common bird species which will exploit the exposed areas to feed on worms and insect larvae that may remain on the surface.
- 7.1.7 The areas along the boundaries have been left intact which includes shrub cover and vegetation at the base of the remaining shrubs and trees which have been left to provide cover for any reptiles and small mammals that remain on the site. Consideration may be given to erect reptile fencing along these margins should parts of the cleared ground be left to regrow during the following spring. Alternatively the cleared ground may require further attention around the margins during late winter to ensure that regrowth is limited or the plants are prevented from re-establishing during the warmer months of spring.



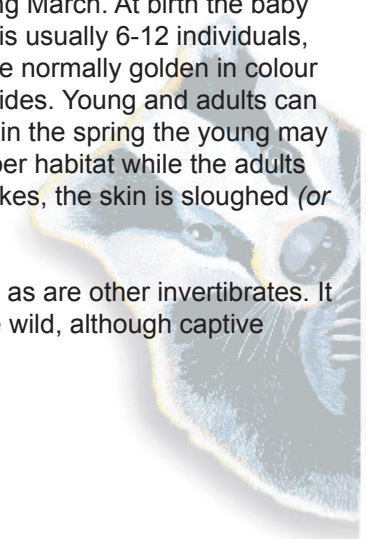


ABOVE: A TYPICAL ADULT SLOW WORM (*Anguis fragilis*) WITH A SHORTENED TAIL

8.0 REPTILES PRESENT WITHIN THE BROOK GARDENS SITE

8.1 THE SLOW WORM (*Anguis fragilis*)

- 8.1.1 The slow worm (*Anguis fragilis*) is a legless lizard and in common with other lizards has the ability to detach its tail. This process is known as *autotomy* and is a means by which the animal is able to escape a predator as when the tail is detached it wriggles violently as the slow worm makes its escape. If discovered basking in warm sunshine, in order to increase its body temperature in common with other reptiles, the slow worm may remain still or even move slowly when first discovered. When suddenly disturbed the animal can in fact move very quickly indeed, similarly to other reptiles.
- 8.1.2 The distribution of the slow worm in Britain is varied and it is known to be more commonly found in the south. The slow worm is also known to be present in a large part of the world and can be found from eastern Asia through much of Europe and Britain and has also been found in Wales and the north of Scotland. The slow worm is protected under the Wildlife and Countryside Act 1981 due mainly to habitat loss rather than it being considered as a rare or endangered species.
- 8.1.3 Slow worms can vary in colour although they are more commonly brown or golden with darker sides and undersides of either black or dark grey. A dark dorsal stripe runs the length of the body and is found on juveniles and adult females while males lack the stripe and are often thicker around the body and larger than the females. Blue spots are frequently found on older males mainly, appearing on specimens older than three years. Females can also have these markings although it is rarer in females than in males. This colouring is known as the form *Colchica*.
- 8.1.4 Adult slow worms can be found above ground on occasions, although normally they bask in warm sunshine within vegetation often with just their heads visible. They can be found under materials that are warmed by sunshine such as corrugated metal, plastics, etc. which is primarily how slow worms are studied, or captured under such materials which are used as refugia. Juveniles and baby slow worms can be found in damper conditions or may emerge earlier than the adults in the mornings in suitably warm weather conditions. Slow worms burrow into soft soil below ground or in leaf litter and the roots of plants and longer grasses in surface vegetation. They may also frequent compost heaps in gardens, and are frequently found near to or within ant nests.
- 8.1.5 Slow worms hibernate from October or November and emerge from their hibernation during March each year. Mating usually takes place in May and the young develop within the mother for three to five months, being born towards the end of August or the beginning of September. In cold conditions the female may hibernate still carrying the embryos throughout the winter, then give birth in the following March. At birth the baby slow worm may be between 65-90 mm in length and a litter is usually 6-12 individuals, although there can be 20 or more. When newly born they are normally golden in colour with the distinctive dorsal stripe with black sides and undersides. Young and adults can often be found basking together, although upon emergence in the spring the young may stay in the vicinity of the hibernation site often in more damper habitat while the adults may move into nearby grassland. Like other lizards and snakes, the skin is sloughed (*or shed*) at times throughout the summer months.
- 8.1.6 Slow worms feed mainly on slugs, and snails are also eaten as are other invertebrates. It is not known how long slow worms are able to survive in the wild, although captive specimens have been known to live as long as fifty years.





ABOVE: THE ONLY COMMON LIZARD (*Lacerta fragilis*), WITH A SHORTENED TAIL, OBSERVED ON OPEN GROUND NEAR THE CENTRE OF THE BROOK GARDENS SITE DURING THE DESTRUCTIVE SEARCHES.

9.0 REPTILES PRESENT WITHIN THE BROOK GARDENS SITE

9.1 THE COMMON LIZARD (*Lacerta vivipara*)

- 9.1.1 The common lizard (*Lacerta vivipara*) is present in a wide area of Asia and Europe, where it is present in northern Spain, Italy as well as extending into the Balkans. It is also present throughout the British Isles and is found in England, Wales and as far as the north of Scotland and in northern and southern Ireland. The common lizard inhabits heathland, grassy banks and can also be found in damp boggy areas. It is also known to enter water on occasions in pursuit of prey or if pursued by predators.
- 9.1.2 The markings of the common lizard can vary and individuals can be brownish in colour and even green, with mottled markings. Juveniles are small and dark brown or black in appearance with the adults measuring up to 180 mm in length.
- 9.1.3 Emergence from hibernation is usually during March and mating occurs during April and May. Lizards spend much of their time basking in warm sunshine and will often be found motionless on top of stone, discarded materials or refugia when they are laid on the ground for monitoring reptiles. When disturbed they will move rapidly into the undergrowth, often returning to bask once the disturbance has ceased. They will usually be found under such materials only during the early morning or in cooler weather conditions when the temperature is below 27 degrees centegrade when they are likely to be in a less active state, although there are sometimes exceptions when they can be found under refugia in warmer temperatures. They are not likely to be seen in very hot weather conditions, or during heavy rain or cold weather.
- 9.1.4 The females give birth usually in July, although the young may be born in August or as late as September. The egg membrane enclosing the baby lizard may break during birth, although some baby lizards may remain within the membrane for a short time before rupturing it. There may be as many as 12 young in a litter or the clutch size may be as little as 3. At birth the young are 37-44 mm long and are active and disperse rapidly. By the time they are ready to hibernate by November they are 70-80 mm long and have shed their skin up to six times, compared to four times a year for adults. The weight of adult lizards may be 3 g or more with females being up to 10 g.
- 9.1.5 Common lizards feed mainly on adult and larval insects which includes spiders and centipedes, small snails, earthworms and harvesters. Water is frequently taken from dew and raindrops. A number of animals and birds prey upon lizards including domestic cats, weasels and even shrews, although if alarmed a lizard may scream like a shrew and successfully make its escape. Snakes such as the adder and the less common smooth snake, blackbirds, and birds of prey such as buzzards, kestrels and shrikes will take adult lizards. Amphibians such as common frogs and toads may take the young.
- 9.1.6 Life expectancy can be over twelve years although between three and five years may be more usual. Habitat destruction can be a major cause of lessening the life expectancy depending upon the available adjacent habitat.



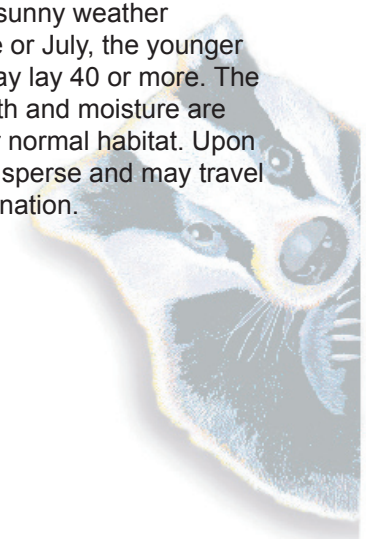


ABOVE: A TYPICAL YOUNG ADULT GRASS SNAKE (*Natrix natrix/helvetica*) OBSERVED UNDER A FELT SHEET NEAR TO THE WESTERN BOUNDARY OF THE BROOK GARDENS SITE.

10.0 REPTILES PRESENT WITHIN THE BROOK GARDENS SITE

10.1 THE GRASS SNAKE (*Natrix natrix/helvetica*)

- 10.1.1 The grass snake (*Natrix natrix/helvetica*) is widely distributed throughout Europe and is also present in North Africa and western Asia. It is also known as the ringed snake or collared snake due to the yellow band around its neck which distinguishes it from the adder and smooth snake, the two other native species of snake to the British Isles. The ring may also be white, orange or pinkish in colour. A sub-species known as *helvetica* is also found in England and Wales and in other European countries which include France, Germany and Italy.
- 10.1.2 The collar is mostly yellow, or sometimes white, on specimens found in southern England and the body colour is normally olive green on the upper part of the body, although some specimens can be brown or even greyish. Rows of black spots are present on the back and along the body sides and the belly is normally black and white.
- 10.1.3 The grass snake is the largest snake in Britain, although it is mainly present in England and Wales, and absent in Scotland. Males can grow to over 800 mm in length while females can be around 1830 mm.
- 10.1.4 Although largely found in grassland habitat the grass snake is also aquatic and can frequently be found swimming in ponds and streams. It is also capable of climbing into shrubs where it may be found basking as well as seeking prey. The grass snake is normally quite elusive, usually moving away before being approached, and is capable of moving very fast when disturbed. Where present it can often be found basking with slow worms under artificial refugia and may return to bask under the same sheet of roofing felt within minutes.
- 10.1.5 Like the other snakes and lizards native to Britain, the grass snake hibernates during the colder months of the winter, usually from October until March each year. They find shelter within the roots of trees and within the shrub layer just below ground level or make use of surface dens away from the effects of ground frost. The males normally appear during the early part of March, followed by the females mid to late March dependant upon weather conditions and temperatures. They tend to remain near to the hibernation areas during March and April and move into grassland and other cover from May onwards.
- 10.1.6 Mating normally occurs near the hibernation areas during April and may continue until June, although autumn matings have also occasionally been observed. Ground surface temperatures normally will be above 18 degrees in sunny weather conditions for mating to occur. The females lay eggs in June or July, the younger adult females laying 8-10 while the more mature females may lay 40 or more. The females choose compost heaps or other areas where warmth and moisture are present and may travel a distance of 1000 metres from their normal habitat. Upon hatching the young snakes are 15-19 cm long. They soon disperse and may travel some distance throughout the summer until they enter hibernation.



11.0 LEGISLATION: SPECIES PRESENT AND THEIR LEGAL STATUS

11.1 All wildlife species in Britain are protected against acts of cruelty and certain species have legal protection under current legislation. Protected species remain present around the boundaries of the site and are also found within 2 km of the site. The species which visit or are present around the site include bats, breeding birds and three species of reptiles.

11.2 BATS

11.2.1 All species of bats and their roosts in Britain are protected under the Wildlife and Countryside Act, 1981 (as amended by the CroW Act, 2000), and the Conservation Regulations, 1994. It is considered an offence to damage or destroy a bat roost, intentionally or recklessly obstruct a place of shelter, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat.

11.3 BREEDING BIRDS

11.3.1 Nesting birds are protected under the Wildlife and Countryside Act, 1981, and it is an offence to intentionally kill, injure or take any wild bird, or take, damage or destroy its eggs. In addition, for some rarer bird species listed in Schedule 1 of the Act, it is an offence to intentionally or recklessly disturb birds while they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

11.4 REPTILES

11.4.1 The grass snake (*Natrix natrix/helvetica*), the common lizard (*Lacerta vivipara*) and the slow worm (*Anguis fragilis*) are protected under the Wildlife and Countryside Act, 1981. Section 9(1) and all of Section 9(5) apply. Reptiles are protected against intentional killing and injuring (but not taking) and against sale, transporting for sale or publishing advertisements to buy or sell.

11.4.2 Once captured all British reptiles become subject to the Protection of Animals Act, 1911, which prohibits cruelty and mistreatment. Releasing a reptile in such a way to cause undue suffering may be an offence under the Abandonment of Animals Act, 1960.





TOP: FENCING HAS BEEN ERECTED ALONG THE BOUNDARY MARGINS FORMING PROTECTION FOR SOME OF THE TREES AND THE BASE COVER REMAINING ON THE BROOK GARDENS SITE. SMALL EARTH BUNDS HAVE ALSO BEEN PLACED AT THE BASE OF THE FENCING.
 ABOVE: A VIEW ALONG THE WESTERN BOUNDARY OF THE WEST HARTING DOWN SITE SHOWING THE TREE AND SHRUB COVER WITHIN A GRASSLAND BASE WHICH PROVIDES THE REPTILES WITH A HABITAT COMPATIBLE WITH THAT FORMERLY AT THE BROOK GARDENS SITE.

12.0 SUMMARY/DISCUSSION

12.1 THE BROOK GARDENS SITE

- 12.1.1 The Brook Gardens Site has been cleared of the ruderal vegetation from most of the site, much of the vegetation having previously been strimmed during the initial reptile surveys in order to position the artificial refugia for checking and the subsequent retrieving of the slow worms for translocation to the receptor site. The margins were left intact along the western and southern boundaries to provide habitat for any remaining slow worms and for the grass snakes which have been deliberately left on the site. The animals have been encouraged to migrate towards the southern section of the site during the destructive searches and the subsequent stripping of the site for groundworks and other excavation works required for drainage and the construction of the roadways, etc.
- 12.1.2 Fencing will provide protection for the trees and some of the shrub cover that should be left along the southern boundary of the site. Log piles should also be placed within the fenced area to encourage invertebrate species and there should also be an opportunity to encourage amphibian species in due course within the vegetation around the existing pond within the southern margins. The creation of the balancing pond and the introduction of reed beds and other marginal planting around the new pond should also provide additional habitat which should become viable for a variety of wildlife species.
- 12.1.3 The inclusion of bird and bat boxes within the remaining tree cover should also be considered to further enhance the diversity of wildlife along the boundaries of the site and within the margins along the southern boundary.
- 12.1.4 Consideration may be required to erecting temporary reptile fencing along the southern boundary should the ground surface be allowed to regenerate during the spring of 2014. Excavation works will be required for the sewerage plant and the creation of the balancing pond which may leave the ground surface devoid of natural vegetation for a season. This may elevate the need for reptile fencing dependent upon the requirements for construction within the southern section of the site. There may be a requirement to ensure that debris placed over some boundary fences and by the adjacent nursery within the southern margin is removed.

12.2 THE REPTILE RECEPTOR SITE

- 12.2.1 The opportunity will be taken during the winter months to lay additional refugia around the receptor site and to check the refugia placed within the grassland areas throughout 2014 onwards. The refugia should be left in position over the winter to attract invertebrate species which may later provide a food resource for the slow worms emerging from hibernation during the spring of 2014. Checking the refugia during the winter months may confirm the presence of small mammals such as wood mouse, or long-tailed field mouse (*Apodemus sylvaticus*) and the short-tailed vole or field vole (*Microtus agrestis*) which create runs and construct nests under the felt sheets whenever they are present. It should be noted that evidence of these species has been confirmed during the inspections of the artificial refugia for the slow worms, although the reptiles are likely to have begun their hibernation from early November. Small mammals in the main are not afforded legal protection under current legislation but are an important indicator species and provide a part of the food chain for other species including hawks and owls.
- 12.2.2 The monitoring process undertaken during the site visits to release the translocated reptiles has confirmed that the released reptiles have remained present within the grassland margins along the woodland edge. The habitat is compatible with that formerly within the donor site and viable therefore for the reptiles, small mammals and invertebrate species. The continued monitoring during 2014 onwards will also ensure that lawful status is maintained at all times and that the translocated reptiles remain protected from harm within a viable site as directed under the Wildlife and Countryside Act, 1981.



SITE DIAGRAM SHOWING THE MAIN FEATURES ON 17/10/13 AFTER THE REPTILE DESTRUCTIVE SEARCHES WERE UNDERTAKEN AND PRIOR TO THE ERECTION OF THE TREE PROTECTION FENCING. THE LOCATIONS OF THE ARTIFICIAL REFUGIA (Shown as red dots) WERE PLACED WITHIN THE MARGINS ALTHOUGH NO REPTILES WERE SUBSEQUENTLY FOUND WITHIN THE SITE BOUNDARIES. THE WHITE AREAS COMPRISE THE FORMALLY TALL RUDERAL VEGETATION AND TREE AND SHRUB COVER CLEARED BY MACHINE.

(Diagram not to Scale)

13.0 SUMMARY/NUMBERS OF REPTILES TRANSLOCATED

13.1 THE BROOK GARDENS SITE

13.1.1 The following data comprises a summary of the numbers of reptiles observed under the artificial refugia laid within the doner site during August and September, 2013:

Friday, 27/08

Adult Male (Shortened Tail)	2	
Adult Female	3	
Young Adult Grass Snake	1	Total Reptiles Released: 5

Monday, 23/09

Adult Male (Shortened Tail)	1	
Adult Female	8	
Adult Female (Shortened Tail)	1	
Juvenile	6	
Baby (Predated on top of felt)	1	
Adult Grass Snake	2	Total Reptiles observed: 16

TUESDAY, 24/09

Adult Male (Shortened Tail)	1	
Adult Female	4	
Adult Female (Shortened Tail)	1	
Young Adult Female	3	
Juvenile	1	Total Reptiles Released: 10

13.1.2 The following data comprises a summary of the numbers of reptiles retrieved from the doner site and released at the receptor site during September, 2013:

Wednesday, 25/09

Adult Male (Shortened Tail)	1	
Adult Female	4	
Adult Females (Shortened Tail)	2	
Young Adult Females	2	
Juvenile	1	Total Reptiles released: 10

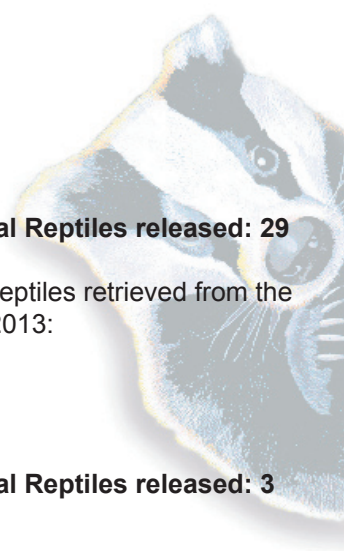
Monday, 30/09

Adult Male	2	
Adult Female	14	
Adult Female (Shortened Tail)	4	
Juvenile	7	
Baby	2	Total Reptiles released: 29

13.1.3 The following data comprises a summary of the numbers of reptiles retrieved from the doner site and released at the receptor site during October, 2013:

Tuesday, 01/10

Adult Female	2	
Juvenile	1	Total Reptiles released: 3



Wednesday, 02/10

Adult Female	2	Total Reptiles released: 2
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Thursday, 03/10

Adult Male (Shortened Tail)	1	
Adult Female (Shortened Tail)	1	
Young Female	1	
Juvenile	1	Total Reptiles released: 4

Friday, 04/10

Adult Male (Shortened Tail)	2	
Adult Female	3	
Young Adult Grass Snake	1	Total Reptiles released: 5

Monday, 07/10

Adult Male	4	
Adult Female	3	
Juvenile	1	
Adult Grass Snake	2	Total Reptiles released: 8

Tuesday, 08/10

Adult Male	2	
Adult Female	2	
Young Female	1	
Juvenile	1	Total Reptiles released: 6

Wednesday, 09/10

Adult Female	3	
Young Female	3	Total Reptiles released: 6

TOTAL REPTILES RELEASED AT THE WEST HARTING DOWN SITE: 88



DIARY NOTES: AUGUST, 2013

TUESDAY, 13/08 WEATHER: Patchy blue sky, windy, bright and sunny.

Telephone call from Julian Jones, Barratt/David Wilson Homes re proposed Reptile Translocation Project from the former Brook Gardens Site to South Harting Down. Confirmation e-mail forwarded from Julian.

WEDNESDAY, 14/08 WEATHER: Clear blue sky, bright and sunny, calm and hot.

Telephone call to Julian Jones. Trip to Brook Gardens, Barnham to lay cut sheets of roofing felt for use as artificial refugia for monitoring reptiles and small mammals. Two telephone calls from Gary Webster.

THURSDAY, 15/08 WEATHER: Dull and overcast, windy becoming bright and sunny.

Call from Peter Best Tree Surgeon, Bournemouth re the initial strimming of the tall ruderal vegetation within the Brook Gardens, Barnham Site. Call to Gary Webster re up-date.

FRIDAY, 16/08 WEATHER: Overcast, windy with rain during the afternoon turning sunny late in the afternoon.

Site Check of Brook Gardens, Barnham, checking felts and laying additional artificial refugia. 9 felts were found to be missing from the frontage overnight. Site meeting with Peter Best, a tree surgeon and Gary Webster.

MONDAY, 19/08 WEATHER: Patchy blue sky, bright and sunny with light winds.

Site Check of Brook Gardens, Barnham, checking felts and laying additional artificial refugia while Peter Best's tree surgeons strimmed the frontage of the site.

Two individuals from EPR appeared on-site, one taking photographs of the brick built former toilet located near the wooden building.

Telephone call to Gary Webster.

TUESDAY, 20/08 WEATHER: Clear blue sky, bright and sunny, light wind with warm temperatures.

Site Check of Brook Gardens, Barnham, checking felts and relaying artificial refugia within the strimmed areas while Peter Best's tree surgeons strimmed the frontage of the site. A check was made of the delapidated former packing building. No current bat or owl presence was found although a number of old owl pellets were found on the upper floor near to the eastern end of the building. The pellets were retrieved for examination and found to be tawny owl pellets. Telephone call to Peter Best.

WEDNESDAY, 21/08 WEATHER: Blue sky, bright and sunny, warm with a light breeze.

Site Check at Brook Gardens, Barnham, checking felts and laying additional artificial refugia and checking delapidated former packing building for signs of presence/absence of bats and owls while Peter Best's tree surgeons completed the strimming of the front section of the site. No additional owl pellets were found on the first floor of the building. A single pigeon flew out of the upper storey near the eastern section of the building. Peacock and tortoiseshell butterflies were observed hibernating within the ground floor.

A discussion with a local householder on the eastern boundary took place during the afternoon.

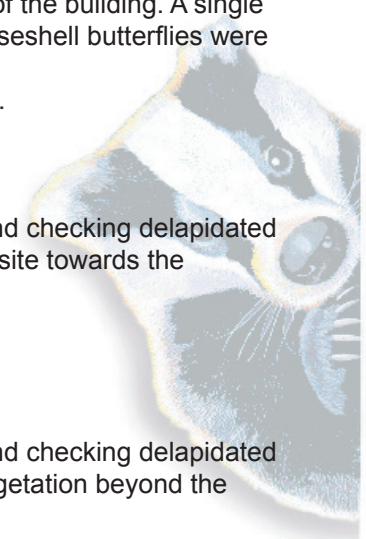
THURSDAY, 22/08 WEATHER: Patchy blue sky, light breeze after overnight rain.

Site Check at Brook Gardens, Barnham, checking felts and laying additional artificial refugia and checking delapidated former packing building while Peter Best's tree surgeons strimmed the 30 metre section of the site towards the delapidated building.

Telephone call to Peter Best. Telephone call to Gary Webster.

TUESDAY, 27/08 WEATHER: Clear blue sky, bright and sunny, calm becoming hot.

Site Check at Brook Gardens, Barnham, checking felts and laying additional artificial refugia and checking delapidated former packing building while Kit from Peter West Tree Surgeons continued to trim ruderal vegetation beyond the building towards the rear of the site.



Destructive Search for reptiles and small mammals while excavating 30 metre long archeological trenches in collaboration with Cornelius.

2 Adult Male Slow Worms with shortened tails, 3 Adult Female Slow Worms and a Young Adult Grass Snake were retrieved during the day. The Slow Worms were taken to the Receptor Site at West Harting Down and released at 17.00. The Grass Snake was released towards the southern section of the site.

THURSDAY, 29/08 WEATHER: Patchy blue sky, bright and sunny, light breeze, warm.

Telephone call from Gary Webster, confirming Planning agreement for Brook Gardens, Barnham. Call to Stan Abbott, Forestry Commission, Lyndhurst re access to proposed reptile receptor site at West Harting Down

DIARY NOTES: SEPTEMBER, 2013

TUESDAY, 03/09 WEATHER: Overcast with a light breeze, remaining dry, bright and sunny turning hot by mid morning.

Call from Dominic re soil sampling pits to be excavated at Brook Gardens Barnham. Call to Gary Webster. Site Check and chacking all artificial refugia at Brook Gardens, Barnham and working with Dominic and Mike, a JCB Machine Driver excavating sampling pits with the machine to ensure that no animals were harmed.

WEDNESDAY, 04/09 WEATHER: Clear blue sky, bright and sunny, light breeze, warm

Call from Gary Webster re concerns raised by Stan Abbott, Forestry Commission over reptile translocation proposals.

THURSDAY, 05/09 WEATHER: Clear blue sky, bright and sunny, light breeze, warm.

Site Check at Brook Gardens, Barnham. e-mail received from Stan Abbott, Forestry Commission re approval of access to West Harting Down Receptor Site.

MONDAY, 09/09 WEATHER: Overcast, wet from previous rain, hazy sun, light breeze becoming brighter with lower temperatures.

Telephone call to Ian Brownlee, Forestry Commission Wildlife Ranger for West Harting Down re translocation of Slow Worms from Brook Gardens, Barnham. Telephone message left with Gary Webster.

TUESDAY, 10/09 WEATHER: Patchy blue sky, bright and sunny, windy.

Site checks at Brook Gardens, Barnham and at West Harting Down Receptor Site.

MONDAY, 16/09 WEATHER: Patchy blue sky, bright and sunny, windy, cooler temperatures, rain late afternoon.

Brook Gardens, Barnham Site Check followed by a Site Check at West Harting Down Receptor Site laying 10 artificial refugia within the grassland strip along woodland edge

WEDNESDAY, 18/09 WEATHER: Patchy blue sky, bright and sunny with alight breeze.

Trip to West Harting Down to check the site and lay additional artificial refugia for subsequent release of Slow Worms to be retrieved from the Brook Gardens Site at Barnham.

MONDAY, 23/09 WEATHER: Overcast, still with mild temperatures.

Destructive Search for reptiles and small mammals while excavating three thirty metre long archeological trenches in collaboration with Cornelius within the frontage section of the site and checking artificial refugia for reptiles. 1 Adult Male Slow Worm with a shortened tail, 8 Adult Females, 1 Adult Female with a shortened tail, and 6 Juvenile Slow Worms observed under felts. 1 Baby Slow Worm found predated on top of felt 49. 2 Adult Grass Snakes observed under a piece of corrugated metal north of the delapidated former packing shed. A number of Common Field Vole runs and nests also found under the artificial refugia around the site.

TUESDAY, 24/09

WEATHER: Clear blue sky, bright and sunny after early morning mist remaining warm with a light breeze throughout the day.

Destructive Search for reptiles and small mammals while excavating two additional 30 metre long archeological trenches in collaboration with Cornelius within the frontage section of the site and three 30 metre long trenches beyond the frontage. 1 Adult Male Slow Worm with a shortened tail, 4 Adult Females, 1 Adult Female with a shortened tail, 3 Young Adult Females and 1 Juvenile Slow Worm were retrieved from the site and released within the Receptor Site at West Harting at 16.00.

WEDNESDAY, 25/09

WEATHER: Overcast, light breeze, heavy rain late afternoon and into the evening.

Destructive Search for reptiles and small mammals while excavating 30 metre long archeological trenches in collaboration with Cornelius. Two trenches within the frontage of the site and three trenches beyond the frontage with a machine. Site meeting with Paul Chinery around 12.30-13.00.

1 Adult Male Slow Worm with a shortened tail, 4 Adult females, 2 Adult Females with shortened tails, 2 Young Adult Females and 1 Juvenile Slow Worm were retrieved from the site and released within the Receptor Site at West Harting at 16.00.

THURSDAY, 26/09

WEATHER: Overcast, light breeze, hazy sun, mild.

Destructive Search for reptiles and small mammals while excavating 30 metre long archeological trenches in collaboration with Cornelius.

MONDAY, 30/09

WEATHER: Overcast with hazy sun, mild, light rain late in the afternoon.

Destructive Search for reptiles and small mammals continued within the frontage section of the site.

Call to Gary Webster re progress on-site.

Call from Pete Best re tree works required on-site.

Discussion with neighbour in eastern boundary.

2 Adult Male Slow Worms, 14 Adult females, 4 Adult Females with shortened tails, 7 Juveniles and 2 Baby Slow Worms were retrieved from the site and released within the Receptor Site at West Harting at 16.30. 1 Juvenile Slow Worm was found basking under the release felt.

DIARY NOTES: OCTOBER, 2013

TUESDAY, 01/10

WEATHER: Overcast with hazy sun, mild, light rain late afternoon.

Destructive Search for reptiles and small mammals within central section of the site while trees were cut down on the bund within the frontage of the site by tree surgeons. 3 Grass Snakes, one being large, were observed to the south side of the bund when undertaking the Destructive Search with the machine.

Paul Chinery visited the site for an up-date.

Call from Ryan Coombes requesting an e-mail recommending the demolition of the derelict packing shed. E-mail subsequently forwarded during the evening.

WEDNESDAY, 02/10

WEATHER: Dull, overcast then bright and sunny from mid morning, mild.

Destructive Search for reptiles and small mammals continued within the 30 metre eastern zone and the southern boundary of the derelict packing shed was stripped of vegetation.

Call from Peter West re chipping the elder on-site.

Call to Gary Webster who was in a meeting and passed the call to Paul Chinery re progress on-site.

2 Adult Female Slow Worms only found and released within the Receptor Site at West Harting at 16.45.

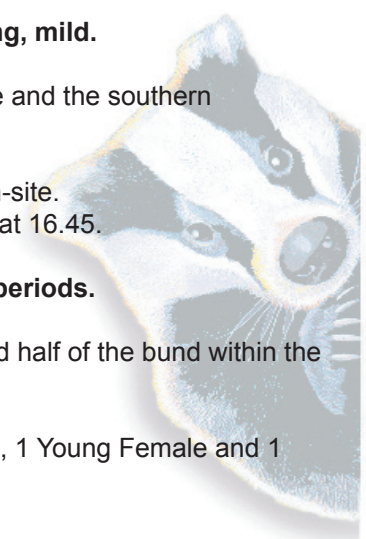
THURSDAY, 03/10

WEATHER: Overcast, wet during the morning, windy with sunny periods.

Destructive Search for reptiles and small mammals continued around derelict packing shed and half of the bund within the frontage was stripped and removed.

Reilly's staff checked around the site during the afternoon.

1 Adult Male Slow Worm with a shortened tail, 1 Adult Female Slow Worm with a shortened tail, 1 Young Female and 1 Juvenile Slow Worm were taken to the Receptor Site at West Harting and released at 17.00.



FRIDAY, 04/10

WEATHER: Overcast with bright sunny periods, windy.

1 Adult Female Slow Worm with a shortened tail was retrieved from a felt located in the north east corner of the site near to the frontage at 09.00 in dull weather conditions and placed in the container.

2 Fencers entered the site with a small truck at 09.30 and walked towards the southern section of the site.

Destructive Search using the machine continued while a check was made for reptiles and small mammals.

2 Adult Male Slow Worms with shortened tails, 3 Adult Female Slow Worms and a Young Adult Grass Snake were retrieved during the day. The Slow Worms were taken to the Receptor Site at West Harting and released at 17.00. The Grass Snake was released towards the southern section of the site.

MONDAY, 07/10

WEATHER: Bright and sunny, light breeze, mild.

Call to Gary Webster re progress. Instructions given to carry on with the destructive searches and strip the remainder of the site.

Machine driver instructed to rake through surface vegetation and surface soil with toothed bucket while a search was made for reptiles and small mammals. The machine was also used to remove elder shrub cover. Raked vegetation and surface soil was then piled on previously cleared ground and re-checked for reptiles and small mammals. Artificial refugia in the form of cut sheets of roofing felt was placed along remaining shrub lines left remaining for subsequent checking. The process was repeated and the site is systematically cleared by the machine working towards the southern section of the site.

Tree surgeons arrived on-site around 10.00.

Call from Pete Best re progress on-site.

2 Young Adult Grass Snakes were observed under one of the felts laid along the western boundary.

4 Adult Male, 3 Adult Female, and 1 Juvenile Slow Worm were retrieved from site and taken to the Receptor Site at West Harting at 15.41. Slow Worms released at South Harting at 16.53. 1 Adult Female Slow Worm observed basking under the release felt and 1 Young Female Slow Worm observed under a felt previously placed some 40 paces away.

A local resident entered the site late afternoon and proceeded to take photographs.

TUESDAY, 08/10

WEATHER: Patchy blue sky, sunny

All artificial refugia checked for the presence of reptiles and small mammals.

Elder stumps cleared using the machine near to the eastern boundary shrub line and the ground surface continued to be raked by the machine while a search was undertaken for reptiles and small mammals.

At 09.15 a Common Shrew was seen running towards the tracks of the machine. Dan lifted the machine up on one side to allow the shrew to run off into the adjacent cover along the eastern boundary unharmed.

The fencing contractors who had arrived on-site earlier continued with the erection of the boundary fence and hoardings along the frontage of the site.

No tree surgeons appeared on-site.

At 10.15 PCSO Neil Billingham of Sussex Police arrived on-site and requested details of the works being undertaken on-site as a result of local residents raising concerns. The Reptile Translocation Process was explained and this satisfied the concerns raised by PCSO Billingham.

Call to Gary Webster re up-date. Ryan Coombes arrived on-site shortly after and was informed of the concerns raised by PCSO Billingham.

2 Adult Male, 2 Adult Female, 1 Young Female and 1 Juvenile Slow Worm were retrieved from felts laid around the site and taken to the Receptor Site at West Harting at 16.05. The Slow Worms were released at West Harting at 17.10.

WEDNESDAY, 09/10

WEATHER: Clear blue sky becoming patchy, sunny, mild temperatures, still then overcast becoming cooler.

Dan the machine driver called early morning announcing his wife was in labour overnight. A replacement machine driver would take over from Dan.

Telephone call to Ryan Coombes.

Two fencing contractors were on-site erecting the fence-line along the frontage and one managed to move the machine from the site access gateway.

A very small baby rabbit running around the site was retrieved. Call to Melanie who arrived on-site mid-morning and took the rabbit off-site late morning.

Fencing contractors left site at 15.18.

Ryan Coombes called to arrange the moving of the machine back to the access gateway late afternoon.

3 Adult Female and 3 Young Female Slow Worms retrieved from site and taken to the Receptor Site at West Harting at 16.10. Slow Worms released at West Harting at 17.10.

THURSDAY, 10/10 WEATHER: Bright and sunny with cold northerly winds.

Aaron the new machine driver arrived on-site.

Tree surgeons arrived on-site around 10.00.

Ryan Coombes appeared on-site during the morning and again in the afternoon with Steve Akehurst and a colleague for a tour around the site. Steve instructed Peter West to cut down the apple trees along the western boundary during a telephone conversation. Steve and a colleague also entered the delapidated former packing shed through the small entry on the northern elevation of the building.

Destructive Search continued on eastern section with the machine throughout the day. No reptiles or small mammals found during the day.

FRIDAY, 11/10 WEATHER: Cloudy, strong winds becoming bright and sunny, then clouding over again with cold northerly winds, rain from 13.00.

Tree surgeons cut down apple trees along eastern boundary.

Centre section cleared by destructive search towards rear of site with the machine.

1 Adult Male Slow Worm (Shortened Tail) retrieved from western boundary and released in south west section of the site.

MONDAY, 14/10 WEATHER: Patchy blue sky, hazy sun, chilly, rain early evening.

No tree surgeons on-site.

Destructive search of last remaining section towards the south of the site and a section of nettles along the eastern boundary.

Refugia moved to southern boundary - no sign of any reptiles.

Aaron, the machine driver, raised the machine on one side as a shrew ran through the tracks - pic taken.

TUESDAY, 15/10 WEATHER: Bright and sunny, warm from mid morning becoming chilly by late afternoon.

No tree surgeons on-site.

Destructive search continued along eastern boundary. 1 common shrew seen near eastern boundary.

Conversations were held with three local householders from properties along the eastern boundary regarding various aspects of the site.

Paul Chinery appeared on the site with a colleague late morning.

1 Adult Slow Worm found under a felt near to the southern boundary.

WEDNESDAY, 17/10 WEATHER: Clear blue sky, bright and sunny, very wet from previous day's heavy rain.

Destructive search of south east strip near boundary - no signs of any wildlife except one field mouse running towards eastern boundary. Two local householders appeared from eastern boundary.

All refugia checked. One Young Grass Snake observed basking under a felt along western boundary. One Adult Male and an Adult Female Slow Worm found basking under a felt in the south west corner of the site. One Adult Female found by Aaron, the machine driver, in soil in the centre of the site near the southern boundary. All three were left under a felt in the south west corner of the site.

Ryan Coombes appeared on-site at 12.45 with instructions to cease work with the machine.



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