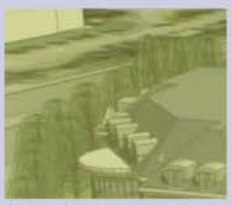









July 2015

Land west of Chesterton

Great Crested Newt and Reptile Mitigation Strategy

Prepared by

CSa Environmental Planning

On behalf of

Taylor Wimpey UK Ltd

Report No: CSa/2325/07a

July 2015

Land west of Chesterton

Great Crested Newt and Reptile Mitigation Strategy

Prepared by
CSa Environmental Planning

On behalf of
Taylor Wimpey UK Ltd

Certificate Number 6523
ISO 9001

	Date	Prepared by	Authorised by	File Ref
First Issue	27/07/15	CD	AM	2325/07a

Report No: CSa/2325/07a

CONTENTS

Page

Appendices

1.0 INTRODUCTION

1.1 This document has been prepared by CSa Environmental Planning on behalf of Taylor Wimpey UK Ltd to address two planning Conditions 14 and 16 of the planning consent for residential development of up to 45 dwellings at land to the west of Chesterton, Oxfordshire (14/01737/OUT) which states:

Condition 14

- *A mitigation strategy for great crested newts, which shall include timing of works, exclusion fencing, the location and design of alternative ponds/habitats together with the timing of their provision, to be submitted and approved by the LPA.*

Condition 16

- *A strategy for the translocation of reptiles, which shall include the identification of receptor sites, the management scheme, landscaping and the arrangements for implementation to be submitted to and approved by the LPA.*

1.2 An Ecological Appraisal of the site (CSa/2325/02) and subsequent surveys for great crested newt and reptiles (Protected Species Survey Report CSa/2325/04) identified a large population of breeding great crested newt *Triturus cristatus* within ponds at the golf course to the west of the site and an individual slow-worm *Anguis fragilis* on the site itself.

Great Crested Newts

1.3 Great crested newts and their habitats are strictly protected under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2010. This legislation makes it an offence to capture, injure, kill or disturb great crested newts and also to damage or destroy a breeding site or resting place used by great crested newts.

1.4 The closest great crested newt breeding pond is approximately 90m from the site and there are anecdotal reports of great crested newts being found within the allotments adjacent to the north-eastern boundary. Given the proximity of the ponds, it is reasonably likely that these animals use the terrestrial habitats within the site.

Reptiles

1.5 All native British reptile species are afforded protection against intentional killing and injury under part of sub-section 9(1) of the Wildlife and Countryside Act 1981 (as amended) Act and all British reptile species are species of principal importance for conservation under Section 41 of the Natural Environment and Rural Communities Act 2006.

1.6 Rough grassland margins on-site provide suitable habitat for reptiles. The allotments adjacent to the northern boundary are known to support slow-worm and it is likely this population will use the grassland habitats within the site when suitable.

1.7 Given the protection of both these species it is appropriate to agree a mitigation strategy that will ensure impacts to great crested newt and reptiles on the site are avoided. A European Protected Species Licence (EPS) will also be required to permit development impacts to great crested newts that would otherwise be illegal.

2.0 IMPACT ASSESSMENT AND MITIGATION RATIONALE

Great Crested Newts

2.1 The great crested newt surveys identified a large population of great crested newt breeding within two ponds on the golf course to the west, at distances of c.90m and c.425m from the site, with an individual great crested newt recorded within a larger pond c. 295m from the site. The terrestrial habitat surrounding these ponds is good, with areas of dense scrub, wooded strips and rough grassland at the margins of the golf holes, and large areas of lower quality short grassland habitat that makes up the majority of the golf course.

2.2 A minor road separates the closest pond from the proposed development site, which is flanked by good quality habitat comprising hedgerows and a wide wooded strip on the northern side abutting the golf course. The road's width and traffic levels (from personal observation) are not considered sufficient to make it a significant barrier to the movement of great crested newts. This is supported by anecdotal records of great crested newts being found within the allotments adjacent to the north-eastern boundary of the site.

2.3 As shown on the Habitats Plan in Appendix A, the majority of the development site comprises arable land and grazed pasture that is considered to be of generally low quality for great crested newts, especially in comparison to neighbouring habitats. Denser ground cover is provided by on-site hedgerows and long grassland margins of the arable field and these habitats offer small areas of good quality habitat that are more likely to be used for foraging and shelter.

2.4 The Great Crested Newt Habitat Impacts Plan in Appendix B is based upon the Site Layout produced by Life Space Design (LSD129.01.01 Rev N). This proposal would result in the following areas of on-site terrestrial habitat being lost, damaged and retained following the categories with the Natural England licence documents[1] (in relation to the closest pond, c.90m from the site):

Table 1: Great Crested Newt On-Site Habitat Impacts (ha)

	Immediate 0-50m	Intermediate 50-250m	Distant 250-500m
Habitat Lost	0	0.95	1.02
Habitat Damaged (then reinstated / enhanced)	0	0.21	0.15
Habitat Retained	0	0.35	0.08

2.5 In addition, upgrades to the adjacent highway are proposed as part of the development, to include widening of the carriageway and the provision of a new 2m wide footway linking the site access to the existing footway to the north. These works would result in the loss of grassland verge alongside the road

[1] Natural England document reference: *"wml-a14-2_tcm-4103"; Section D: Impact assessment (continued); D5.1 Quantitative Impact Assessment*

which is likely to be used by great crested newt. Appropriate mitigation for the impacts of this small-scale habitat loss will also need to be covered within the EPS licence for the site to ensure that no illegal impacts to great crested newts or their habitats occur from the highways works.

2.6 Natural England guidelines[2][3] state that suitable terrestrial habitats within 250m of a breeding pond are most likely to be used by great crested newts. As such, the development Masterplan has been designed to maximise the amount of high quality terrestrial newt habitat available within 250m of the closest breeding pond, where it is most likely to be used by great crested newts. It is considered that the loss of a larger area of low quality terrestrial habitat would be adequately mitigated by the provision of a smaller area of higher quality habitats, especially as these will continue to be connected to retained hedgerows, ditches and offsite habitat.

Reptiles

2.7 The reptile surveys identified an individual slow-worm along the central hedgerow which separates the improved grassland field to the north from the arable crop to the south. The majority of grassland is grazed and provides limited opportunities for slow-worm, however the field margins surrounding the arable crop are rougher in nature. These, along the mature hedgerows surrounding the site are likely to form the most suitable habitat for slow-worm although the survey suggests that they are used by low numbers of individuals. The offsite gardens and allotments are likely to support larger populations of common reptiles which may be dispersing onto the site.

2.8 Habitat to be lost as a result of the development proposals includes the internal hedgerow along which the individual slow worm was observed. It is considered likely that the rough margins and hedgerows support low numbers of slow-worm, populations of which are most likely to be focussed in the allotments and spread across the gardens ad surrounding agricultural land. A considerable area of enhanced grassland and scrub habitat (see next section) is due to be created as compensation for the loss of great crested newt habitat on-site, and this will also provide opportunities for reptiles. This area is larger than the current resource for reptiles which is limited to the boundaries of the site.

[2] English Nature (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough
[3] Natural England (2013) *Template for Method Statement to support application for licence under Regulation 53(2)e in respect of great crested newts Triturus cristatus. Form WML-A14-2 (Version April 13).*

3.0 MITIGATION STRATEGY

3.1 The proposed habitat types described herein as mitigation, compensation and enhancement for great crested newt and slow-worm are shown on the Soft Landscaping Plans (CSa/2325/112-13). As these species have similar requirements for their terrestrial habitats, the mitigation proposed is designed to support populations of both.

3.2 The plan within Appendix B demonstrates that the development Masterplan would provide 0.56 ha of enhanced terrestrial habitat for great crested newts within 250m, and an additional 0.23 ha within 500m of the breeding pond.

Habitats

3.3 Existing hedgerows with associated tree, basal vegetation and ditches along the site boundaries are to be retained alongside the development with the exception of the loss of a c. 10m section along the north-western boundary to facilitate the new road access. This has been located to facilitate an existing gap and thus minimise impacts to this hedgerow. The central hedgerow which is gappy and species-poor is also due to be lost. Retained hedgerows will be protected from accidental damage during construction in line with BS5837:2012 – Trees in relation to design, demolition and construction (recommendation). Replacement hedgerow planting will be made alongside the proposed access route and within gaps in the north-eastern boundary hedgerow to strengthen this feature and improve its wildlife value.

3.4 Areas of public open space will be created in the north-east corner of the site with habitat buffers along the northern, western and southern boundaries. These areas will be dominated by native grassland with mown paths in the largest area of POS, with additional native scrub, tree and thicket planting. Existing grassland in the main area of POS will be allowed to grow up naturally and over-sown with native flower/herb seeds to improve diversity. There is limited grassland within the remaining areas of proposed POS (limited to rough field margins a few metres wide). These margins will be left intact wherever possible and a mixed grass/flower seed mix used to establish meadow grassland over the existing arable land.

3.5 Proposed scrub planting will increase the amount of habitat available for foraging, dispersing and sheltering amphibians and reptiles, and the wildflower grassland will provide enhanced structure and diversity to the existing arable land and grazed pasture. The majority of such habitat is located at the northern end of the site, in closest proximity to the ponds used by great crested newt. Habitat buffers surrounding the site allow the dispersal of wildlife between on-site and adjacent habitats, and permits movement within the site itself.

3.6 Though not included within the habitat calculations above, the creation of gardens will also provide opportunities for great crested newt and reptiles.

Landscape treatments

3.7 The majority of new habitat for these species will comprise meadow grassland. Existing grassland within proposed areas of open space will be allowed to grow up and the sward structure and diversity improved by over-sowing and management under a more relaxed regime than the current sheep grazing. A native species-rich wildflower grassland mix would be used to establish meadow areas over existing arable land though additional ground preparation may be required in these areas to strip some of the enriched topsoil and control the regrowth of rigorous weeds. Meadow habitat should support a wide range of invertebrates that would provide foraging for both great crested newts and reptiles. Once established, meadow grassland should not be cut (or grazed) during the spring or summer to allow plant species to flower and set seed, as well as to provide cover for wildlife. A cut should be undertaken in late summer to no lower than 150mm to avoid direct impacts to newts and slow-worm, and the arisings collected and used to make several small habitat piles at the bases of hedgerows.

3.8 Two drainage attenuation basins are proposed within areas of open space. These provide additional surface water drainage capacity for periods of peak rainfall, but they are likely to be dry for much of the year. A wet grassland seed mix would be sown into these areas once the basins have been created and management should focus on allowing a long wet grassland sward to establish that will provide further high quality habitat for great crested newts.

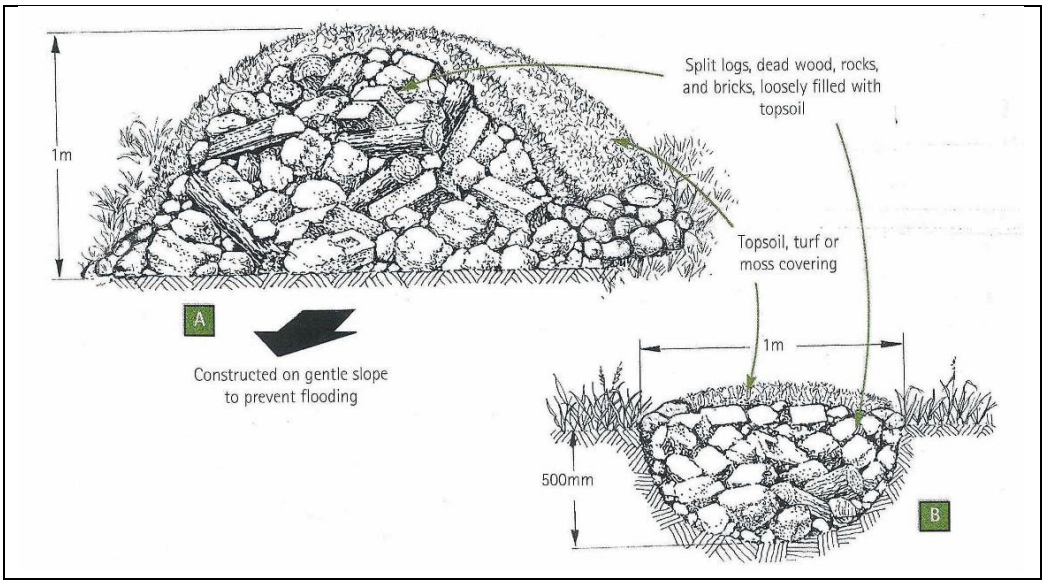
3.9 Native trees and shrubs within the areas of open space will be managed only lightly to prevent excessive growth, maintain proper form and healthy growth and where health and safety concerns require intervention. Management of the north-eastern and north-western boundary hedgerows will be relaxed to comprise a regime that encourages bushier growth and basal vegetation as cover for amphibians and reptiles.

3.10 Detailed implementation and management prescriptions for the site, including habitats for great crested newt and reptiles, are covered within a separate Landscape Management Plan (CSa/2325/06).

Refugia

3.11 Two hibernacula (see Figure 1 below) are proposed to be constructed within the largest area of open space in the north-east corner of the site. They will be located within / adjacent to native shrubs to provide additional shelter, as shown in the Soft Landscaping Plans. These will be approximately 90-120m from the great crested newt breeding pond and will comprise buried piles of logs and rubble beneath a soil mound, with gaps left to enable newts, reptiles and other small animals to access frost-free gaps for hibernation.

Figure 1 Hibernacula Design taken from Great Crested Newt Conservation Handbook[4]



3.12 Eight log piles will also be created within areas of open space to provide refuge for amphibians, reptiles and other wildlife.

[4] Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001) *Great Crested Newt Conservation Handbook*, Froglife, Halesworth.

4.0 CAPTURE AND EXCLUSION MEASURES

Great Crested Newts

4.1 To safeguard great crested newts from killing or injury during development works, all working areas will be subject to a capture and exclusion exercise to remove any newts from areas where they would otherwise be at risk from development activities. This exercise will need to be covered by an EPS licence from Natural England. It will involve the use of amphibian/reptile exclusion fencing with pitfall traps and artificial refugia to temporarily trap animals moving across the site.

4.2 Exclusion fencing will be erected to encompass the boundaries of the site so that all habitat within can be cleared of great crested newts. Lengths of fence will also be installed within the interior of the site (drift-fencing) to improve capture rates. The fencing will comprise UV-resistant plastic sheeting extending approximately c.0.6m above the ground and c.0.3m below the surface. Installation of the fence will be undertaken when newts are above ground (from late February – October, weather dependent) so that hibernating individuals are not affected, and under ecological supervision. Any hedgerow, scrub or other potential bird nesting habitat along the route of the fencing will need to be removed in advance (October – February inclusive) so that active birds' nests, eggs or young (which are also legally protected) are not impacted. Removal of small amounts of nesting habitat may be facilitated within the active season if a pre-commencement nesting bird check by an experienced ecologist demonstrates that no birds are nesting within the habitat to be impacted.

4.3 Pitfall traps will be installed along the edges of the exclusion fence-line and along internal lines of drift fencing at approximate 5m - 10m intervals. Artificial refugia, such as carpet tiles would also be used in between pitfall traps to increase the chances of capture.

4.4 Natural England guidelines suggest that a minimum trapping period of 90 nights with suitable weather conditions are likely to be required to trap out a great crested newt population classed as 'large' from their terrestrial habitats. Trapping can occur during most of the frost-free months of the year (typically during March – October). Checks of the traps and refugia would be undertaken on at least a daily basis by an experienced and licensed ecologist.

4.5 Any amphibians captured during the process will be released into cover within the receptor area. The receptor area has been identified as the hedgerow and adjacent grassland habitats along the north-eastern boundary which will not be included within the exclusion zone and will be both retained and protected during construction and landscaping works. It was considered that this receptor site would be the most suitable option as it provides immediate cover and established terrestrial habitat for newts whilst allowing them to continue to

disperse through the adjacent allotments or back to their breeding ponds within the golf course.

4.6 Once the capture results demonstrate that all great crested newts have been successfully caught and moved from the exclusion zone, the internal drift fencing, all pitfall traps and refugia will be removed. Development related works within the construction area can then begin. The exclusion fencing at the boundary of the development area will remain in place and will be maintained until the end of the construction period to ensure that great crested newts do not cross into the working areas.

Road verges

4.7 Access to the site will be through the north-western boundary hedgerow where widening of the existing road will also take place. This will require the removal and reinstatement of road verges which may be used by dispersing great crested newts. The width of road verge that is vegetated is fairly narrow (1-2m wide). It is advised that these areas are strimmed regularly to reduce the likelihood of this species seeking cover in longer vegetation.

4.8 As these areas are small and difficult to enclose they will not be included in the capture and exclusion exercise. However, prior to any works taking place on the verges an ecologist will undertake a search of all areas that have the potential of being used by great crested newts. This includes any areas of rougher grass, cracks within the soil and hard surfacing and gaps between any curb stones. Any great crested newts found during the search will be removed and placed within the receptor area. Once a search is complete the top soil will be stripped under a watching brief. This will remove any likely resting areas for great crested newts. No works to the verges will be undertaken during the winter months when great crested newts may be hibernating.

<u>Reptiles</u>

4.9 Alongside the capture and exclusion exercise for great crested newts, a reptile translocation will also take place to ensure that no reptiles are deliberately killed or injured during development of the site.

4.10 The fencing and methods for trapping reptiles are the same as those described for great crested newt. Sheets of roofing felt (minimum size c.0.5m x 0.5m) will be laid between the pitfall traps / carpet tile refugia to increase the chances of capturing reptiles. These refugia will be checked daily alongside checks for great crested newts.

4.11 Any reptiles captured during this process will be released in to the receptor area identified above. It is likely that reptiles found on-site will have originally dispersed from the allotments or surrounding gardens and the proposed receptor site will allow access back into these areas.

4.12 HGBI guidelines[5] suggest that a minimum trapping period of 60 nights with suitable weather conditions are likely to be required to trap out a small reptile population. This will coincide with the trapping required to clear the site of great crested newts. Trapping can occur during most of the frost-free months of the year (typically between March – October).

[5] Herpetofauna Groups of Britain and Ireland (1998) *Evaluating local mitigation/translocation programmes: Maintaining Best Practice and Lawful Standards*. HGBI advisory notes.

5.0 POST DEVELOPMENT MANAGEMENT AND MONITORING

Management

5.1 The timing, methods and responsibility for management of new landscaping and retained habitats are set out in a Landscape Management Plan. This will aim to maintain the habitats in suitable condition for great crested newt and other wildlife for the long term.

Monitoring

5.2 It is likely that post-development monitoring of the great crested newt population will be a condition of any EPS licence granted for great crested newts by Natural England for the site. This would be undertaken to assess the success of the mitigation works in maintaining the favourable conservation status of the population.

5.3 With reference to the great crested newt mitigation guidelines[6], the partial destruction of intermediate terrestrial habitat represents a low impact at the site level (Section 6.5), which for a high population of great crested newts would require post-development monitoring for a minimum of 2 years. This monitoring should take the form of population size class assessment surveys of the local breeding ponds.

[6] English Nature (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough

6.0 SUMMARY

6.1 A large population of great crested newt was recorded using ponds within c.90m and 425m of the proposed development site in Chesterton. There is good quality surrounding the ponds within the Bicester Golf Course to the north-west of the site though anecdotal evidence of great crested newt occurring within the adjacent allotments confirms that individuals do cross the road between the Golf Course and the site. There are terrestrial habitats on-site which may also be used by this species- principally the hedgerow bases and rough grassland field margins.

6.2 A single slow-worm was recorded on-site within the arable field margins.

6.3 The proposed development will result in the loss of 1.97ha of on-site terrestrial habitats for great crested newt within 500m of the closest breeding pond. Great crested newts are protected under both national and European legislation and an EPS licence will be required to permit works that would otherwise be illegal. Reptiles are also safeguarded under national law and both protection and provision for, slow-worm at the site will be covered simultaneously under mitigation measures for great crested newt.

6.4 A mitigation strategy has been described herein to prevent killing and injury of these species using a capture and exclusion exercise, followed by reinstated and enhancement of species-rich grassland and scrub habitat of benefit to great crested newt and reptiles. Whilst, a smaller amount of habitat will be reinstated than lost, it is considered that the enhancements proposed will be sufficient to satisfy the conditions for an EPS licence. Habitat provision has been focussed at the northern end of the site where it is most likely to be used by great crested newt however, habitat buffers and additional areas of open space will be maintained around the site boundaries to provide additional habitat and allow dispersal across the site.

6.5 Capture and exclusion exercises are largely limited to the months between March and October when there is no risk of ground-frost. A minimum of 90 suitable days trapping is required for a large great crested newt population, and a minimum of 60 days for a small slow-worm population. Any vegetation removal will also need to consider the potential for nesting birds which are legally protected (see section 4.2).

Appendix A

Habitats Plan (CSa/2325/105)

Legend

- Site boundary
- A — Arable
- I — Improved grassland
- SI — Species-poor, semi-improved grassland
- Species-poor, intact hedgerow
- Species-poor, defunct hedgerow
- Species-poor hedgerow with trees
- Species-rich hedgerow with trees
- Individual tree
- Introduced shrub
- Dry ditch
- Fence
- Hard-standing
- Building
- F1 — Field number
- H1 — Hedgerow number
- Target Note
  1. Spoil/debris heap
  2. Log pile

0m 100m

CSa environmental planning
Suite 1, Deer Park Business Centre,
Woollas Hall, Eckington, Pershore,
Worcestershire, WR10 3DN
t 01386 751100
f 01386 751144
e pershore@csaenvironmental.co.uk

Project	Land west of Chesterton	Date	April 2014	Drawing Number	CSa/2325/105
Title	Habitats Plan	Scale	Scale bar indicative at A4	Revision	-
Client	Taylor Wimpey UK Ltd	Drawn	KK	Checked	LC

Appendix B

Great Crested Newt Habitat Impacts Plan (CSa/2325/109b)

N

0 10 20 30 40 50 metres

LEGEND

- Application Boundary
- Great Crested Newt Habitat Lost
- Great Crested Newt Habitat Retained
- Great Crested Newt Habitat Damaged Then Reinstated And Enhanced

	IMMEDIATE (0-50m)	INTERMEDIATE (50-250m)	DISTANT (250-500m)
Great Crested Newt Habitat Lost	0.00ha	0.95ha	1.02ha
Great Crested Newt Habitat Damaged then Reinstated Enhanced	0.00ha	0.21ha	0.15ha
Great Crested Newt Habitat Retained and Enhanced	0.00ha	0.35ha	0.08ha

Revision	Date	By	Description
A	27.07.15	HT	Updated layout

CSa environmental planning
Dixies Barns
High Street, Ashwell
Hertfordshire, SG7 5NT
t 01462 743647
f 01462 743648
e ashwell@csaenvironmental.co.uk

Project	Land west of Chesterton, Oxfordshire
Title	Great Crested Newt Habitat Impacts Plan
Client	Taylor Wimpey UK Ltd
Scale @ Size	1:1250 @ A3
Date	July 2015
Drawing Number	CSa/2325/109
Drawn	AB
Checked	LC
Revision	B