





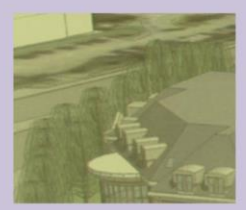


CSa environmental planning

September 2014

Land west of Chesterton

Great Crested Newt Mitigation Strategy

Prepared by

CSa Environmental Planning

On behalf of

Taylor Wimpey UK Ltd

Report No: CSa/2325/05

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Appendices

1.0 INTRODUCTION

1.1 This document has been prepared by CSa Environmental Planning on behalf of Taylor Wimpey UK Ltd. It sets out the principles of great crested newt mitigation to be implemented as part of the proposed development of up to 45 dwellings at land to the west of Chesterton, Oxfordshire.

1.2 An Ecological Appraisal of the site (CSa/2325/02) and subsequent great crested newt surveys (Protected Species Survey Report CSa/2325/04) identified a large population of breeding great crested newt within ponds at the golf course to the west of the site The closest breeding pond is approximately 90m from the site and there are anecdotal reports of great crested newts being found within the allotments immediately to the north of the site. Given the proximity of the ponds to the site, it is reasonably likely that these animals use the terrestrial habitats within the development site.

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 A European Protected Species Licence (EPS) will ultimately be required to permit development impacts to great crested newts that would otherwise be illegal. An EPS licence cannot be obtained until the site has been granted planning permission. In determining the planning permission, the Local Planning Authority must have confidence that suitable mitigation can be provided alongside development to maintain the favourable conservation status of great crested newts. This document has therefore been produced to demonstrate that the development design allows for sufficient appropriate mitigation measures.

2.0 IMPACT ASSESSMENT AND MITIGATION RATIONALE

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. The terrestrial habitat surrounding these ponds is moderate, 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 make 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 hedgerows and a wide wooded strip on the golf course side, offering good quality habitat. The width and traffic levels on the road are not considered sufficient to make the road a significant barrier to great crested newt movement. This is supported by the anecdotal records of great crested newts being found within the allotments adjacent to the northern 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 low quality for great crested newts, i.e. it provides dispersal and limited foraging opportunities. 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 could be used for foraging and shelter.

2.4 The Great Crested Newt Habitat Impacts Plan in Appendix B is based upon the development Masterplan produced by Life Space Design in September 2014. This proposal would result in the following areas of on-site terrestrial habitat being lost, following the categories with the Natural England licence documents[1] (in relation to the closest pond, c.90m from the site):

- 0 ha of immediate terrestrial habitat (<50m from pond)
- 0.93 ha of intermediate terrestrial habitat (50m - 250m from pond)
- 0.96 ha of distant terrestrial habitat (250m- 500m from pond)

2.5 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 great crested newt breeding pond. The plan within Appendix B demonstrates that the development Masterplan would provide 0.58 ha of enhanced terrestrial habitat for great crested newts within 250m, and an additional 0.3 ha within 500m of the breeding pond.

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

[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).*

2.6 Enhanced on-site habitats for great crested newts would comprise approximately 0.88 ha to be seeded with native wildflower meadow grassland and planted with new native trees and shrubs. The habitats would also include new hibernation features for great crested newt. Existing hedgerows along the northern, eastern and southern boundaries would be retained and enhanced, maintaining potential habitat linkages for great crested newt. The design principles for the mitigation habitats are provided within section 3.0.

2.7 It is considered that the loss of a larger area of terrestrial habitat that is predominantly of low quality for great crested newts, would be adequately mitigated by the provision of smaller areas of high quality habitats, with an emphasis on providing the majority of mitigation habitat within 250m of the nearest breeding pond.

2.8 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 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.

3.0 PROPOSED MITIGATION HABITATS

3.1 The types of great crested newt mitigation habitat that would be provided as part of development are shown on the Landscape Strategy within Appendix C and described below.

Green Infrastructure

Location

3.2 The largest area of new terrestrial habitat for great crested newts is proposed in the north-west of the site. The Masterplan was designed to include such habitat within this part of the site because it is the closest point to the off-site breeding pond and it is adjacent to the off-site allotments which are also understood to be used by newts.

3.3 A second area of open space to comprise new terrestrial habitat would be provided along the western edge of the site, which is between c.110m – 150m from the pond.

3.4 A third open space area that would provide new terrestrial habitat for newts occurs in the south-east corner of the site.

3.5 Existing boundary hedgerows would be retained and enhanced to provide habitat linkages for great crested newts and other wildlife between the areas of green space.

Landscape treatments

3.6 The majority of new habitats for great crested newts would comprise wildflower meadow grassland. A native species-rich wildflower grassland mix would be used to establish meadow areas that will increase the botanical diversity at the site. This habitat should support a wide range of invertebrates that would provide foraging for newts. Once established, meadow grassland should not be cut (or grazed) during the spring or summer to allow plant species to flower and set seed. This should provide a long sward for much of the year that would offer cover for newts.

3.7 Two drainage attenuation basins are proposed on the Masterplan within the open space areas. 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.

3.8 Existing hedgerows at the site boundaries are retained by the Masterplan, with the exception of the loss of a section to facilitate the new road access. The hedgerow along the northern boundary that would border the largest area of

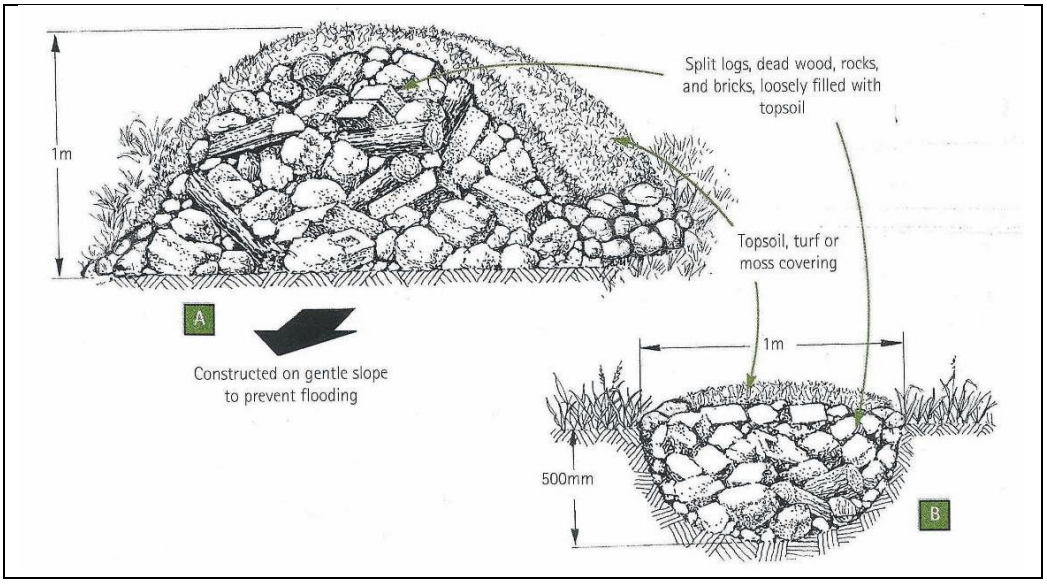
green space is currently heavily flailed and has several gaps. This hedgerow should be enhanced through infill native planting and the relaxation of management tailored to creating a wide hedge with a dense base to enhance cover for great crested newts.

3.9 The open space areas would contain small copses of native thicket to comprise a range of shrub and tree species. These areas will provide further foraging and cover for great crested newts.

Hibernacula

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

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



[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

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 under an EPS licence from Natural England. Exclusion fencing will be erected around all areas of terrestrial newt habitat to be impacted by development. Ideally this fence would be timed for erection in the early spring, once newts are active and are moving towards their breeding ponds.

4.2 The standard approach is for pitfall traps to be installed at 5m - 10m intervals along the exclusion fencing, and along internal lines of drift fencing. Artificial refugia, such as carpet tiles would also be used in between pitfall traps to increase the chances of capture. Checks of the traps and refugia would then be undertaken by an ecologist on a daily basis.

4.3 Any amphibians captured during this process would be released into cover within a defined receptor area. This would be a location outside of the exclusion fencing that would not be impacted by development and that has habitat connectivity to the breeding pond.

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 population classed as ‘large’ population from terrestrial habitats. Trapping can occur during most of the frost-free months of the year (typically between March – October).

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

5.0 POST DEVELOPMENT MANAGEMENT AND MONITORING

Management

5.1 The timing, methods and responsibility for management of new landscaping and retained habitats should be clearly set out in a Landscape and Ecology Management Plan. This should 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 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[5], 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.

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

6.0 CONCLUSIONS

6.1 It is considered that this Great Crested Newt Mitigation Strategy and the Landscape Strategy (Appendix C) demonstrate that the development Masterplan has been designed to accommodate adequate enhanced terrestrial habitats to mitigate for the impacts of development on great crested newts.

6.2 The specific details of mitigation to be implemented, such as the layout of exclusion and drift fencing and timescales for implementation, should be based upon the detailed development design following the principles set out within this strategy. This information would be required to inform an application to Natural England for an EPS licence to permit the impacts to great crested newts and their habitats.

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

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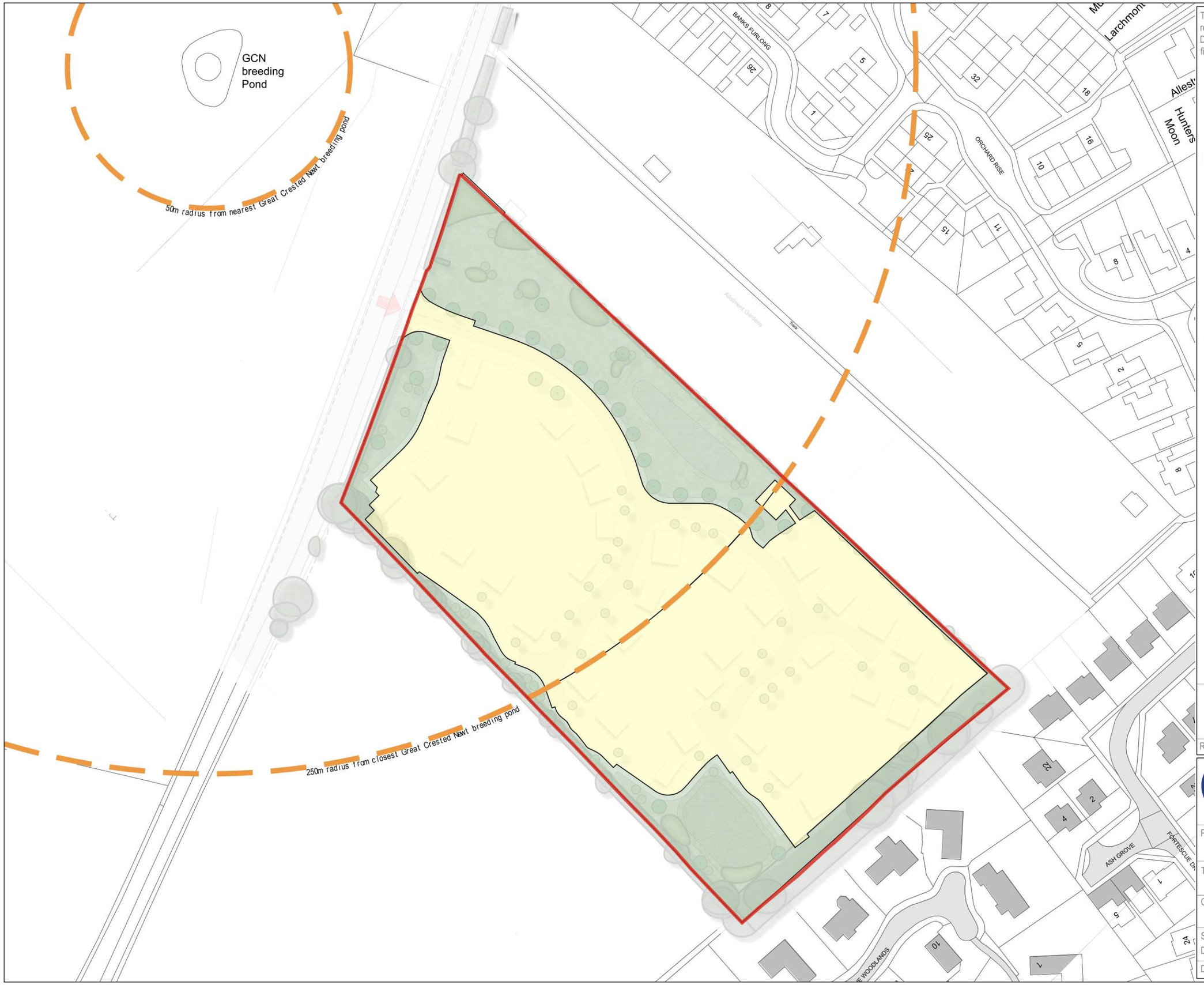
Project	Land west of Chesterton	Date	April 2014	Drawing Number	CSa/2325/105
Title	Habitats Plan	Scale	Scale bar indicative at A4	Revision	-
Client	Taylor Wimpey UK Ltd	Drawn	KK	Checked	LC

Appendix B

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



N

0 10 20 30 40 50 metres

LEGEND

- Application Boundary
- Great Crested Newt Habitat Lost
- Great Crested Newt Habitat Retained and Enhanced

	IMMEDIATE (0-50m)	INTERMEDIATE (50-250m)	DISTANT (250-500m)
Great Crested Newt Habitat Lost	0.00ha	0.93ha	0.96ha
Great Crested Newt Habitat Retained and Enhanced	0.00ha	0.58ha	0.30ha

Revision	Date	By	Description

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Project	Land west of Chesterton, Oxfordshire
Title	Great Crested Newt Habitat Impacts Plan
Client	Taylor Wimpey UK Ltd
Scale @ Size	1:1250 @ A3
Date	September 2014
Drawn	AB
Checked	LC
Drawing Number	CSa/2325/109
Revision	-

Appendix C

Landscape Strategy (CSa/2325/108)

1 Main Distributer Road

Objectives

- Establish lines of trees to create strong landscape features within the key primary streetscape
- Develop an open character to the main street with wide grass verges

Indicative Species for Avenue Trees;

Indicative Species	Common name	Size	Root Condition
Corylus colluma	Turkish Hazel	18-20cm girth	CG
Carpinus betulus 'Frans Fontaine'	Hornbeam	18-20cm girth	CG
Tilia cordata 'Greenspire'	Lime	18-20cm girth	CG

Residential Landscaping

Objectives:

- Plant new street trees to provide structure and create focal points within the development; and
- New tree and ornamental shrub planting within landscaped parcels to soften the built form, including species known for wildlife value, such as Cherry, Birch, Lavander and Viburnum, as described in 'Plants for Wildlife Friendly Gardens' produced by Natural England.

2 Native Hedgerow Buffer

Objectives

Reinforce existing hedgerow with new native infill planting along the boundary to provide natural enclosure to the north / northeast. Relax management of hedgerow to allow existing planting to form wide native hedgerows providing screening and a robust boundary to the development. Hedgerow trees to be planted intermittently along length of boundary.

Indicative Species	Common Name	Size(cm)	% Mix
Corylus avellana	Hazel	45-60	20
Crataegus monogyna	Hawthorn	45-60	30
Ilex aquifolium	Holly	45-60	10
Prunus spinosa	Blackthorn	45-60	20
Rosa canina	Dog rose	45-60	10
Viburnum opulus	Guelder Rose	45-60	10

Hedgerow Trees

Indicative Species	Common Name	Supply Height(cm)	Girth(cm)
Acer campestre	Field Maple	200-250	8-10
Quercus robur	Oak	200-250	8-10
Prunus avium	Wild Cherry	200-250	8-10

3 Public Open Space

Objectives

- Incorporating new tree planting and structured shrub planting to provide a robust edge to the new development and softening views from neighbouring houses
- Establish areas of informal wildflower meadow, incorporating groups of parkland trees.
- Introduce mowing regime to encourage development of more diverse grass sward for benefit of wildlife and increase species diversity through introduction of native wildflower species into the meadow mix
- Incorporate new areas of native thicket shrubs with limited high canopy trees to form small copses within the long grassland areas to add visual interest and cover for wildlife.
- Meadow areas to provide additional habitat and cover for reptiles
- Create new informal mown grass footpaths to provide dog walking routes.

Parkland Trees

Indicative Species
Quercus robur
Tilia cordata
Sorbus aucuparia

Structural Shrub Mix with High Canopy Trees

Indicative Species	Common Name	Height(cm)	Root condition	% Mix
Betula pendula	Silver Birch	125-150	BR	10
Prunus avium	Wild Cherry	125-150	BR	10
Sorbus aucuparia	Rowan	125-150	BR	10
Understorey				
Cornus alba	Dogwood	125-150	BR	20
Corylus avellana	Hazel	125-150	BR	20
Ilex aquifolium	Holly	125-150	C	10
Ligustrum vulgare	Privet	125-150	BR	10
Viburnum opulus	Guelder Rose	125-150	BR	10

Structural Shrub Mix

Indicative Species	Common Name	Height(cm)	Root condition	% Mix
Berberis atropurpurea	Berberis	30-40	3L	20
Cornus alba 'Sibirica'	Dogwood	30-40	3L	20
Cotinus coggygria		40-60	3L	10
Escallonia 'Donard Radiance'		30-40	3L	20
Genista lydia		30-40	3L	10
Ligustrum japonicum		40-60	3L	10
Ilex aquifolium 'JC vonToll'	Holly	40-60	3L	10

Meadow Mix

EM2 'Standard meadow mix' by Emorsgate Seeds Ltd or equal and approved

6 Soakage Depression

Objectives

- Create a large, predominantly dry, shallow depression to provide additional overland drainage capacity in peak conditions.
- Plant isolated parkland trees and wetland style thicket to provide shade and interest, utilising species tolerant of potentially seasonally wet conditions.

Indicative Species	Common Name	Supply Size	Root Condition
Alnus glutinosa	Alder	60-80cm	BR
Betula pubescens	Downy Birch	60-80cm	BR
Corylus avellana	Hazel	60-80cm	BR
Cornus sanguinea	Dogwood	40-60cm	3L Container
Crataegus monogyna	Hawthorn	60-80cm	BR
Salix fragilis	Crack Willow	60-80cm	BR
Salix cinera	Gray Willow	60-80cm	BR
Viburnum opulus	Guelder Rose	60-80cm	BR

Wet Meadow Mix

EM8 'Wet meadow mix' by Emorsgate Seeds Ltd or equal and approved

5 LAP Play Area

Objectives

Create a dedicated play space will be provided for children aged under 5 years old that will provide a safe space for play and running around. Adult seating will be provided and the space will be enclosed by railings with gated access.

Suggested play provision:

- Multi-play unit offering climbing and sliding set in wetpour safety surfacing;
- Carved timber features set in grass;
- A wetpour surfaced area with small play structures;

All equipped LAP will be located at least 10 metres away from the nearest habitable room of the proposed dwelling.

4 Lanes

Objectives

- Residential units softened by abundant shrub planting and ornamental hedgerows to the outer edge of the private drive
- Tree planting to compliment the existing leafy character of the development and its setting
- Carriageway surface-dressed to provide an intimate residential character adjacent to the countryside edge

Pedestrian Link

LEGEND

- Application boundary
- Existing Trees / Vegetation

Softworks

- Structural Native Shrubs with High Canopy Trees
- Structural Native Shrubs
- Wetland Thicket
- Extra-Heavy Standard Trees / Advanced Nursery Stock
- Street / Garden Trees
- Half-standard Trees
- Ornamental Hedge Planting
- Native Hedge Planting
- Ornamental Shrub Planting
- Amenity Grass
- Wildflower Meadow Mix
- Wet Wildflower Meadow Mix
- Great Crested Newt Hibernacula

Revision	Date	By	Description

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