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GREAT GROVEHURST FARM, SITTINGBOURNE

Great Crested Newt Mitigation Strategy

Client: G H Dean & Co Ltd

Reference: J005845

Date of Report: November 2015

Issue:	Date:	Written by:	Reviewed by:	Amended by:	Approved by:
Draft	13 November 2015	AH	SK	AH	SK
Draft Two	27 November 2015	-	-	SK	SK
One	8 July 2016	-	-	SK	SK

Company Registration Number: 372 4176
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Certificate Number 6745
ISO 9001, ISO 14001, OHSAS 18001

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1 INTRODUCTION

1.1 In October 2015, Ecosulis was commissioned by G H Dean & Co Ltd to compile a great crested newt mitigation strategy of land at Great Grovehurst Farm, Sittingbourne.

1.2 The current proposals for the site include brickearth extraction followed by the construction of residential properties. In addition, archaeology investigations, building demolition and contaminated soil removal will also be undertaken in advance of great crested newt licence implementation. This mitigation strategy has been compiled to inform the planning application for the proposed development.

1.3 This mitigation strategy includes an assessment of potential impacts of the development, as well as construction and operational phases of development. The mitigation strategy detailed within this application would then by applied to a Natural England European Protected Species Licence (EPSL) for the site. This licence would be required to allow works to be undertaken on site.

Objectives of Study

1.4 The aim of this strategy is to ensure that great crested newts are fully considered within the development plans, and that the necessary implementation works and timescales for these are provided to the developer in order that they can schedule in the works as accurately as possible

General Description of Site

1.5 The site is located on the northern outskirts of Kemley and is centred on OS grid reference TQ 904 666. It covers an area of 4.8ha and includes an unoccupied cottage, farm buildings which are now used by a car sales business, pet supply store and stables. Other areas on site include hardstanding and grassland.

1.6 The site is surrounded by large built up areas on all sides, including a main road to the east.

2 BACKGROUND TO THE DEVELOPMENT

Existing Survey Data

2.1 A great crested newt Habitat Suitability Index (HSI) assessment was undertaken by Lloydbore Landscape and Ecology of ponds within 250m of the site to assess their suitability to support great crested newts. The survey recorded two ponds; one with 'excellent' suitability and the other with 'good' suitability to support great crested newts. These are located immediately north and south of the site.

2.2 In addition, a great crested newt presence/absence survey was undertaken in May 2013 by Lloydbore Landscape and Ecology, to determine presence or likely absence of this species within adjacent ponds. The presence/absence survey recorded great crested newt presence within both ponds surveyed within 250m of the site. A small population of great crested newts were present in each pond. The ponds are likely to be used in combination by a metapopulation. One pond, located west of the site, was not surveyed in 2013.

2.3 The update 2016 surveys recorded the same size population as previous surveys (small population present), and the same habitats on the site. As such, the calculated 1.3ha of mitigation habitat is still required for this scheme.

Development Proposals

2.4 The proposals for the site include the construction of up to 130 residential properties. Prior to the housing construction phase, brickearth extraction will be undertaken and will take 12 months to complete.

2.5 The housing development will include areas of associated access and landscaping. An area of open space will be provided in the north of the site, including one new wildlife pond on the northern boundary.

3 IMPACT ASSESSMENT

3.1 Great crested newts typically use territorial habitat up to 500m from breeding ponds. Broadly speaking the likelihood of newt presence and therefore density is highest within 50m of a breeding pond. However terrestrial habitat and connectivity will influence newt distribution.

3.2 The proposed site clearance works are located within 500m of ponds known to support a small population of great crested newts. Suitable great crested newt habitat is present on site in the form of hedgerows and longer grassland edges. Grassland in the centre of the site has been under agricultural management, but provides some suitable foraging and commuting habitat for newts. The impacts below have been assessed in the absence of mitigation.

Constructive Phase Impacts

3.3 During construction, there is a risk of direct harm to great crested newts from site clearance, moving machinery and extraction works. In addition, the works will result in direct habitat loss as detailed below.

Habitat Loss

3.4 The proposals for the site will require extensive vegetation clearance of suitable terrestrial habitat for great crested newts. No pond habitat will be affected by the proposals, as these are all located adjacent to the site. A total of approximately 3.2ha of suitable great crested new habitat, comprising predominately grassland, will be permanently lost to the development.

Fragmentation and Isolation

3.5 The works will result in the loss of habitat that connects the two adjacent ponds. Unmitigated, the proposals will result in fragmentation of suitable foraging and commuting opportunities for great crested newts travelling between the ponds.

Operational Phase Impacts

Habitat Loss

3.6 The proposals will result in the permanent loss of existing grassland on site (3.2ha). If managed incorrectly, the hedgerows on site could also be degraded which would also result in some refuge habitat loss. The development proposals will include areas of open space and residential gardens, which will provide some suitable terrestrial habitat for great crested newts.

Fragmentation

3.7 Based on the great crested newt presence/absence survey, it is considered likely that the small population of great crested newts form a metapopulation within adjacent waterbodies. As a result, great crested newts may cross the site to use both confirmed breeding ponds. The proposed development could sever the route between the ponds through the construction of housing and new roads.

3.8 There is also a risk of great crested newt mortality on the new roads as great crested newts cross the site to use the network of ponds in the area. Although only minor cul-de-sac roads are proposed with a low speed limit, the road is likely to be used by residents at night therefore there is a risk of amphibian mortality, especially during spring months.

Disturbance

3.9 The site is currently managed as agricultural land, therefore the change in land use to residential housing is likely to increase disturbance pressures on great crested newts. In addition to increased traffic levels detailed above, the development will also result in increases in noise, lighting, recreational pressures and increased predation by cats.

4 MITIGATION STRATEGY

4.1 Whilst the majority of the works on the site will be undertaken under a Natural England European Protected Species Licence (EPSL), some initial investigation works to small areas of the site are required in advance. Mitigation measures to cover these activities have therefore been detailed below to ensure that the relevant legislation is not breached.

Archaeology

4.2 Archaeological investigations will be required on the site to inform the planning application. This will involve the creation of several trial trenches across the site. On this basis, they will need to be undertaken in advance of the EPSL licence being granted.

4.3 An Ecological Clerk of Works will be present on site to oversee the works. A hand and destructive search will be undertaken in advance of the works, and the works will avoid hibernation season (generally November to February). Once the hand search has been completed and the area deemed clear, the topsoil strip will be undertaken under supervision by the Ecological Clerk of Works. Machinery and workers will be restricted to the trail areas only, and access routes will be restricted to minimise disruption or risk of injury/killing to great crested newts.

4.4 Following the works, trail trenches will be backfilled.

Great Crested Newt Receptor Area

4.5 The receptor area is located in the south-west corner of the site. The location of the receptor site will allow great crested newts to utilise the pond immediately south-west of the site, which is likely to be used by the meta-population of newts currently utilising the site, as well as allowing a feasible development scheme. Any newts being relocated to the receptor area will be able to use the adjacent pond for breeding during the 12 months of brickearth extraction on the site. In addition, the receptor site is located within 50m of the adjacent pond, which is considered to be the highest quality habitat most used by the breeding population using the pond.

4.6 This, in addition to the retained buffer along the southern boundary will maintain connectivity east/west for foraging and commuting great crested newts, therefore aiming to maintain the favourable conservation status of the local population.

4.7 The size of the receptor site has been based on the total amount of suitable newt habitat on the site. The site covers an area of 4.832ha, the majority of which comprises arable land and buildings and hard-standing. The amount of suitable newt habitat has been calculated at 1.3ha, which includes scrub and grassland habitats. The amount of mitigation provided within the scheme will therefore total this to ensure that suitable habitat for great crested newts is retained on the site. This will then be enhanced through appropriate management and planting. The calculations were undertaken by Thompson Ecology.

Receptor Site Preparation

4.8 Contaminated soils are present within the proposed great crested newt receptor area and will be removed during receptor area preparation works. Localised excavations will be undertaken, and will be supervised by an Ecological Clerk of Works. Precautions will be put in place to ensure that works are restricted to the working area only and not encroach other suitable habitats.

4.9 In addition, buildings currently form part of the proposed receptor area. These will be removed as part of the works, in advance of the licensable works detailed below. Removal of any foundations, as required, will be undertaken in accordance with the contaminated soil removal details above.

4.10 Once works to the receptor site have been completed, additional planting will be undertaken to enhance opportunities for great crested newts and prepare the receptor site for the translocation exercise (detailed below).

Works under the Natural England Licence

4.11 A Natural England EPSL will be required to allow works to proceed on site. This will include the mitigation detailed below. Figure 1 shows proposed mitigation for the site.

Short-term Mitigation

Retained Habitat

4.12 Retained habitats on site, namely hedgerows and some grassland habitats, will be protected during both stages of the works. This will include marking out retained habitats with Heras fencing (or similar) and signs for contractors. The retention of these habitats will maintain a green corridor along the eastern boundary of the site for great crested newts. A toolbox talk will be delivered to contractors and site operatives in advance of works highlighting areas to be protected. The talk will be delivered by an Ecological Clerk of Works, and explain protected species, responsibilities and required work methods.

Temporary Amphibian Fencing and Pitfall Trapping

4.13 Temporary Amphibian Fencing (TAF) and drift fencing will be installed around areas proposed for clearance under licence, and will initially follow the extraction line shown on Figure 1.

4.14 Pitfall trapping will be undertaken when night-time temperatures are consistently above 5°C (generally March to October). A minimum of 30 nights of trapping would be undertaken, and pitfall trapping will cease following five consecutive days with no capture at the end of this minimum period. Any amphibians captured will be relocated to the proposed receptor site in the south of the site (shown on Figure 1). The receptor site has been selected so that it has connectivity with the pond immediately south of the site.

4.15 TAF around the boundaries of the site will be maintained during construction to ensure that amphibians do not re-enter the construction site. Drift fencing will be removed by/under supervision of an Ecological Clerk of Works prior to construction works commencing.

4.16 Once the site has been deemed clear of great crested newts, vegetation clearance works would proceed under supervision of an Ecological Clerk of Works. The Clerk of Works would undertake hand and destructive searches on the site to check for any amphibians. Any found would be moved to the receptor site. Methods for vegetation clearance would follow those set out within English Natures Great Crested Newt Mitigation Guidelines (English Nature 2001).

4.17 The boundary TAF will be installed prior to brickearth works commence and not removed until both stages of development are completed to prevent any great crested newts utilising the site between work phases. The fenceline will be moved following the brickearth extraction to the developable area shown on Figure 1. This is to allow the additional landscaping works to be completed on the northern and western boundaries of the site, to enhance opportunities for great crested newts on the site.

Northern and Eastern Boundary Reinstatement

4.18 Following the brickearth extraction, and prior to the commencement of the housing development, landscaping will be implemented on the northern and eastern boundaries of the site to provide additional habitat for great crested newts. This will reinstate connectivity to ponds to the north of the site, therefore minimising potential fragmentation of the population (brickearth extraction will take 12 months to complete). This area has been landscaped to provide additional opportunities for great crested newts.

Construction Works

4.19 No brickearth extraction will be undertaken within the receptor site, or along the southern and western boundaries of the site. No construction activities will be undertaken within mitigation areas, and protection fencing will be installed to mark these as 'no-go' areas for construction workers. Storage areas for materials will also be placed outside of mitigation areas, and temporary newt fencing.

Long-term Mitigation

4.20 Following the completion of construction works on site, TAF will be removed from the perimeter of the site. The proposals include the creation of minor roads on site. These roads are likely to be used by low levels of traffic, and are unlikely to be subject to high levels of use at night. As such, the risk of amphibian mortality is low. Amphibian friendly kerbs (dropped, sloping kerbs) and amphibian friendly gully pots should also be incorporated along the roads. This will allow amphibian movement across the whole site.

Sustainable Urban Drainage Systems

4.21 The use of Sustainable Urban drainage Systems (SuDS) should be incorporated within the scheme, and will include a new water body on the northern boundary.

4.22 The proposals include the construction of a new wildlife pond on the northern boundary. The pond will provide additional breeding habitat for great crested newts, and will be connected with existing known breeding ponds, therefore providing suitable breeding habitat for the local metapopulation.

4.23 The pond will be designed and created to maximise its ecological potential. Bank profiles will have a shallow edge and will be planted using native marginal plants, particularly water mint.

4.24 In addition, a total of two great crested newt hibernacula will be created adjacent to the new pond to provide additional refuge habitat for great crested newts. These will be created from a combination of wood, soil, rubble and rock, and will provide additional refuge opportunities for great crested newts. Appendix I includes a specification for the hibernacula on the site. Each hibernacula will be at least 2m long x 1m wide x 1m high

Buffer Zone

4.25 Open space habitat will be created on the southern, eastern and northern boundaries of the site specifically landscaped for great crested newts. These areas will be managed appropriately in the long-term to enhance opportunities for great crested newts in the local area. Additional planting will also be incorporated into these areas of open space, to include scrub and native shrub planting, to enhance terrestrial habitat for amphibians and to minimise public access into these areas. These will form the main wildlife corridors for amphibians, however in addition residential gardens will provide additional foraging opportunities for amphibians commuting across the site.

4.26 Open space provision and residential gardens will continue to provide suitable opportunities for great crested newts and connectivity between the site and wider ponds.

FIGURE 1

Key

- Site Boundary
- Constraints Zone
- GCN Receptor area 0.675ha
- Total GCN mitigation area 1.579ha (to be created following brickearth extraction but
- Developable area
- Extraction Boundary

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Client	G H Dean & Co Ltd	
Project	Great Grovehurst Farm	
Title	GCN Mitigation	
Date November 2015	Scale SCHEMATIC ONLY	Figure 1

5 PROGRAMME OF WORKS

5.1 Works with seasonal constraints are summaries in the table below. Natural England require at least 30 working days to process any licence application.

Table 1: Proposed Programme of Works

Works	2016												2017
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Licence Application													
Toolbox Talk													
Installation of TAF fencing													
Pitfall trapping and clearance													
Clearance works under supervision (following 5 clear days)													
Construction works commence (following clearance)													
Brickearth Work(12 Months)													
Residential Housing Construction													
Creation of enhancement features prior to the completion of construction (new pond creation)													

Table 2: Seasonal Constraints

Works	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Installation / removal of drift fencing												
Pitfall trapping												

6 LIMITATIONS OF SURVEY AND REPORT

6.1 This report records wildlife found during the survey and anecdotal evidence of sightings. It does not record any plants or animals that may appear at other times of the year and were therefore not evident at the time of visit. Some species that might use the site or be apparent at other times of year, or only in certain years, would not have been detected.

6.2 The present/absence surveys and HSI were undertaken by a separate Ecological Consultancy Lloydbore Landscape and Ecology.

6.3 The behaviour of animals can be unpredictable and may not conform to standard patterns recorded in current scientific literature. This report therefore cannot predict with absolute certainty that animal species will occur in apparently suitable locations or habitats or that they will not occur in locations or habitats that appear unsuitable.

6.4 The advice contained in this report relate primarily to factual survey results and general guidance only. On all legal matters you are advised to take legal advice.

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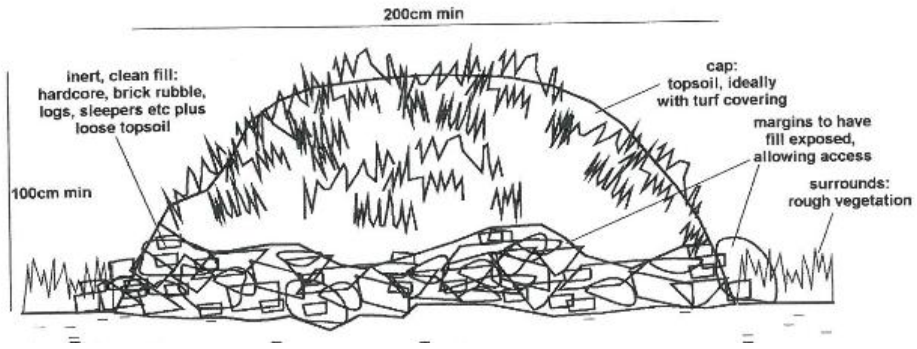
Appendix I: EXAMPLE HIBERNACULA DESIGN



Source: English Nature (2001) *Great Crested Newt Mitigation Guidelines* English Nature