

TAYLOR WIMPEY UK

LAND AT SWANBRIDGE ROAD, SULLY

REPTILE MITIGATION STRATEGY

16 September 2016



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Summary

Soltys Brewster Ecology were commissioned by Taylor Wimpey to devise a mitigation strategy for reptiles at Land at Swanbridge Road in Sully which has been proposed for residential development.

No reptile surveys have been undertaken at the site and it has been agreed with the Local Authority that a mitigation strategy would be prepared based on the assumed presence of small numbers of reptiles.

The site currently comprises arable land surrounded by hedgerows with the surrounding landscape dominated by residential houses, gardens and agricultural grassland. The arable land currently supports a Maize crop which is considered to be of little potential to support reptiles. However the hedgerow bases and narrow field margins around the boundary of the site were considered to have some, albeit limited potential to support common species of reptile.

An area of grassland and hedgerow within the north of the site is to be retained/provided as part of the development and as such the mitigation strategy will include a programme to capture any reptiles from within the development footprint and transfer them to the retained area (reptile translocation). Enhancement of habitats within the retained area will also be undertaken prior to the commencement of the translocation exercise including supplementary scrub planting and creation of hibernacula and log pile habitat etc.

Surveys undertaken in the pond located approximately 70m north of the site identified the presence of Great Crested Newt *Triturus cristatus* and, given the proximity to the current application site, a Mitigation Method Statement has been produced to protect Great Crested Newt at the site (Soltys Brewster Ecology, 2016). The mitigation strategy for reptiles set out within the current document has been designed to run in parallel with the strategy produced for Great Crested Newt.

The current report presents detail of the mitigation strategy for reptiles and will form the basis of the method statement for the phased capture and transfer of reptiles out of the development footprint (to be undertaken by the project ecologist) and for site clearance undertaken by the appointed contractors. The strategy will involve clearance of all vegetation within the development works footprint to ground level, installation of exclusion fencing around the development footprint and the deployment of artificial reptile refugia at a high density. The capture/transfer will involve checks of the refugia and the capture and transfer of any reptiles found to the receptor site. Post-transfer checks of the receptor site will also be undertaken to establish the continued presence of reptiles. The site is to be developed over three phases and a translocation exercise will be undertaken within each phase prior to the commencement of works.

1.0 INTRODUCTION

- 1.1 Soltys Brewster Ecology were commissioned by Taylor Wimpey to devise a reptile mitigation strategy (method statement) in support of a proposed residential development of a parcel of Land at Swanbridge Road in Sully.
- 1.2 No survey for reptile has been undertaken at the site however it has been agreed with the Local Authority Ecologist that a mitigation strategy would be prepared based on assumed presence of low numbers of reptiles at the site.
- 1.3 The site dominated by arable land surrounded by hedgerows. The arable land was considered likely to be of little or no value to reptiles. However the hedgerow bases and narrow field margins around the boundary of the site were considered to have some, limited potential to support common species of reptile.
- 1.4 All common species of reptile are protected against killing or injury under Schedule 5 (Sections 9(1) and 9(5)) of the Wildlife and Countryside Act 1981 (as amended). In terms of site development this effectively translates into a requirement to transfer or exclude reptiles from areas where they could be killed or injured. An existing area of grassland and hedgerow in the northern area of site is to be retained/provided as part of the proposed development (see proposed layout in Appendix I). Enhancements are proposed within the retained habitat (supplementary scrub planting and creation of log-piles and hibernacula) and this area is considered appropriate to receive reptiles found within the development footprint. The site is considered unlikely to support large number of reptiles based on the small area of suitable habitat present.
- 1.5 The current document sets out the strategy to minimise the risk of killing or injuring reptiles including appropriate vegetation clearance from the development (or donor) site, enhancement works to the receptor sites, translocation of reptiles from within the donor site to the receptor site and monitoring at the receptor sites post transfer of animals. The site is to be developed over three phases and a translocation exercise will be undertaken within each phase prior to the commencement of works.
- 1.6 Surveys undertaken in the pond located approximately 70m north of the site on site revealed the presence of Great Crested Newt. The current report should be read in conjunction with the Mitigation Method Statement – Great Crested Newt (Soltys Brewster Ecology, 2016) and the translocation strategy for reptiles has been designed to run in parallel with the works to protect Great Crested Newt at the site.

2.0. METHODOLOGY

Overview

- 2.1. The details of the reptile translocation are set out in this document and form the basis of a Method Statement for vegetation management/removal and provision of enhancements (supplementary scrub planting and creation of log-pile, stone pile and hibernacula) by a suitably experienced contractor. Based on the layout and scale of the proposed development, and the need to protect reptiles from killing or injury as far as practicable, transfer of reptiles to the retained habitat area in the north of the site (receptor site), outside the works footprint (donor site) would be the most practical course of action (Figure 1). The development layout would permit retention of boundary hedgerow in the north of the site and grassland would be sown/created adjacent to this hedgerow. Due to the small number of reptiles considered likely to be encountered within the works footprint, along with the adoption of enhancement measures to increase ‘carrying capacity’, this area would form the receptor site. Reptiles would also be able to disperse from the receptor site along the hedgerow corridors around the site boundary, providing access to a comparable range of habitats/resources as is currently available at the site.
- 2.2. Timing of works has yet to be confirmed, however for the purpose of this mitigation strategy a commencement of reptile translocation in spring 2018 has been assumed. Should works be delayed, or come forward more quickly than anticipated, the programme of works identified within this document would need to be revised accordingly. Works to capture and transfer reptiles will only be undertaken in suitable weather conditions during the active period for reptiles (late-March to September inclusive, weather dependent).
- 2.3. The site is to be developed on a phased basis and as such a translocation exercise will be undertaken within each phase (3no. phases) prior to the commencement of development. A successful translocation prior to commencement of each phase will require the following elements:
1. Habitat enhancement at proposed receptor site including sowing of grassland, proposed planting and construction of hibernacula, log-pile and stone-pile features using material from donor site (if suitable resource exists, or sourced externally if required) prior to March 2018 (Figure 1);
 2. Removal of above-ground vegetation to ground level within the proposed development phase (e.g. Phase 1) using hand-held strimmers or chain saws, with all arisings removed (short sections of hedgerows at highways access points and cutting other vegetation within construction). For development Phase 1 clearance will be undertaken in winter 2017/ 2018 (prior to March 2018¹);

¹ This timing would avoid potential conflict with the bird nesting season and would coincide with hibernation of reptiles (and amphibians) below ground - i.e. would avoid/minimise the risk to nesting birds and reptiles

3. Installation of temporary exclusion fencing around the boundary of the development phase (Figure 2 and Appendix II) following vegetation clearance (i.e. in March 2018 for Phase 1);
4. Deployment of artificial refugia (e.g. 0.5 x 0.5 squares of roofing felt) within donor site at high density and within receptor sites at low density (from March 2018 for Phase 1);
5. Checking of refuges within donor site and transfer of animals to receptor sites under suitable environmental conditions (from late March 2018 for Phase 1 (weather dependent));
6. Translocation to continue until such time as 5 nil returns have been achieved at the donor site or 'reasonable capture effort' is agreed with the local authority. Following the translocation a destructive search is to be undertaken (hand search of remaining refuges, uprooting tree stumps etc.). Any remaining reptiles found during destructive search to be immediately transferred to the receptor site.
7. Completion of destructive search marks the start of site construction (i.e. soil strip and commencement of construction works).
8. The same process outlined in items 2 to 7 above will be repeated for development phases 2 and 3 i.e. vegetation clearance, construction of exclusion fence, deployment and checking of refugia and, following 5 nil returns, site clearance. The location of exclusion fencing for each phase of development is illustrated in Figure 2. Timing of future development phases will be dependent upon progress of works on site. Works to capture and transfer reptiles will only be undertaken in suitable weather conditions during the active period for reptiles (late-March to September inclusive, weather dependent).

Reptile species and numbers

- 2.4. No surveys have been undertaken at the site. Given the poor quality of the habitat present over much of the site (arable land) any reptiles present were considered most likely to present around the hedgerows bases and narrow field margins located around the site boundary. Estimating reptile numbers on any site is difficult and in the absence of survey information this has not been attempted. However, in the unlikely event more than 40 individuals were found during the translocation exercise a discussion with the Local Authority Ecologist will be undertaken to identify whether further enhancements or an additional receptor site would be required.
- 2.5. No records of reptiles within 1km of the site were revealed via the desk study information supplied by the South East Wales Biodiversity Information Centre (SEWBRc). Based on the available habitats the reptile species considered most likely to be encountered on site are Slow Worm *Anguis fragilis* and potentially

Common Lizard *Zootoca vivipara*. Should other species of reptile be encountered (e.g. Grass Snake *Natrix natrix*) the mitigation strategy set out in the current document is also considered appropriate for these species.

Habitat management – Removal of vegetation

- 2.6. In the interests of optimising reptile capture, and avoiding potential conflict with the bird nesting season, the woody vegetation (short sections of hedgerow at highway/ pedestrian access point) would be cut to ground level over winter prior to the translocation (prior to March 2018 for Phase 1). Remaining grass/ non-woody vegetation would be cut to a height of c.50mm (in February 2018 for development Phase 1). Some of the felled woody material would be retained and utilised to create the enhancements features (log piles etc.) as indicated on Figure 1, with the remaining material removed from site. All non-woody vegetation would be immediately removed (within 24-48h of cutting) and composted/disposed of off-site.

Exclusion fencing

- 2.7. In order to minimise the risk of movement of reptiles into the development footprint and to effectively 'fix' the number of animals to be translocated, temporary exclusion fencing will be installed around each development phase prior to the translocation as illustrated on Figure 2 and Appendix II. For Phase 1 the exclusion fence would be installed in March 2018. Once installed, the fencing would be checked regularly during both the translocation and construction period, with any damaged sections immediately replaced or repaired (within 24 - 48h) – the relatively simple fence design shown in Appendix II facilitates maintenance/repair of the fence. Following completion of construction works within each phase the surrounding exclusion fence would be removed.

Use of refugia & translocation

- 2.8. To facilitate the capture of reptiles from the site, artificial refuges in the form of 0.5 x 0.5 m squares of roofing felt would be deployed at high density following completion of vegetation clearance and installation of the exclusion fencing. For development Phase 1 refugia would be deployed in March 2018.
- 2.9. Following a 'settling-in' period of 5 – 7 days, refuges would be checked by an experienced ecologist. All checks would be undertaken under suitable environmental conditions as defined by FrogLife (1999) i.e. little or no rain/wind, temperature between 9 and 18°C. Checks would commence, dependent upon the weather conditions and installation of exclusion fencing from late March and all reptiles found would be carefully captured by hand. The reptiles would be transported to the receptor site in appropriate containers lined with vegetation, taking care to ensure they are not subjected to undue stress or allowed to over-heat. The reptiles would be released at the receptor site, in areas where cover from predators is readily available. All animals

would be released as soon as possible following capture unless environmental conditions were such that the animals had to be held temporarily (e.g. overnight) until release conditions were more suitable.

- 2.10. The translocation will be actively managed by the project ecologist, who will monitor the catch results and weather conditions to ensure the number, frequency and timing of visits undertaken is such so as to achieve the maximum catch rate possible.
- 2.11. Capture of reptiles on the site will continue until a 'reasonable capture effort' (as determined by the project ecologist in consultation with the Local Authority) had been expended. Typically, a series of 5-10 'nil returns' – i.e. 5-10 visits to site with no reptiles found – is taken as a reasonable demonstration that reptiles have been successfully translocated.
- 2.12. Following completion of the translocation exercise a destructive search would be undertaken to remove any remaining refugia within the footprint of the development phase. For the current site this is considered likely to involve removal of shrub roots associated with the short sections of hedgerow to be removed at highways access points. These features would be hand searched prior to removal and a small excavator would be used to pull back stumps to expose the root ball which would be checked by the ecologist prior to full uprooting and removal. Any remaining reptiles (or Great Crested Newt) recovered during this search would be captured and immediately transferred to the receptor site.
- 2.13. The same process outlined above would be will be repeated for development Phases 2 and 3 i.e. vegetation clearance, construction of exclusion fence, deployment and checking of refugia and, following 5-10 nil returns, site clearance. Timing of future development phases will be dependent upon progress of works on site. Works to capture and transfer reptiles will be completed prior to commencement of any works within a development phase and will only be undertaken during suitable weather conditions and within the active period for reptiles (late-March to September inclusive, weather dependent).

3.0 RECEPTOR SITE

- 3.1. The receptor site comprises the retained area and boundary hedgerow within the northern part of the development site (Figure 1). Currently this area is managed as arable farmland. In the sowing season prior to commencement of the translocation (September/ October 2017) the area is to be sown with a suitable grass seed mix (e.g. Emorsgate EM2) to create a grassland habitat within this area.

- 3.2. Additional enhancements are to be undertaken within the receptor site to make the habitats more suitable for use by reptiles (and Great Crested Newt). These enhancements include the creation of log-pile, stone-pile and hibernacula as well as supplementary scrub planting as illustrated in Figure 1. Management of the receptor site will also be undertaken as described below to provide more favourable habitat for reptiles (and Great Crested Newt).
- 3.3. A small pond is also to be created within the retained habitat to provide additional breeding habitat for Great Crested Newt (Figure 1). The pond is to be created using a small excavator prior to the commencement of the reptile translocation. Any area to be disturbed as part of the pond creation is to be hand searched for reptiles/ newts prior to any works being undertaken.

Management of receptor site

- 3.4. The management of the retained habitat area will aim to promote the development of a tussocky sward more suitable for reptiles. Within the retained habitat area and once the grassland has established it will be managed via cutting. To maintain a tussocky resource the grassland will be cut on a rotational basis, with no more than half the area cut in any one year. The eastern half of the retained habitat area would be cut in year 1 following commencement of construction and the western half in year 2 and continue on this basis. The grassland will be cut between November and February, when reptiles would be least likely to be active and at risk of killing or injury. Cutting height will not be lower than 100mm and all arisings will be collected and removed from the site. Scrub encroaching into the grassland areas will be cut back to ground level on an annual basis as required.
- 3.5. Pedestrian paths through the retained habitat area as illustrated in Figure 1 will be maintained via mowing a narrow strip of grassland no wider than 1.5m. Mowing of these paths will typically be undertaken every 2-4 weeks, dependent upon vegetation growth rates.
- 3.6. The existing hedgerow along the northern boundary of the site is a dense, mixed species hedge which is regularly trimmed. The objectives for this feature are to maintain a dense hedgerow and allow to grow up to 2-3m in height. Adjacent scrub planting in the site to the north will to increase the width of the hedgerow to 10m and will form a scrub corridor along the boundary of the site. Blocks of scrub will also be planted within the retained area to increase the area of scrub habitat present. A high proportion of thorny species are included within the planting mix and the aim is that, once established, these will form areas of dense scrub 2-3m in height and that the thorny species will discourage human access to these areas.

- 3.7. The northern boundary hedgerow is to be trimmed on a two year rotation using handheld equipment. All cuttings/ arisings are to be removed from the site and composted/ disposed of as appropriate.
- 3.8. In scrub planting areas all planted shrubs (excluding standard trees) will be cut back to 200mm in year 3 (2020) using handheld equipment to encourage dense, bushy growth. Edge trimming of scrub will be undertaken annually as required to prevent overgrowth into adjacent areas. No further management is proposed and shrubs will be allowed to grow up to form an area of dense, mixed species scrub.
- 3.9. All cutting of scrub or woody vegetation will be undertaken outside the breeding bird season (i.e. cutting possible between September and February inclusive).
- 3.10. All vegetation management works in the area of retained habitat will be undertaken by hand (using trimmers/ brush cutters, chainsaws etc.), with all cuttings carefully removed and disposed of/ composted off site as appropriate.
- 3.11. The long-term management of the retained habitat area and southern hedgerow will be delivered via a Section 106 agreement. Annual monitoring of habitats within the retained area and along the northern hedgerow will be undertaken to assess their current condition and the effectiveness of the management regime. Should the condition of any feature be viewed as unfavourable the management regime will be amended as required in consultation with the Local Authority Ecologist and NRW (in view of the presence of Great Crested Newt on the site).

4.0 POST-TRANSLOCATION REPORTING & UPDATE SURVEYS

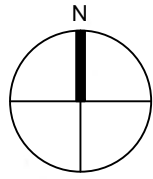
- 4.1. Following the completion of translocation in each Phase, a report would be issued documenting the translocation process, the number and species of reptiles transferred. No specific reptile monitoring of the receptor site is proposed as any reptiles transferred would be able to move of their own accord into surrounding habitats and would be able to access a comparable range of habitats/resources as per the existing condition. Dependent on the translocation results – i.e. if any reptiles are found in the development site, presence/ absence surveys within the receptor area could be undertaken in parallel with the proposed monitoring programme for Great Crested Newts (SBE, 2016).

5.0 TIMETABLE OF PRE-CONSTRUCTION ACTIVITY

5.1. Construction on site is targeted to commence in Phase 1 from spring/ summer 2018, dependent upon the receipt of planning permission. In order to achieve this programme, vegetation clearance at the site will be undertaken over winter 2017/ 2018, with installation of reptile exclusion fencing in March 2018 and translocation of animals from late March, dependent on weather conditions. In view of the presence of Great Crested Newt at the site no works will commence until a European Protected Species Licence has been secured from NRW. A summary timetable of activities is provided in Table 1.

Table 1. Indicative works programme for Phase 1 assuming commencement of construction of Phase 1 in 2018

Date	Activity
Autumn (Sept/ Oct) 2017	Sowing of grassland mix (e.g. Emorsgate EM2) within receptor site area.
Winter 2017/ 2018 (prior to March 2018)	Short sections of hedgerow (at highway/ pedestrian access points) cut to ground level using hand tools (chainsaws etc.) with some felled material retained to create log-pile habitat under the direction of the project ecologist. Remaining cut vegetation to be removed from site. Vegetation cut to ground level only (no grubbing of roots). Clearance of grassland to site margins using vehicle mounted mower (limited likelihood of reptiles or newts being present in grassland over winter).
December 2017 - February 2018	Creation of log-pile, stone pile and hibernacula in retained habitat under the direction of the project ecologist or accredited agent – use of small excavator required. Areas to be disturbed during installation of above to be hand searched prior to works. No other ground disturbance/stripping or vehicular access to works footprint during this period.
Prior to March 2018	Vegetation planting to be undertaken along southern hedgerow boundary and within the retained habitat area.
From March 2018	Installation of exclusion fence (refer Figure 2 & Appendix II). Fence installation preceded by a hand search of any potential refugia along the fence route. Trench dug by hand, or in part by a small excavator. Any animals found during fence installation immediately transferred to retained terrestrial habitat.
From March 2018 (following installation of exclusion fence)	Reptile refugia deployed at high density within donor site and allowed to 'settle in' for a period of 5 – 7 days. Start of refuge checks from late March, dependent on weather conditions. Any reptiles found transferred from within development footprint to retained habitat. Translocation to continue until 'reasonable capture effort' agreed or 10 nil returns achieved. Following 10 nil returns, remaining terrestrial refuges within works footprint to be hand searched by the project ecologist or accredited agent. Any animals found transferred to retained habitat as described above. Following hand searches and removal of terrestrial refuges, remaining tree stumps uprooted using a small excavator under ecological supervision.
From late Spring/ Summer 2018	Site clearance and commencement of construction in area associated with Phase 1. Integrity of exclusion fence checked regularly (weekly) – any damage/defects corrected immediately.
2018 onwards	Mitigation measures described above are to be repeated for each development phase with translocation works only undertaken during the active period for reptiles (late March to September) and under appropriate weather conditions.



KEY - RETAINED POND AREA AND SOUTHERN HEDGEROW EXPANSION ONLY

- Proposed Grassland
- Proposed Pond
- Proposed Scrub Planting
- Proposed Mown Path
- Proposed Native Hedgerow Planting
- ✱ Proposed Hibernacula
- ✱ Proposed Log Pile
- ✱ Proposed Stone Pile

Notes:

This plan illustrates the retained and proposed landscape features within the retained habitat area associated with the Swanbridge Road site only. For proposal associated with the adjacent site to the North refer to *Land South of Cog Road, Sully - Mitigation Method Statement - Great Crested Newt* (Soltys Brewster Ecology (2015) Ref: E1237002/ Doc 03). This also plan excludes landscape structure outside the retained habitat area which would be subject to reserved matters design and application.

SCRUB PLANTING MIX			
Randomly plant at 3 per 1m ² in groups of 3 to 7 of a single species. Avoid planting in grids or lines.			
%	BOTANICAL NAME	COMMON NAME	SPECIFICATION INFORMATION
10	<i>Corylus avellana</i>	Common Hazel	1+1 Transplant, Bare Root
35	<i>Crataegus monogyna</i>	Common Hawthorn	1+1 Transplant, Bare Root
5	<i>Cornus alba</i>	Dogwood	1+1 Transplant, Bare Root
10	<i>Prunus avium</i>	Wild Cherry	1+1 Transplant, Bare Root
35	<i>Prunus Spinosa</i>	Common Blackthorn	1+1 Transplant, Bare Root
5	<i>Acer campestre</i>	Field Maple	1+1 Transplant, Bare Root
Extra over planting of trees within scrub as per Extra Over Tree Planting Mix below.			

NATIVE HEDGE MIX			
Planted at 300mm apart, central to a 1 metre wide strip, 6 per linear metre in double staggered row in groups of 3 or 7 of a single species.			
%	BOTANICAL NAME	COMMON NAME	SPECIFICATION INFORMATION
10	<i>Acer campestre</i>	Field Maple	1+1 Transplant
10	<i>Corylus avellana</i>	Hazel	1+2 Transplant
30	<i>Crataegus monogyna</i>	Hawthorn	1+1 Transplant
30	<i>Prunus spinosa</i>	Common Blackthorn	1+2 Transplant
10	<i>Sambucus nigra</i>	Common Elder	1+1 Transplant
10	<i>Viburnum opulus</i>	Guerder Rose	1+1 Transplant

EXTRA OVER TREE PLANTING MIX			
Species to be planted as mixed sizes as indicated below, in groups of 3, 5 or 7 of a single species. To be planted at a typical rate of 1 tree per 10 linear metres in hedgerows and 10m ² in scrub planting.			
%	BOTANICAL NAME	Common Name	SPECIFICATION INFORMATION
20	<i>Acer campestre</i>	Field Maple	Standard 14-16cm girth, rootballed. Single timber stake 600mm high.
10	<i>Alnus glutinosa</i>	Alder	Feathered 1.5m height. Rootballed.
20	<i>Prunus avium</i>	Wild Cherry	Feathered 1.5m height. Rootballed.
5	<i>Malus sylvestris</i>	Crab Apple	Standard 14-16cm girth, rootballed. Single timber stake 600mm high.
2.5	<i>Quercus robur</i>	Pendunculate Oak	Standard 14-16cm girth, rootballed. Single timber stake 600mm high.
30	<i>Tilia cordata</i>	Small Leaved Lime	Standard 14-16cm girth, rootballed. Single timber stake 600mm high.

Grassland Areas			
Emorsgate EM2 Standard General Purpose Meadow Mixture (sow at 4g/m ² to suppliers instructions)			
%	BOTANICAL NAME	COMMON NAME	SPECIFICATION INFORMATION
0.5	<i>Achillea millefolium</i>	Yarrow	-
4.0	<i>Centaurea nigra</i>	Common Knapweed	-
2.5	<i>Galium verum</i>	Lady's Bedstraw	-
1.0	<i>Leucanthemum vulgare</i>	Oxeye Daisy	-
0.5	<i>Lotus corniculatus</i>	Bird's Foot Trefoil	-
2.0	<i>Plantago lanceolata</i>	Ribwort Plantain	-
0.5	<i>Plantago media</i>	Hoary Plantain	-
0.2	<i>Primula veris</i>	Cowslip	-
2.0	<i>Prunella vulgaris</i>	Self Heal	-
4.2	<i>Ranunculus acris</i>	Meadow Buttercup	-
1.5	<i>Rhinanthus minor</i>	Yellow Rattle	-
1.0	<i>Rumex acetosa</i>	Common Sorrel	-
0.1	<i>Trifolium pratense</i>	Red Clover	-
8.0	<i>Agrostis capillaris</i>	Common Bent	-
40.0	<i>Cynosurus cristatus</i>	Crested Dogs Tail	-
28.0	<i>Festuca rubra</i>	Red Fescue	-
4.0	<i>Phleum bertolonii</i>	Smaller Cat's-tail	-

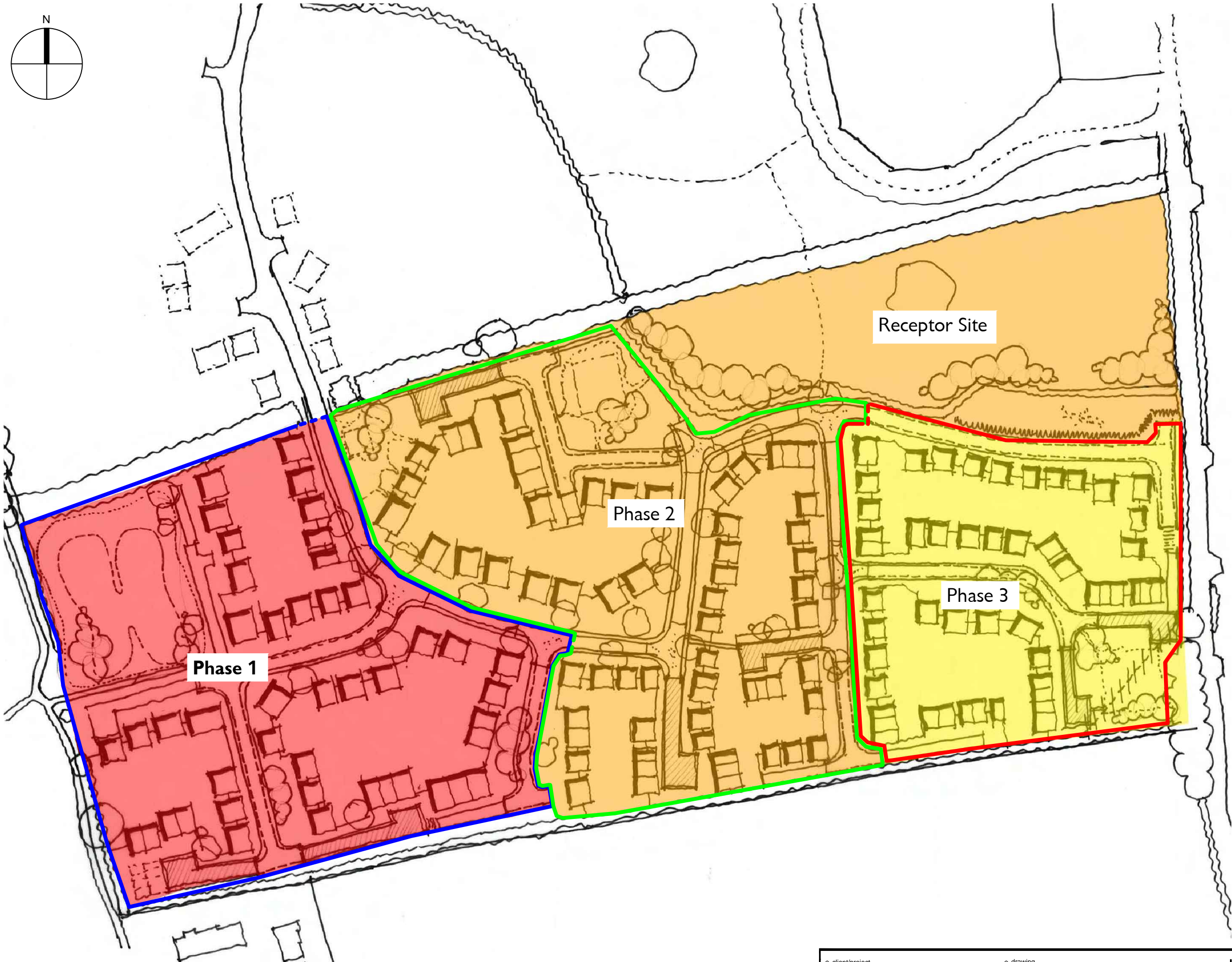
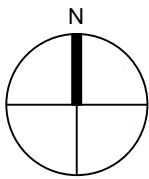
o client/project	o drawing			
Taylor Wimpey	Figure 1			
Swanbridge Road, Sully	Proposed planting within retained pond area (Receptor Site) and southern hedgerow expansion			
o drawing no.	o revision	o scale	o drawn	o date
E1237004/003	*	NTS @ A3	AP	Sept 2016

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Key

- Exclusion fencing to be installed prior to development Phase 1 with pitfall traps set every 5-10m along internal perimeter
- Exclusion fencing to be installed prior to development Phase 2 with pitfall traps set every 5-10m along internal perimeter
- Exclusion fencing to be installed prior to development Phase 3 with pitfall traps set every 5-10m along internal perimeter

Dashed line represents area of exclusion fence to be removed following completion of reptile translocation/newt pitfall trapping to allow access for construction. All other areas of exclusion fence around each phase to remain in place throughout construction and not be removed until works within relevant phase have been completed.

Integrity of exclusion fence checked at least once a week and maintained as required.

o client/project	Taylor Wimpey Land at Swanbridge Road, Sully			o drawing	Figure 2. Proposed Exclusion Fencing	
o drawing no.	o revision	o scale	o drawn	o date		
E123704/001	-	NTS @ A3	AP	Sept 2016		

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APPENDIX I INDICATIVE MASTERPLAN



LAND AT COG ROAD, SULLY (SOUTH SITE)

Indicative Masterplan

1:1000 @ A2



APPENDIX II EXAMPLE SPECIFICATION FOR TEMPORARY EXCLUSION FENCING

Temporary Reptile Fence

This is a standard temporary fence design which can be utilised in situations where it is necessary to create a reptile-proof barrier for periods usually not exceeding a single season. Although this design will effectively prevent the passage of reptiles in either direction, the 'returns' on the fence should face outwards, i.e. facing the direction from which the majority of any reptiles are expected to approach. It can be constructed from relatively inexpensive materials, but is easily damaged or vandalised, and will degrade over time. Fences of this type are less appropriate in windy situations where damage will be more frequent. Also if placed close to areas where plant operate regularly and/or earthworks are taking place, a membrane fence of this kind is usually best protected by a more robust fence, for example a wooden paling fence.

Care needs to be taken when undertaking the necessary maintenance works to ensure that vegetation does not grow over the fence. If undertaken mechanically, this can easily damage the membrane.

The use of a nail gun is recommended to attach the battens securely to the posts. Not only is this advantageous for speed, but prevents any loosening of the posts which can be associated with the repeated impacts of a hammer.

Some practitioners prefer the use of flexible plastic washers to hold the membrane in place, as an alternative to softwood battens. (An example of this is shown inset.) The result is similar in strength and durability to that of the previous design, but precludes the use of a nail gun, as the washers require a large headed nail and cannot withstand the force produced by the gun.

