LAND AT UPTON LANE, SHIFNAL

Ecological Survey and Mitigation Strategy

Prepared for: Nurton Developments Ltd

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1.0 Introduction

1.1 Background

In August 2019, SLR Consulting Ltd (SLR) produced a promotional report for Nurton Developments Ltd. to support the promotion of their land interests at Upton Lane, Shifnal[1] hereafter referred to as the 'Site'. The Site is located to the south east of Shifnal, approximately 3.5 miles south east of Telford and 8.5 miles to the north west of Wolverhampton, extending to approximately 45 hectares (ha) (broadly centred on National Grid Reference SJ 759 068).

The promotional report set out information to demonstrate that the Site could be removed from the Green Belt and is appropriate for housing, as it can be shown to be:

- available,
- in a suitable location for development, and
- achievable (i.e. with a realistic prospect that housing will be delivered within the plan period) and in particular that development is viable.

A range of technical studies informed the promotion document, including Ecology, which more specifically included an ecological desk study and site visit to identify the main habitats present and any potential ecological constraints or opportunities.

Following submission of the promotional document to Shropshire Council, further information has been requested by Shropshire Council to further demonstrate the achievability of delivering development at the Site. with regards to Ecology, this comprised the following comment made by Shropshire Council on the 25th November 2019 "*This should be supported by first level / desk based assessments including ecology, heritage and archaeology with the landowner / developer indicating when they would consider undertaking further detailed studies such as species specific studies, detailed ecological or heritage mitigation measures, geophysical/trial trenching or other detailed site specific studies*".

1.2 Purpose of Report

This report seeks to provide further information relating to the timescales for undertaking species specific surveys at the Site. Furthermore, this report seeks to identify the potential mitigation measures and timescales that may be required, depending on the results of species-specific surveys, to further demonstrate that the Site is able to deliver the extent of development shown on the indicative masterplan within the plan period.

The report therefore has two main Sections:

- Section 2 – Timescales for species surveys and mitigation; and
- Section 3 – Approaches to mitigation.

1.3 Site Description

At approximately 45 ha, the Site largely comprises areas of arable agricultural land, ruderal grassland and a commercial fishery.

A site visit was undertaken on the 6th August 2019 by Mr Chris Mitchell to inform the promotional document. During this, no notable plant species were recorded and the dominant land uses likely prevent the occurrence of

[1] Land at Upton Lane, Shifnal. Promotional Document. SLR Ref 406.02395.00004, August 2019.

any such plant species across much of the Site. The site visit recorded the presence of potentially notable habitats and green corridors including hedgerows and arable field margins which are listed as priorities for conservation under the NERC Act[2], these are incorporated into the Green Infrastructure aspects of the indicative masterplan.

From the habitats identified during the site visit and the species records returned from the desk study, the potential presence of protected or notable species was identified. The potential ecological constraints in need of further survey and assessment work are as follows:

- Bats (protected under EU and UK legislation) – potential roost sites and foraging habitats identified;
- Badger (protected under UK legislation) – may potentially occur on the Site;
- Amphibians – aquatic habitats identified adjacent to the Site with potential to support great crested newt (GCN) (protected under EU and UK legislation) together with potential terrestrial habitats;
- Breeding birds (protected under UK legislation) – the presence of suitable habitats for a range of species, predominantly associated with waterbodies and Site boundary features;
- Reptiles (protected under UK legislation) – the potential presence of reptiles has been identified; and
- Invertebrates (certain species protected under UK legislation) – the presence of suitable habitats for a range of species has been identified.

It is these faunal groups which are therefore considered further in this report to show how, in ecological terms, it is a valid assumption that the Site can deliver the level of development, and associated contribution to the Shropshire Council Local Plan Partial Review.

1.4 Evidence of Technical Experience and Competence

This report has been prepared by Mr Chris Mitchell and Rebecca Whatmore of SLR.

Chris is a Principal Ecologist with SLR and a Chartered Ecologist (CEcol), Chartered Environmentalist (CEnv) and Full Member of the Institute of Ecology and Environmental Management (CIEEM). Mr Mitchell has 14 years of professional experience. During this time, Chris has developed and implemented numerous mitigation schemes for great crested newt, bats, reptiles and badger and holds survey and mitigation licences in respect of great crested newt, bats and badger.

Rebecca is a Project Ecologist at SLR, a member of the Freshwater Biological Association and a Qualifying Member of CIEEM.

[2] Natural Environment and Rural Communities Act (NERC) 2006.

2.0 Timescales for Species Surveys and Mitigation

At this stage of the Site promotion, it is not considered appropriate or necessary to undertake detailed ecological surveys on the basis that a high-level review of the likely ecological features to require consideration, the nature of potential impacts and likely approaches to mitigation, can be predicted using the results of the desk study and site survey alongside knowledge of comparable scenarios and local conditions.

At this stage, it is anticipated that detailed surveys would be undertaken to inform the first planning application for development at the Site, whether this be an Outline or Full application, and as would be typically undertaken in respect of development proposals.

Table 2-1 shows a hypothetical timetable based purely on ecological considerations. The detail of actual timings will be determined by the stage in the year when a decision is made to progress work on a planning application, the findings of species-specific surveys and wider factors such as the timescale for granting planning permission, whether the planning application is Outline or a Full application, the phasing of development and any other technical lead in periods such as highways improvements, all of which will influence detailed proposals and exact timings.

Table 2-1 therefore provides an overview of the timings and approach to surveys that are considered likely to be required following the desk study and initial site survey. Hypothetical planning application timescales and subsequent ecological mitigation timescales are also shown. Although this can only be hypothetical at this stage, this confirms the deliverability of housing development within the plan period, most likely within a period of less than five years.

Table 2-1 Ecological Survey and Mitigation Timescales

	Year 1										Year 2											
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Baseline Survey and Assessment.																						
Badger																						
Amphibians																						
Breeding birds																						
Reptiles																						
Bats																						
Invertebrates																						
Ecological Impact Assessment.																						
Determination of planning application.																						
Application for any required protected species licences/discharge of Planning Condition.																						
Implementation of mitigation (if required)																						
Amphibian and reptile translocation.																						
Removal of bat roosts.																						
Closure of badger setts.																						
Removal of nesting bird habitat.																						

3.0 Approaches to Mitigation

The following section describes the potential approaches to mitigation that could be implemented in the event of the protected or notable species, which are potentially present, being confirmed as present during baseline surveys which will be required at an appropriate stage of any future planning application.

In considering this, the mitigation hierarchy has been applied, as recommended by CIEEM. The mitigation hierarchy sets out a sequential approach beginning with the avoidance of impacts where possible, the application of mitigation measures to minimise unavoidable impacts and then compensation for any remaining impacts.

It is important to clearly differentiate between avoidance mitigation, compensation and enhancement and these terms are defined here as follows:

- Avoidance is used where an impact has been avoided, e.g. through changes in scheme design;
- Mitigation is used to refer to measures to reduce or remedy a specific negative impact in situ;
- Compensation describes measures taken to offset residual effects, i.e. where mitigation in situ is not possible; and
- Enhancement is the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

The following species/groups are considered in this section:

- Bats;
- Amphibians;
- Badger;
- Breeding birds;
- Reptiles; and
- Invertebrates.

Each is considered individually in the context of the mitigation hierarchy. An overarching consideration is that the indicative masterplan retains existing features of higher value, such as hedgerows and mature trees, and incorporates these into the site layout enhancing the green infrastructure. This represents the first stage of the mitigation hierarchy i.e. avoidance and would be adopted by any detailed design in order to comply with wider planning policy requirements.

It is important to note that the information below is based upon current best practice approaches and regulatory processes that are applicable. These approaches will be subject to review and confirmation at the time of implementation to ensure the findings of baseline surveys and any changes to current guidelines are fully taken into account.

3.1 Bats

The potential bat roost locations within the Site relate to mature trees and the former windmill. These features occur within hedgerows and the areas of grassland associated with the Monument Fishery, these also represent the habitats most likely to be used by foraging and commuting bats within the Site. The indicative masterplan prepared at this stage retains these habitats and the associated potential roost features.

Whilst at this stage there is therefore no suggestion of potential roost features being removed, there may be an unavoidable need for mature tree removal or the potential for indirect effects i.e. through the introduction of

artificial lighting. Should either situation arise then the baseline surveys identified in Section 2 will confirm whether any roosts occur and therefore whether further measures are required.

In accordance with the mitigation hierarchy, the following approach would therefore be adopted:

1) Avoidance
   Potential roost features and most likely foraging/commuting routes are retained by the indicative masterplan. Any required streetlighting can be designed to avoid illumination of any roost features or key commuting routes / foraging habitats should these be confirmed during baseline surveys.

2) Mitigation
   In the highly unlikely event a bat roost is confirmed and an unavoidable loss is required to implement development, mitigation will be required. Further details of the typical approaches to mitigation are provided in Appendix A, although in summary these are based upon the timing of works when a roost feature is removed and the implementation of measures to avoid killing or injuring bats during any roost removal.

3) Compensation
   In the event of a confirmed roost needing to be removed, a compensatory roost will be required. As the former windmill will be retained, on heritage and landscape grounds, this scenario would only ever relate to the loss of any confirmed tree roosts which again is unlikely given the indicative masterplan retains mature trees. In this unlikely event therefore the current approach would be based around the provision of five artificial bat boxes for every confirmed roost feature to be lost, to be established in mature retained trees. Whilst the exact box design would be subject to confirmation depending on the species present, typical designs include Woodcrete designs comparable to Schwegler 1FD for smaller crevice dwelling species i.e. common pipistrelle (*Pipistrellus pipistrellus*) and cavity replicating boxes comparable to Schwegler 2FN for other species i.e. brown long-eared (*Plecotus auritus*), both of which were identified in the local area during the desk study.

   Compensation for habitat loss will not be necessary based on the current masterplan, as noted above the habitats most likely to be used by foraging and commuting bats are retained and the indicative layout includes 22 hectares (c.49% of the Site) as undeveloped land where a range of habitats of value to bats will be created including waterbodies and woodland.

4) Enhancement
   Even where compensation for confirmed roosts is not applicable, development of the Site provides the opportunity to provide significant enhancement for bats when compared to the current situation. As per most residential developments, standard application of bat boxes can be included in the detailed design, both in terms of provision in retained and newly created habitats and, where appropriate, integrated into new residential units.

   As noted above, the provision of 49% of the site as open space and habitats which will benefit a range of bat species is considered more than sufficient to compensate for any losses and still represent an enhancement when compared to the current situation whereby the majority of the Site is dominated by intensive arable crop production which has negligible value to foraging or commuting bats.

In summary, providing the above approach is taken, there is currently no reason to consider that delivering the level of development proposed by the indicative masterplan would have any significant adverse effect on bats which could affect the local distribution or Favourable Conservation Status of bats. In contrast, the proposal for development offers the opportunity to secure habitats across half of the Site area which will be of much greater value to bats than the current intensive agricultural use.

3.2 Amphibians

The local presence of great crested newt (*Triturus cristatus*) (GCN) has been raised due to the known presence of this species in the local area. A review of publicly available information has identified three known populations near the Site which require consideration as follows:

1) A residential development, reference 14/00062/OUT, approximately 200m north-west of the Site. A review of this approved development[3] indicates a GCN survey was undertaken to inform this Outline application which has subsequently been subject to formal mitigation measures under a European Protected Species Licence (EPSL) by virtue of the licence document shown in relation to the discharge of planning conditions and the location of a granted EPSL shown on the MAGIC website[4].
2) An EPSL shown on MAGIC approximately 500m to the north-west which appears to link to a completed development. Due to the separation distances involved is not considered further; and
3) An EPSL shown on MAGIC approximately 350m west of the Site beyond the A464, a major barrier to dispersal. Due to the separation distance involved, which is more than 500m to the nearest build development of the indicative masterplan, and presence of a major barrier, this population of GCN is not considered further.

The aquatic habitats within the site were provisionally considered to offer limited suitability for amphibians as part of the site walkover, due to their operational use as an agricultural irrigation lake and a commercial fishery. The presence of a pond immediately adjacent the western site boundary was identified during the Site visit to inform the promotional document. Further ponds also occur to the west/north-west of the Site within 500m.

A review of the Shropshire Council Planning portal indicates these ponds within 500m were surveyed in 2013 as part of the application 14/00062/OUT. In terms of the pond immediately adjacent the Site, a peak count of 3 GCN was recorded. The 2013 survey encompassed a number of ponds, of which two more occur within 500m of the Site and were found to support GCN, these occurred approximately 200 and 250m from the Site boundary and individual GCN were recorded at both ponds.

Whilst the situation may have changed in the intervening period, this information indicates a small population of GCN (overall peak of 5 GCN) was present in 2013 and may be still be present at ponds within 500m of the Site, including a pond immediately adjacent to the western Site boundary where a survey in 2013 recorded a peak of 3 GCN.

Given development of the Site to achieve the indicative masterplan layout will require the loss of habitats within 250m of this pond, a mitigation strategy will be required. There are three approaches to GCN mitigation that may be considered as part of any future development of the Site, further details are given below and the approach taken will need to be considered against the results of an updated baseline survey and the precise nature of detailed development proposed in this zone.

3.2.1 Approach 1 – District Licencing

Natural England have made recent changes to their policies regarding GCN survey and mitigation requirements and approaches, the most recent is referred to as District Licensing and was rolled out to several administrative areas in February 2020, including Shropshire.

Under District Licensing, if you are a developer proposing to develop land, you can apply to join a district level licensing scheme by committing to a conservation agreement with Natural England. This is based on the

[3] https://pa.shropshire.gov.uk/online-applications, accessed 01/05/2020.
[4] EPSL ref 2016-21689-EPS-MIT, https://magic.defra.gov.uk/MagicMap.aspx accessed 01/05/2020.

likelihood that GCN being present and how important the site might be for the local population, Natural England make this assessment based on survey information they hold[5]. If you join a scheme, you do not need to:

- carry out specific surveys (even to inform a planning application); or
- plan and carry out mitigation work on the development site.

In Shropshire, developers can now apply to join a Natural England led scheme. Initially, an enquiry form is completed including a detailed map for the proposed development and information regarding the locations of ponds on site and within 250m of the site plus any information regarding the presence/absence of GCN. Natural England will assess the information and if the developer agrees to the proposals put forward by Natural England this is confirmed and the Conservation Certificate would be provided as part of the planning application to evidence that the development could proceed in respect of GCN and, by virtue of how District Licencing works, without detriment to the Favourable Conservation Status of GCN.

3.2.2 Approach 2 – Conventional Mitigation Scheme

Applying to be part of a Natural England led District Licence scheme is not mandatory and ultimately the developer at the time will have to decide on which approach to take based on updated survey results. As such, the following section sets out how a conventional approach to mitigation could equally be followed to ensure no detriment to the Favourable Conservation Status of GCN at the site assuming potential presence based on a small population occurring within 250m.

The approach would follow the mitigation hierarchy as follows:

1) Avoidance
   No potential breeding ponds occur within the Site itself and the majority of the Site, approximately 35 ha, occurs more than 250m from any identified GCN pond. Of the land within 250m of the identified GCN ponds, over 60% relates to the commercial fishery infrastructure or land not subject to build development under the indicative masterplan. This represents the first stage of avoidance as only a proportion of potential terrestrial habitat would be affected by the indicative layout.

2) Mitigation
   In the event of GCN being re-confirmed at the adjacent pond, a risk assessment of the detailed development layout would be required to inform the exact approach to GCN mitigation. Assuming GCN are still present in the pond, the Site does contain potential terrestrial habitats within 250m of the pond and therefore it is possible that GCN could utilise suitable terrestrial habitats within the Site. These potential terrestrial habitats extend to approximately 4-5 ha[6] within 250m of the identified pond, of which an approximate 3-3.5 ha would be subject to development in the indicative layout. As such, an approach to mitigation will be required to minimise the risk of killing or injury of any GCN present, with further details of the typical approach provided in Appendix A.

3) Compensation
   Compensation will be required for the habitat losses which would occur. Based on the indicative masterplan, there would be an approximate 3-3.5 ha of potential GCN terrestrial habitat lost to built development, at least 1 ha of land retained and enhanced and approximately 5 hectares of unsuitable habitats within 250m of the identified pond. However, the indicative layout incorporates an overall 22.6 hectares of undeveloped land which includes waterbodies, grassland and woodland habitats which would include sufficient area to compensate with habitat of value for GCN. This is far more extensive than the current situation and would therefore offer more than adequate opportunity for compensation.

[5] https://www.gov.uk/government/publications/great-crested-newts-district-level-licensing-schemes
[6] All areas are approximate at this stage and based on indicative masterplan due to absence of detailed design.

4) Enhancement
As identified above, the extent of habitats provided by the indicative layout, even allowing for the fact some areas will not be highly suitable for GCN where land management is more formal, will exceed the baseline situation. This is most noticeable in respect of aquatic habitat with multiple waterbodies being provided for surface water attenuation which will also be suitable for amphibians and represent an enhancement to the current situation.

3.2.3 Approach 3 – Reasonable Avoidance Measures (RAMs)

There are situations where the presence of a protected species is confirmed although the circumstances are such that a detailed risk assessment may show the actual risk of harm, or causing an offence under the relevant legislation, is low and full-scale mitigation approaches may not be appropriate. This could be, for example, where small populations occurred historically but are no longer present, where only small areas of potential habitat are being affected as an overall proportion of that available or where works in proximity to ponds can be timed to avoid sensitive times of the year.

Should such factors become evident at the Site i.e. following completion of updated baseline surveys or progression of the indicative masterplan to a detailed design/application, then it may be appropriate to follow RAMs in place of Approaches 1 or 2 set out above.

Whilst the development of RAMs will always be specific to individual site circumstances once full details are known, these typically include the following range of measures:

- An Ecological Clerk of Works (ECoW) will be appointed to carry out a pre-commencement walkover search, deliver a 'toolbox talk' to contractors and oversee works in specified areas where there may be the potential to find amphibians;
- It may be appropriate to remove vegetation at a certain time of year and then mow/graze to maintain a low sward height that is unsuitable for GCN prior to construction;
- All materials may need to be stored on pallets, waste in appropriate skips etc and not within close proximity to ponds;
- Locations for compounds etc are often agreed and established on hardstanding bases so as not to provide refuge opportunities for amphibians; and
- Working practices are often adapted to avoid leaving open trenches etc that may pose a risk of entrapment to amphibians, or other fauna.

Such measures, in very low risk situations, are often deemed appropriate and suitable to demonstrate development activities are unlikely to adversely affect the Favourable Conservation Status of GCN.

As such, whichever Approach is pursued in respect of GCN, it is considered that the level of development shown by the indicative masterplan can be delivered without detriment to the Favourable Conservation Status of GCN and in a timescale necessary to ensure the level of housing indicated can be delivered in the timescales required.

3.3 Badger

The desk study did not return records of badger (*Meles meles*) and no evidence was observed during the site survey. The presence of badger is a possibility, particularly in boundary habitats and nearby woodlands such as Revell's Rough.

In the event that badger setts are identified at the Site in the future then the mitigation hierarchy shall be applied as follows.

1) Avoidance

The extent of built development is focussed on intensive arable farmland and so the future presence of badgers in these areas is highly unlikely. In the event of any badger setts establishing in boundary features, the most likely outcome will be to avoid impacts and retain the sett through the adoption of an appropriate buffer (typically 30m).

2) Mitigation
In the highly unlikely event that a badger sett establishes in the area subject to development and cannot be retained, the implementation of mitigation measures will be required to remove the sett under licence ensuring the risk of injuring badgers is avoided by following standard sett closure and destruction practises.

3) Compensation
Compensatory badger setts are typically only provided where the impact is high i.e. removal of a main or subsidiary sett. The presence, and unavoidable loss, of such a sett within the footprint for development shown on the indicative masterplan has been discounted by the survey undertaken in August 2019 and it is highly unlikely this will change based on the current intensive agricultural land use. Notwithstanding this, there is sufficient space and opportunity (c.49% of the Site) that will remain as undeveloped land where a compensatory badger sett could be created if required.

4) Enhancement
As stated above, the requirement for formal mitigation or compensation for badgers is considered highly unlikely based on the absence of any confirmed presence at the current time and nature of development proposed by the indicative masterplan. Although no specific enhancements for badger are therefore likely to be required, the resultant landscape which includes areas of woodland creation and grassland are considered to represent more favourable habitat for badgers than is currently present and therefore provide an enhancement.

3.4 Birds

It was noted during the initial site visit that the Site featured a number of areas that had the potential to be used by a range of nesting birds including the boundary hedgerows, aquatic habitats/margins, uncultivated field margins and arable land.

The mitigation hierarchy will be applied in relation to breeding birds as follows.

1) Avoidance
The extent of built development is focussed on intensive arable farmland and so the future presence of breeding birds in these areas is less likely than the boundary features and other areas of less intensively manged vegetation which is largely retained. The principal avoidance measure regarding potential impacts to nesting birds will relate to removal of nesting habitats outside of the nesting season (typically March to end of August).

2) Mitigation
In the event of avoidance not being possible, i.e. removal of potential habitats is required during the nesting season, a check for active nests will be undertaken by an appropriately experienced ecologist which will ensure direct impacts will be avoided.

3) Compensation
Based on the extent of land proposed for general habitat development, including waterbodies, hedgerows, woodland and grassland, no specific compensation for birds is considered likely to be required at this stage based on the habitat creation included as part of the indicative masterplan. The

results of baseline survey may require minor alteration to habitats proposed should it be necessary to provide any specific conditions for notable species.

4) Enhancement
As with any development proposal, in addition to inbuilt habitat creation as part of the site layout, there will be opportunities to incorporate further enhancements for birds. Although specific commitments will need to be made as part of any detailed application, suitable opportunities are likely to include features suitable for a range of notable bird species such as sparrow terraces, swift boxes, barn owl boxes and general bird boxes.

3.5 Reptiles

The majority of the Site offers limited opportunities for reptiles although baseline surveys will confirm presence, and species concerned, or likely absence. Assuming presence is confirmed the following approach will be taken in accordance with the mitigation hierarchy.

1) Avoidance
The extent of built development is focussed on intensive arable farmland and so the presence of reptiles in these areas is unlikely. Where possible, any confirmed reptile habitats will be retained, this is most likely to occur in any event as such habitats include hedgebanks, ruderal grassland and ponds which will largely be retained and enhanced under the indicative masterplan.

2) Mitigation
In the event of avoidance not being possible, a reptile mitigation strategy will need to be implemented to ensure conservation objectives are met and the risk of killing or injuring reptiles is avoided. Further detail regarding the likely approach to reptile mitigation, if required, is provided in Appendix A.

3) Compensation
Based on the extent of land proposed for general habitat development, including waterbodies, hedgerows and grassland which are of recognised value to reptiles, no specific compensation is considered likely to be required at this stage based on the habitat creation included as part of the indicative masterplan.

4) Enhancement
As with any site development, there will also be opportunities to provide further enhancements for reptiles, if present, such as the provision of purpose-built hibernacula features.

Providing this process is followed, it is not considered that the level of development proposed by the indicative layout would result in any significant negative impact upon reptiles (if present).

3.6 Invertebrates

The broad range of habitats present on the Site have been identified as having the potential to be used by a range of invertebrate groups.

At this stage, it is not considered likely that specific mitigation, compensation or enhancement measures for invertebrates are likely to be required given the general habitat creation proposed will offer an enhanced situation for invertebrates when compared to the current situation.

4.0 Summary and Conclusion

In August 2019, SLR produced a promotional report for Nurton Developments Ltd. to support the promotion of their land interests at Upton Lane, Shifnal. The was informed by a range of technical studies which included ecology, informed by a desk top study and site survey.

This initial high-level review identified the presence of notable habitats i.e. as listed as priorities for conservation under the NERC Act, although these are incorporated into the Green Infrastructure aspects of the indicative masterplan.

The potential presence of protected and notable species was also identified. Although not at a formal planning application stage, Shropshire Council requested further information relating to ecology survey and mitigation timings to further demonstrate that the Site is appropriate for development and the level of housing proposed can be delivered in the plan period.

This document has considered the likely requirements for those protected and notable species that are, potentially, present within the Site based on further review of publicly available information and best practise methods.

Whilst the potential for protected and notable species to occur does exist, overall it is concluded that due to the current dominant land use of intensive agriculture at the Site and inclusion of 22ha of undeveloped land in the indicative masterplan, that suitable and appropriate opportunities to deliver any mitigation, compensation or enhancement required to meet legislative or policy requirements exists. It is also considered all ecology survey and mitigation could, subject to other technical aspects, be completed in a period of approximately 2 years ensuring housing delivery is feasible in the plan period.

APPENDIX A

Outline of likely approaches to species translocation/exclusion (if required)

Bats

In the unlikely event of baseline surveys identifying a tree roost, and retention is unavoidable, the following approach will be adopted as 'mitigation' stage of the mitigation hierarchy:

1) A 'feature' is confirmed as a roost site and removed under European Protected Species Licence; or
2) A 'feature' is confirmed as a non-roost site but still has the 'potential' to be used by bats; or
3) A 'feature' is confirmed as a non-roost site following survey and has no 'potential' to be used by bats (no further action required).

Removal of Roost under EPSL

Removal of any confirmed roost features will be undertaken following the issue of an EPSL, as shown in Table 2-1.

The need for capture would be avoided where possible to reduce the risks of disturbance, stress, injury and killing any bats involved.

This will primarily be achieved by the use of exclusion devices to prevent bats from entering the tree roost. Alternative roosting opportunities will be in position prior to any exclusion through the establishment of artificial boxes in retained trees as set out in Section 3.1; ensuring bats can continue to roost locally.

Whilst exact timings will be subject to confirmation at the time of applying for an EPSL, it is expected roost removal works are likely to be timed to avoid the main breeding or hibernation periods i.e. roost closure would occur during March/April or September/October, with daytime temperatures of 7°C or over, in order to also complement breeding bird mitigation requirements.

Prior to any works, an advance check will be undertaken by the licensed ecologist (or agent). The check will comprise of an inspection of all known and potential roost features using suitably sized ladders, an endoscope and torch.

If bats, or fresh evidence of bats is discovered, then exclusion devices will be fitted to all potential bat access points at the tree and left in situ for seven nights before works commence. If exclusion devices are required, they will be constructed on site and made specifically to cover the crevice or opening where evidence of bats was found or bats are suspected to be present. Exclusion device design follows the Bat Workers Manual.

The licensed ecologist would confirm that bats are not present or had subsequently been excluded prior to the tree removal occurring.

The tree may then be felled following the advice of the ecologist on site. This is likely to involve careful dismantling of sections that contain the confirmed or potential roost features. Best practice for felling trees with suitable features for bats include the following: cracks and splits to be wedged to prevent closure prior to felling; loose bark to be carefully peeled back to reveal the wood beneath and confirm no bats are present; cavities must not be sawn through; sections that contain potential roost features must be "soft-felled" and roped carefully down to the ground; cavity containing sections should be allowed to remain undisturbed on site for 24 hours following felling to allow any undiscovered bats (or other animals) to escape.

If bats are discovered during any of the above stages, they would be taken by hand by the licensed ecologist (or agent) and removed to a place of safety using a soft bag to temporarily hold bats. The animals would then be inspected for injuries and then placed in the compensatory roost, allowing the animals to disperse naturally at dusk.

Removal of other Trees

In the event of a tree needing removal where baseline surveys have confirmed the likely absence of bats but suitable features are present, RAMs will be applied as follows:

- Trees that have features with potential for use by roosting but which have not been confirmed as a bat roost will be scheduled for felling during October to mid-November, or Mid-March to the end of April. All such trees will be surveyed by means of a climb and inspect survey as a minimum, followed by dusk / dawn survey if presence cannot be ruled out, immediately prior to felling;
- Assuming no evidence of bats is discovered during surveys, trees may be felled following the advice of the ecologist on site. This is likely to involve careful dismantling of sections that contain potential roost features; and
- Best practice for felling trees with suitable features for bats include the following: cracks and splits to be wedged to prevent closure prior to felling; loose bark to be carefully peeled back to reveal the wood beneath and confirm no bats are present; cavities must not be sawn through; sections that contain potential roost features must be "soft-felled" and roped carefully down to the ground; cavity containing sections should be allowed to remain undisturbed on site for 24 hours following felling to allow any undiscovered bats (or other animals) to escape.

If bats, or evidence of bats is discovered at any time during implementation of RAMs this work will cease and the advice of a licensed batworker sought. An EPSL may be required as set out above before works can resume in this situation.

Great Crested Newt

Assuming presence of GCN is re-confirmed and the conventional mitigation route (Approach 2 in Section 3.2) is followed, land within 250m[7] of identified breeding ponds will be subject to capture and exclusion following the Great Crested Newt Mitigation Guidelines (2001). This would be under a European Protected Species Licence (EPSL) or Low Impact Class Licence (LICL) subject to specific details and criteria being met once a detailed development design is finalised.

Prior to this commencing, a suitable receptor area will need to be identified. This is typically an area not subject to development activities and whilst this may potentially include 'off site' land if appropriate to do so, this is not anticipated to be necessary in this instance given the extent of land which is allocated for habitat creation beyond the extent of development shown by the indicative layout.

Translocation under an EPSL typically relies on the ability to install a barrier to movement which contains newts in an area and a means of capture. This typically involves the combination of amphibian barrier fencing of the area subject to development activities, the installation at regular intervals of pitfall traps which are dug so they are flush with the ground level and the placement of refuges. The pitfall traps and refuges are established along the clearance side of barrier fencing with refuges also focussed on any localised features i.e. rubble piles, which are more likely to be used by GCN.

The refuges and pitfall traps are then checked daily by an ecologist with captures logged. Translocation is undertaken when night-time temperatures are anticipated to be above 5°C and typically between March and the end of October in a given year. Any GCN, and other amphibians, will be then be relocated to the receptor area.

[7] A great distance may be considered subject to detailed survey results and completion of a specific risk assessment of the detailed development design at planning application stage.

The length of capture period is based on population size (deduced during baseline surveys), typically this is 30 suitable days for a 'small' population as previously recorded at the identified ponds in 2013, although this is extended to 60 suitable days for a 'medium' population and 90 days for a 'large' population.'

Following completion of the relevant capture period, a destructive search is undertaken prior to releasing the land for development. Should the Site be eligible for a LICL, and this option is taken, then the same level of fencing, capture and translocation required as under a full EPSL may not be necessary. Again, the options available will need to be assessed at the time of implementation to ensure the most appropriate route is taken.

Post construction monitoring is then often required, together with positive habitat management of the receptor area, by condition of the licence.

Reptiles

The presence of reptiles has not been confirmed although presence is considered a possibility in parts of the Site, albeit these are largely undeveloped under the indicative masterplan.

Whilst a baseline survey will confirm the presence or likely absence of reptiles, an outline Reptile Mitigation Strategy (RMS) is provided below to show how development can be undertaken in a way which minimises the risk of killing or injuring any reptiles present when habitat removal takes place. It is also possible that, if required, the RMS will be adapted to occur alongside any GCN mitigation scheme.

A staged approach to reptile clearance is likely to be required, the exact details subject to the species and likely number of reptiles recorded, if present.

The approach to reptile mitigation is set out below and will comprise two main elements:

- Targeted habitat management of the reptile habitats to be lost in order to reduce their suitability for reptiles during active translocation of reptiles away from the clearance area into a receptor site; and
- A final hand search of vegetation and refuges for reptiles immediately prior to ground disturbance taking place.

Decreasing Habitat Suitability

Initially a series of 0.5m^2 artificial refuges will be set out at a density of 100 refuges per hectare and will be left for a period of at least one week to settle into the vegetation. Following this, an initial reduction in vegetation height will take place in stages over three days of suitable weather i.e. dry and warm (10-20°C) within the main active period for reptiles (March to October). The first stage will reduce vegetation to approximately 30cm, then the second to approximately 15cm and finally approximately 5cm.

The vegetation reduction works will be undertaken under the direction of an ecologist during which reptiles will be actively searched for. This will include regular checks of the artificial and any natural refuges.

Checks of the refuges will be made during this and for a period continuing until five capture free days have been achieved. As any reptiles are encountered, these will be captured using a gloved hand and transferred to a suitable container (cloth drawstring bag or a lidded bucket) allowing their safe transportation to a predefined release site beyond the exclusion area.

The precise release site can only be confirmed once the presence of reptiles is known, although based on the indicative masterplan, there will remain areas of the Site that can be used to accommodate reptiles (a receptor area) during development until a suitable point of development is reached and reptiles will be able to access all suitable habitats of the completed landscape scheme.

Subject to the precise details regarding any reptile species present, the extents and locations of habitat to be disturbed and the detailed timings of such works, the use of temporary barrier fencing may also be required to

exclude reptiles from working areas or retain them in receptor areas, again this is likely to work in parallel to any required GCN mitigation.

These details will all be subject to confirmation as part of any future planning application.

Final Hand Search

Following completion of the above steps, a final hand search of the vegetation and refuges will be undertaken by an ecologist immediately prior to vegetation removal taking place.

At this stage, the likelihood of encountering reptiles will be low as a result of the habitat modification and capture exercise, but any reptiles found will be relocated following the above measures.

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