

Tritax Symmetry (Hinckley) Limited

HINCKLEY NATIONAL RAIL FREIGHT INTERCHANGE

The Hinckley National Rail Freight Interchange Development Consent Order

Project reference TR050007

Ecological Mitigation and Management Plan

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Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
Regulation 5(2)(a)

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
Regulation 14

This document forms a part of the Development Consent Order (DCO) for the Hinckley National Rail Freight Interchange project.

Tritax Symmetry (Hinckley) Limited (TSH) has applied to the Secretary of State for Transport for a DCO for the Hinckley National Rail Freight Interchange (HNRFI).

Further details about the proposed Hinckley National Rail Freight Interchange are available on the project website:



The DCO application and documents relating to the examination of the proposed development can be viewed on the Planning Inspectorate's National Infrastructure Planning website:

<https://infrastructure.planninginspectorate.gov.uk/projects/east-midlands/hinckley-national-rail-freight-interchange/>

Section 1 ◆ Introduction

INTRODUCTION

- 1.1 This Ecological Mitigation and Management Plan (EMMP) has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Tritax Symmetry (Hinckley) Limited (hereafter referred to as “TSH”). It has been produced in relation to the proposed National Rail Freight Interchange on land north-east of Hinckley (Hinckley National Rail Freight Interchange (HNRFI)), which is to be the subject of a Development Consent Order (DCO) application. The full extent of the Order Limits is hereafter referred to as the ‘DCO Site’.
- 1.2 The land between the M69 motorway and the Leicester to Hinckley railway on which the proposed HNRFI would be developed is identified as the ‘Main HNRFI Site’.
- 1.3 The DCO Site contains the Main HNRFI Site and also includes contiguous areas to the north-west, south and east, respectively to contain the corridor of a proposed link road that would cross the Leicester to Hinckley railway and connect to the B4668/A47 Leicester Road (the ‘A47 Link Road’), the proposed works to M69 Junction 2 and a section of the B4669 Hinckley Road towards the village of Sapcote. These are hereafter referred to as the ‘Main Order Limits’.
- 1.4 The DCO Site also includes additional non-contiguous areas of land at roads and junctions for which highway enhancements and traffic management measures are proposed, in addition to pedestrian level crossings on the Leicester to Hinckley railway that are subject to proposed works and restrictions.

SITE CONTEXT

- 1.5 The Main Order Limits are located 3km north-east of Hinckley in an area of mixed farmland to the north-west of M69 Junction 2 and is centred on National Grid Reference (NGR) SP 46314 94858. The Main Order Limits support predominantly arable land and comprises field parcels delineated with hedgerows and ditches, ponds, several small blocks of woodland and three complexes of farm buildings and an unnamed stream which flows north-eastward through the southern portion of the Main Order Limits.
- 1.6 A Phase 1 Habitat Plan for the Main Order Limits is provided as Figure 12.3 (document reference 6.3.12.3).

Development Proposals

- 1.8 Development on the DCO Site is described in Chapter 3 of the ES (document reference 6.1.3).

Purpose

- 1.11 This EMMP has been prepared in relation to the DCO Site as described above and should be read in conjunction with the Illustrative Context Masterplan provided as Figure 3.1 (document reference 6.3.3.1), and the Illustrative Landscape Strategy provided as Figure 11.20 (document reference 6.3.11.20). This document demonstrates the measures required during the construction phase to protect and mitigate impacts on the ecological receptors identified within the DCO site.
- 1.12 This EMMP makes occasional reference to the Landscape and Ecological Management Plan (LEMP) (document reference 17.2). The LEMP sets out details of habitat to be retained and created and its management and monitoring for the benefit of nature conservation, through the operational phase of the Development.
- 1.13 The EMMP will be secured by way of a suitably worded DCO requirement.

Section 2 ◆ Existing and Updated Ecological Baseline

2.1 During the baseline ecological investigations undertaken by EDP, the following valued ecological features were identified within and adjacent to the Main Order Limits:

- Designated Sites - Burbage Wood and Aston Firs SSSI and the overlapping Burbage Common and Woods LNR are located immediately adjacent to the Main Order Limits. In addition, two Local Wildlife Sites (LWSs) and seven potential Local Wildlife Sites (pLWSs) lie within the Main Order Limits and four LWSs and four pLWSs lie immediately adjacent. A candidate Local Wildlife Site (cLWS) also lies immediately north of the railway in the north-east;
- Habitats (see Figure 12.3, document reference 6.3.12.3) – principally comprise arable, improved, semi-improved grassland, buildings and hardstanding, marshy grassland and tall ruderal vegetation of low ecological value. However, the semi-improved neutral grassland, pond network, plantation woodland and ditches are of higher (Local level) nature conservation value. In addition, the hedgerow/tree line network demarcating the field boundaries, the scattered mature trees, the parcels of broadleaved semi-natural woodland and the unnamed stream are considered to be of high (District level) nature conservation value;
- Birds - The diversity and density of wintering and breeding birds recorded within the Main Order Limits is considered to be mostly typical for a lowland urban edge farmland site in central England. Diversity and abundance are slightly higher than is generally found, although given the size of the Main Order Limits, this is not surprising. Farmland indicators were recorded in moderate numbers, including yellowhammer (*Emberiza citrinella*), linnet (*Linaria cannabina*), grey partridge (*Perdix perdix*), lapwing (*Vanellus vanellus*) and yellow wagtail (*Motacilla flava*);
- Bats: Roosting – The Main Order Limits contain 33 buildings/built structures, all of which were assessed for their potential to support roosting bats. Five of these buildings (B2, B3a, B12, B20 and B21) were found to support bat roosts in 2021. B12, B20 and B21 were found to support only single common pipistrelle (*Pipistrellus pipistrellus*) bats in 2021 and no roosts had been recorded in these buildings previously. B2 was found to support a roost of two common pipistrelle bats in 2021 and supported three bats of this species during the previous surveys. Building B3a was found to support eight common pipistrelle bats in 2021 and in previous surveys was found to support three common pipistrelle and six long-eared bats (*Plecotus* sp.). In addition, a total of 83 trees were found to have bat roost potential (8 with high, 22 with moderate and 53 with low potential) within the Main Order Limits. No trees were confirmed as roosts during the ground level visual assessment or subsequent general activity surveys;
- Bats: Commuting/foraging – The activity surveys across the Main Order Limits recorded low to moderate levels of commuting and foraging bat activity, mainly associated with the species-rich hedgerows, woodland edge, waterbodies and mature trees. This

activity was fairly evenly spread across the Main Order Limits, and species diversity is fairly low, being dominated by common pipistrelles (86.3% of all static detector recordings made) with at least eight other species recorded (*Myotis* sp. not identified to species level) during the transect and automated detector surveys, including a few passes from two rarer species locally and nationally - *Nathusius' pipistrelle* (*Pipistrellus nathusii*; six recordings spread between April to September) and barbastelle (*Barbastella barbastellus*; two recordings). The bat assemblage recorded is typical of an urban edge farmland site in central England, with common and widespread generalist species accounting for the vast majority of foraging and commuting activity, and a small amount of activity from several rarer species;

- Badger – During the detailed walkover surveys in 2018, 2019 and 2021, a small number of badger setts were recorded across the Main Order Limits and immediate surroundings, comprising one main sett just off-site to the west, with one subsidiary sett and an outlier sett within the Main Order Limits. Evidence of foraging and dispersal across the Main Order Limits was also found. The survey confirms the presence of badgers and active setts and suggests that the Main Order Limits form a core part of the territory of at least one badger clan;
- Otter - A single record for otter (*Lutra lutra*) from 2002 was returned from a stream 400m to the north-east of the Main Order Limits (which also runs through the Main order Limits) was returned from Leicestershire and Rutland Environmental Records Centre (LRERC) during the desk study. During the two detailed walkover surveys in 2018, an old otter spraint was found immediately adjacent to the Main Order Limits. The update surveys in 2021 found no evidence of the species and as such the evidence found is not considered to be indicative of a permanent population on-site and is more likely to indicate the overspill of populations from the adjacent Burbage Common and Woods Local Nature Reserve;
- Water Vole - Seven records of water vole (*Arvicola amphibius*) were returned, dated between 1998 and 2003, from around the Burbage Common area. During the two detailed surveys for water vole in 2018, no water voles or confirmed evidence of this species was found, apart from a single instance of possible feeding remains, found on the wet ditch on the north-western edge of the Main Order Limits. The 2021 surveys found no evidence of use by the species;
- Brown Hare – Brown hare (*Lepus europaeus*) were recorded commonly across arable land within the Main Order Limits, including a juvenile on one occasion;
- Great Crested Newt – In 2018, an eDNA survey returned a positive result for the presence of great crested newt (*Triturus cristatus*) DNA in three on-site ponds and one off-site pond, but was negative for all other surveyed ponds within the Main Order Limits. No great crested newts (or eggs or larvae) were recorded during the course of the six conventional pond surveys undertaken of these ponds in 2018. A second eDNA test was carried out on these four ponds following this result, resulting in a positive result for just one on-site pond. In 2019, only one off-site pond returned a positive eDNA result and in 2021 all sampled ponds tested negative. As such, it is assumed that

a potential small population of non-breeding GCN was present within the area but has now declined to an undetectable population;

- Reptiles – ‘Low’ populations of grass snake (*Natrix helvetica*) and slow worm (*Anguis fragilis*) were found during the refugia-based reptile survey undertaken across the Main Order Limits during the 2018, 2019 and 2021 seasons; and
- Invertebrates - The majority of the Main Order Limits is not considered to support important populations of invertebrates, given the dominance of arable and improved/semi-improved grassland habitats. However, habitats within the Main Order Limits, including the hedgerow network, scattered mature trees, woodland, waterbodies and watercourse provide opportunities for terrestrial and aquatic invertebrates. It is considered that the mitigation relating to these habitats will act as a surrogate to safeguard such interests.

2.2 The findings of the surveys have been used to inform the sensitive working practices to avoid impacts to protected species during construction, as detailed in this EMMP.

2.3 Based on the above, the features comprising valued and/or legally protected species which require consideration during the construction phase are as follows:

- Hedgerows, broadleaved woodland and scattered trees within or adjacent to the construction footprint (including Burbage Common Hedgerows pLWS);
- The water course which runs within the Main Order Limits;
- Birds potentially nesting within habitats proposed for removal and adjacent retained habitats;
- Bats using the habitats proposed for removal (including buildings and trees) and adjacent retained habitats for roosting, foraging and commuting;
- Active badger setts and potential for additional sett building/expansion of existing setts, as well as commuting and foraging within habitats proposed for removal and adjacent retained habitat;
- Suitable habitat for foraging and commuting otter within the Main Order Limits and surrounding area;
- Suitable habitat for water vole within the Main Order Limits and surrounding area;
- Potential for great crested newt populations within aquatic and terrestrial habitats proposed for removal; and
- Small populations of common reptile species within grassland, scrub and hedgerow habitats proposed for removal.

Section 3 ◆ Ecological Construction Method Statement for Biodiversity

- 3.1 This section sets out the appropriate working practices and safeguards to be deployed prior to and during the construction phases, to protect the wildlife interest of the Main Order Limits as summarised in Section 2. General measures relating to site supervision and habitat protection are provided, along with detailed species-specific measures relating to the protection of birds, bats, badger, otter, water vole, great crested newt and reptiles, which will ensure that these species are not subject to significant adverse effects as a result of the proposed works.

RESPONSIBILITIES

- 3.2 The responsibility for delivering the protection and enhancement activities within the DCO Site are described in this EMMP before, during and immediately after the construction period, rests with TSH. TSH will be assisted by a combination of one or all of the following: a Principal Contractor; suitably experienced Landscape Contractor; and a suitably experienced ecologist.
- 3.3 The appointed Ecological Clerk of Works (ECoW) will be responsible for the provision of site briefings ('toolbox talks'), information and supervision where necessary to the Principal Contractor appointed by the TSH, and all relevant sub-contractors and site personnel involved in any enabling and construction works. The toolbox talks will ensure full understanding of the identification and legal protection of birds, bats, badger, otter, water vole, great crested newt, reptiles and their habitats, and any species-specific control measures as detailed in this EMMP, in addition to the protection of the retained hedgerows, woodland, scattered trees and watercourse.
- 3.4 The ECoW will also supervise relevant pre-construction work phases, including vegetation clearance, and mitigation for birds, bats, badger, reptiles, and potentially great crested newt and otter and water vole, as discussed further below.
- 3.5 At the time of writing, it is anticipated that EDP will act as the ECoW during the implementation of the clearance and construction works. Contact details for the practice can be found at [REDACTED]
- 3.6 In accordance with the DCO requirements, all elements of this EMMP must be implemented unless otherwise agreed in writing by the Local Planning Authorities (LPAs), and in accordance with a timetable agreed with the LPAs.

PRE-CONSTRUCTION MEASURES

Habitats

Protective Fencing

- 3.7 Prior to the commencement of construction, protective fencing, in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations (see Annex 7 of ES Appendix 11.4 Arboricultural Impact Assessment, document reference 6.2.11.4) will be securely installed around the Root Protection Area (RPA) of all retained habitats, namely hedgerows, woodland and scattered trees. The RPAs are illustrated on the Tree Retention and Removal Plan at Annex 5 of ES Appendix 11.4 (document reference 6.2.11.4). Such fencing is the responsibility of the Principal Contractor and will be installed in accordance with best practice guidance and maintained throughout the duration of the construction phase.
- 3.8 The area of land within the RPA of retained hedgerows, woodland and trees will be treated as an Ecological Protection Zone (EPZ) with all construction activities, including incursion from construction vehicles and storage of materials, excluded.
- 3.9 The water course (once re-aligned) and waterbodies (once created) will also be subject to protection, via the installation of protective fencing. Other measures to prevent polluted run-off or increased deposition of silt into the water course are outlined in paragraphs 3.27–3.32.
- 3.10 No works (other than planting), including the storage of materials, will be carried out immediately adjacent to areas of protective fencing. The digging of trenches and pits adjacent to areas of protective fencing for new tree and scrub planting will be carried out by hand only, following best practice guidance.
- 3.11 All works within or adjacent to the EPZs will be undertaken in accordance with the mitigation measures specified in the Arboricultural Impact Assessment (Appendix 11.4, document reference 6.2.11.4).

Breeding Birds

- 3.12 The protective fencing measures described above will, by-proxy, protect any nesting birds within retained habitats, namely hedgerows, woodland, scrub and scattered trees.
- 3.13 The proposed works will result in the removal of hedgerows and a large number of trees, as detailed in full in the Arboricultural Impact Assessment (ES Appendix 11.4, document reference 6.2.11.4), and illustrated on the Tree Retention and Removal Plan included as Annex 5 to ES Appendix 11.4 (document reference 6.2.11.4). This includes various features required for removal to accommodate the delivery of the built development and associated infrastructure.
- 3.14 Removal of suitable nesting habitat will be undertaken during the months of September to February inclusive, in order to avoid disturbance to breeding birds. Should this

constraint prove not to be practical in terms of the proposed construction timetable or due to timing constraints of other protected species, any habitats suitable for breeding birds (including hedgerows, trees or scrub) to be affected by clearance works within the breeding season (typically March to August inclusive) should be checked for the presence of active bird nests by a suitably experienced ecologist, immediately prior to the commencement of clearance works.

- 3.15 Areas of grassland habitat within the Main Order Limits, including field margins, which are within the construction footprint should be maintained at a height of less than 30mm (in line with other species-specific recommendation) through frequent mowing, or as bare ground through frequent disturbance. Areas of arable habitat within the construction footprint should be cut and maintained at a height of no more than 150mm to deter ground nesting birds and other wildlife from entering the construction site. All arisings from any vegetation clearance should be taken away from the works area.
- 3.16 If works are due to commence within the skylark breeding season (March to August), all arable fields located within the construction footprint should be regularly ploughed and/or cut, starting prior to nesting bird season and continuing until the commencement of the works. This will prevent the establishment of crops above the height of 150mm, to ensure that the construction footprint remains unsuitable for nesting by skylark. If works are scheduled to begin within breeding bird season a precautionary walk over and vantage point survey of the construction footprint should be undertaken by a suitably qualified Ecologist to check that the area is free from ground nesting birds.
- 3.17 If an active bird's nest is discovered, then works within a minimum of 5m of the nest should cease until it has been confirmed by a suitably experienced Ecologist that the nest is no longer active. The exact dimensions of the buffer zone will be determined by the Ecologist and depend on the level of disturbance, bird species present and life stage of young.
- 3.18 At all times, the below ground removal of hedgerows/trees/scrub will respect the species protection and mitigation measures relevant to badgers, reptiles and great crested newts, as detailed below.

Bats

Bat Roosting - Buildings

- 3.19 Given the transitional nature of bat roosts, further surveys prior to the demolition of any buildings within the Main Order Limits may be required to inform on the current bat roosting status of the buildings. Update surveys should be undertaken during the active bat season (May to September inclusive) and within 12 months prior to any demolition to inform any future bat mitigation strategy and/or potential Natural England (NE) European Protected Species (EPS) licence application.
- 3.20 An NE EPS Mitigation Licence (EPSML) for bats, or site registration with NE under the Bat Mitigation Class Licensing (BMCL) scheme, will be required for any building with a confirmed presence of roosting bats prior to works commencing. Thereafter, any works affecting bat roosts will need to be completed in line with a mitigation strategy approved

through the licensing process. Unless updated surveys reveal the presence of additional roosts within the Main Order Limits, the mitigation strategy for buildings will be based on roosts of low conservation significance as defined by the Bat Mitigation Guidelines, (i.e., small numbers of common species, not a maternity site), which state: *“Flexibility over provision of batboxes, access to new buildings etc. No conditions about timing or monitoring”*.

- 3.21 Based on the findings of bat roost surveys completed to date, and subject to any further surveys still to be completed, the only licence required will be for the demolition of buildings B2, B3a, B12, B20 and B21 where common pipistrelle and long-eared bat day roosts have been identified.
- 3.22 Buildings due to be demolished which have bat roosting potential but were not confirmed as bat roosts should be demolished using ‘soft demolition’ techniques including the following:
- A tool-box talk will be given to site contractors by the ecologist prior to commencement of any demolition works with respect to the legal protection afforded to bats, the working methodologies to be employed and procedures to be followed should any bats be encountered during the works;
 - The removal of all features with suitability to support roosting bats (such as sheet roofing, timber eaves and walls) will be undertaken by hand/using hand tools;
 - Removal of the roof, including roost access points (vents) and potential roosting features, can be undertaken during the months of September to February, in order to avoid disturbance to breeding birds. Should this constraint prove not to be practical in terms of the proposed construction timetable or due to timing constraints of other protected species, a nesting bird check will be undertaken by a suitably experienced ecologist prior to works commencing;
 - If a bat (or bird nest) is found during the demolition, the works will stop, and the advice of an ecologist/Natural England sought; and
 - The LPA ecologist will be informed of all demolition works undertaken. Should a NE EPS licence be required, a copy of the licence will be sent to the LPA ecologist.

Bat Roosting - Trees

- 3.23 It is anticipated that approximately 63 trees will be lost that contain bat roosting potential (10 with high potential to support roosting bats, 17 with moderate potential and 36 low potential) as a result of the HNRFI. Owing to the transitory nature of roosts, particularly tree roosts, these features may become occupied by roosts in future that would be subject to legal protection. As such, they require further consideration with respect to update surveys and mitigation to ensure there is no breach of legislation.
- 3.24 Prior to commencement of any clearance or construction works, further tree climbing inspections are to be undertaken during the bat active season (April to September

inclusive) of the trees with moderate or higher bat roosting potential that will be impacted by the Proposed Development. If the tree is not safe to access, presence/absence/root characterisation surveys will be carried out.

- 3.25 Removal of trees or limbs containing bat roosts would require a Natural England European Protected Species licence to be obtained in advance, and suitable alternative roosting habitat provided (typically in the form of bat boxes).
- 3.26 It is recommended that trees with low bat roost potential should be subject to a ‘soft’ felling methodology by a suitably qualified arboricultural contractor, following the advice of a suitably qualified and licensed ecologist and supervised where necessary. A soft-felling methodology involves the following approach:
- The avoidance of cutting through cavities/potential roosting features – i.e. cutting above and below the feature when removing sections with suitable features;
 - The gentle lowering of cut sections to ground to avoid violent movement of potential roosting features; and
 - The retention of cut sections with potential roosting features on-site for 48 hours, with potential entrances not blocked i.e. facing away from the ground, before being removed or chipped.
- 3.27 Should any bat be discovered prior to or during works, then all works will necessarily cease, and the advice of the licensed bat ecologist sought. It may be necessary to obtain a Development Licence from Natural England before works can continue.

Sensitive Timing of Works

- 3.28 Unless agreed with NE through the EPS licensing process, the following sensitive timing of works will be adhered to:
- For confirmed bat roost features:
 - o If a maternity roost is identified, works will not be carried out during the summer maternity period, running from May to August;
 - o If a hibernation or winter roost is identified, works will avoid the winter period or cold weather conditions when bats may be torpid or hibernating (i.e., temperatures below 8°C, periods of prolonged rain or strong wind), running from November to February (depending on weather conditions during that winter season, this may extend into March); and
 - o If a non-breeding roost is identified, works can be carried out at any time during the bat active period from March to October (depending on weather conditions during spring/autumn, only carried out during favourable weather conditions when bats are unlikely to be torpid, namely temperatures above a minimum of 8°C for four consecutive nights prior to commencement of works, no rain or strong wind).

- For buildings/trees with low – high bat roost potential (without confirmed bat roost features):
 - o If a building/tree contains features suitable for hibernation or winter roosting, works will avoid the winter period or cold weather conditions when bats may be torpid or hibernating (i.e., temperatures below 8°C, periods of prolonged rain or strong wind), running from November to February (depending on weather conditions during that winter season, this may extend into March); and
 - o If a building/tree does not contain any features suitable for hibernation/winter roosting, works can be carried out at any time.
- 3.29 If a building/tree is confirmed to be of negligible bat roost potential, no timing constraints will apply to demolition (but will be subject to other protected species timing constraints e.g., nesting birds).

Foraging and Commuting Bats

- 3.30 The loss of hedgerow, woodland, scrub and scattered trees to accommodate the proposed development may also result in the fragmentation of bat foraging/commuting habitat, although the quantum of habitat creation and enhancement measures such as new species rich hedgerow, native woodland planting, wildflower meadow grassland and waterbodies with associated wetland planting are considered to offset these losses and also provide additional suitable habitat for bats. Enhancement measures for bats and other species are detailed within the LEMP (document reference 17.2).
- 3.31 In addition, artificial lighting installed on-site during and/or after construction could also negatively affect the foraging and commuting activity of the local bat population. To ensure no such impacts arise, a sensitive lighting strategy is set out within this document under Construction Measures.

Badger

- 3.32 Three active badger setts were identified during the badger survey including a possible main sett, a subsidiary sett and an outlier sett. The location of the setts is shown on Figure 12.21 within the Environmental Statement (document reference 6.3.12.21). Other field signs included a network of mammal paths across the Main Order Limits, plus latrines and a footprint. No other setts were recorded within the Main Order Limits or wider area.
- 3.33 The subsidiary and outlier setts will both be lost to the proposed development. Such losses have the potential, in the absence of mitigation, to kill, injure, and/or disturb badgers that may be present. The actual number of setts to be lost will be determined following an update survey within 12 months prior to the start of enabling works at the Main Order Limits. This survey will also inform the future NE badger mitigation licence application.
- 3.34 Along with damage/destruction of these badger setts, the construction activities may result in the killing, injuring and/or disturbing of individuals. Additionally, badger foraging habitat will be lost owing to the construction footprint of the proposed development.

- 3.35 In order to avoid any infringement of the legal protection afforded to badgers in the UK and ensure that the development meets planning policy requirements with respect to biodiversity, it will be necessary for badgers to be excluded from the construction footprint of the development. Therefore, an application to NE seeking the grant of a badger mitigation licence to interfere with active badger setts will need to be made in order to permit construction works to proceed lawfully.
- 3.36 There are mature hedgerows and large woodland blocks within the local area that would provide suitable habitat to badgers once excluded from the setts occurring within the footprint of the Main Order Limits.

Mitigation Strategy

- 3.37 The badger Mitigation Strategy will contain the following measures to be implemented prior to any construction works commencing within the Main Order Limits.

Contractor Briefings

- 3.38 Prior to the commencement of any groundworks, a copy of the badger mitigation licence and accompanying method statement will be provided by the licensee or accredited agent to the applicant, and their appointed contractors working on-site and the LPA ecologist. Any appointed contractors will be briefed by the licensee or accredited agent in relation to the protection afforded to badgers, and the purpose and scope of the licence. The applicant or their representative (e.g. Site Manager) will retain a copy of the licence on-site for the duration of the works.

Vegetation Clearance

- 3.39 Following the cessation of the badger breeding season, taken to be 01 July onwards, vegetation clearance to no lower than 300mm above ground is to be undertaken across all areas within 10m of the sett entrances to be closed. Any vegetation clearance beyond a 10m buffer around active sett entrances is not considered a licensable activity.
- 3.40 Vegetation clearance shall follow a sensitive working methodology as outlined below:
- (i) The vegetation removal will be undertaken under the supervision of the ECoW and in such a way to avoid infringement of legislation relating to breeding birds (and their nests, eggs and young) and widespread reptiles under the Wildlife and Countryside Act 1981 (as amended);
 - (ii) Prior to the commencement of any vegetation clearance works all contractors shall be suitably briefed by the licensee or accredited agent on the presence, and location of, badger setts within the Main Order Limits;
 - (iii) A minimum of 20m buffer zone shall be implemented to maintain shelter for any retained setts and minimise disturbance;
 - (iv) The perimeter of the exclusion zone sett shall be clearly marked with temporary post

and wire fencing, or similar, to clearly define the boundary of the exclusion zone;

- (v) Vegetation clearance will be undertaken by petrol powered hand tools (including trimmers, brush cutters, chainsaws and powered saws) or via tracked machinery (up to 10t gross weight) fitted with mulcher, strimmer or flail attachments;
- (vi) To avoid potential killing or injury of reptiles within the Main Order Limits, any parts of the Main Order Limits where plant is to be tracked over must be suitably cleared of vegetation and finger tipped searched for reptiles by a suitably qualified ecologist;
- (vii) Cut material is to be chipped on-site using a tracked/wheeled wood chipper; and
- (viii) In the event that additional sett entrances are identified during the course of vegetation clearance (such as those not identified during previous site investigations owing to the dense covering of scrub within the Main Order Limits), appropriate precautionary measures as defined by the licensee or accredited agent, based on the current state of the entrance found, shall be adopted to prevent disturbance to badgers potentially underground. This may include the restriction of vegetation clearance to within no less than a 10m buffer of any new sett entrances.

Badger Exclusion

3.41 The methods to be followed during the exclusion of badgers from the setts are detailed below.

On entrances showing signs of current use, as determined by the licensee or accredited agent:

- A one-way gate will be fitted directly over the entrance. Where necessary, the sett entrance and/or spoil heap will be re-contoured or levelled to allow snug fitting of the gate frames, and to ensure free movement of the gate itself;
- The ground around and in front of the gates extending to between 1–2m from sett entrances will be covered in galvanised standard stock mesh (C8/80/15). The mesh will be doubled where necessary to reduce the mesh size and will be securely fastened using 30mm fencing staples and 2-foot-long, 1-inch square surveyors' posts. The mesh will prevent badgers digging around the gates and ensure that badger egress is via the gates only;
- To prevent badgers opening the gates from outside the sett, additional surveyors' posts may be driven into the spoil heap in front of the gates; and
- The gates will be shut and set to one-way operation to exclude any badgers within the sett.

On entrances showing no signs of current use, as determined by the licensee or accredited agent:

- Disused entrances will be hard stopped at the start of the exclusion process. Hard

stopping will comprise half-round timber posts driven in vertically across all the holes, and the entrances back-filled with rubble or soil, packed hard (hence the term hard stopped); and

- The hard-stopped entrance and the area around will be overlaid with a sheet of galvanised metal C8/80/15 standard stock mesh. The extent of mesh used will depend on the size of the entrance, the number of nearby holes and the type of soil but will be sufficient to prevent badgers digging around and regaining entry to the tunnels. The mesh will be secured in place, tight to the ground, using 30mm fencing staples secured to 2-foot-long wooden surveyor’s pegs. If timber posts cannot be used, additional sheets of mesh will be used staggered to reduce the diameter of the mesh.

Exclusion Monitoring and Maintenance

3.42 Badger activity at the sett will be monitored regularly throughout the sett exclusion period, which will last for 21 days. Throughout this time, a minimum of three site visits per week will be undertaken by the licensee, accredited agent or suitably qualified ecologist to ensure that badgers have not broken through the gates or removed mesh netting, and regained access to the sett.

3.43 Sticks placed at arm’s length (approx. 1m) down the tunnel will be used to detect movement of badgers within the sett, and a short stick (c.5cm long) placed on the outside of the gate will be used to detect use of the gates.

Sett Destruction

3.44 After 21 days with no signs of badgers re-entering the sett(s), the gates will be removed and setts will be destroyed using a mechanical excavator, under the direct supervision of the licensee or accredited agent. All sett entrances, tunnels and chambers will be carefully excavated and removed ensuring that no badgers remain present within any underground structures.

3.45 Additional measures to protect badger are set out under Other Measures, below.

Amphibians

3.46 Further surveys at each phase of the proposed development will inform whether mitigation measures for great crested newts are required. Sensitive working methodologies set out below for reptiles will, by-proxy, protect any populations of amphibians within the Main Order Limits whilst in their terrestrial habitats.

3.47 Furthermore, the proposed habitat creation, as set out in the LEMP (ES document reference 17.2) will provide extensive new aquatic and terrestrial habitat for amphibians.

3.48 In the event any great crested newts are identified during the vegetation clearance works, all works will cease immediately, and the ECoW will contact Natural England regarding licencing requirements to proceed.

Reptiles

- 3.49 The clearance of any grassland or ruderal habitat, if required, will follow the following precautionary approach to prevent the risk of any harm to reptiles (or amphibians):
- If cleared during the hibernation period (mid-October to mid-March) any potential refugia/hibernacula identified during clearance within the development footprint will be carefully dismantled/removed using hand tools, hand-held machinery or untracked, light machinery under the supervision of the ECoW;
 - If cleared during the active season (mid-March to mid-October) all grassland areas will be subject to directional cutting over two phases. The first phase of clearance will require an initial cut of the vegetation reducing vegetation height down to a minimum of 150mm, with clearance directed towards adjacent retained habitat. Thereafter, grassland will be cut to ground level, with sward heights not exceeding 30mm;
 - All arisings will be removed from the construction footprint and vegetation will be maintained thereafter at a height no greater than 30mm through regular mowing or strimming or as bare ground to discourage common reptiles (and amphibians from returning; and
 - In the event any reptiles are identified during the phased clearance, individuals will be captured by the ECoW and immediately released into retained habitat adjacent.

CONSTRUCTION MEASURES

Maintenance of Areas Cleared of Vegetation

- 3.50 Should there be a delay between the end of the pre-construction phases and the beginning of the construction works phase, such that vegetation begins to re-colonise, then such vegetation will be subject to regular cutting throughout the duration of the Construction Phase to ensure heights are maintained at c.30mm or less, or else maintained as bare ground to deter the return of wildlife to the construction area.
- 3.51 Any remedial or formative pruning required of trees will be undertaken between October and February inclusive, in accordance with good horticultural and arboricultural practice with thinning, trimming and shaping of specimens undertaken as appropriate to species, location, season, and stage of growth. All arisings from any vegetation clearance will be taken away from the vicinity of the development footprint no later than the day after vegetation clearance.
- 3.52 Any spoil, rubble, brash and/or debris collected as a result of the construction works will be removed from site or stockpiled within the centre of the site and away from the vegetated boundaries and water courses.

Pollution Incidents and Site Protection

- 3.53 As part of the government’s ‘Smarter Guidance Project’, pollution prevention guidance notes and publications produced previously by Defra were withdrawn on 17 December 2015 in an attempt by the government to simplify and streamline the guidance provided. Pollution Prevention Guidelines (PPG) are currently archived on the National Archives website; however, these are still downloadable and represent the most up to date good practice guidance notes.
- 3.54 Therefore, measures to prevent pollution incidents will follow the recommendations set out in the Environment Agency’s PPG. It will be the responsibility of the Principal Contractor to ensure that any site contractors are aware of the measures to be implemented to prevent and deal with any pollution incidents.
- 3.55 The Main Order Limits should be adequately protected by secure perimeter fencing with a padlocked front gate to reduce the potential incidents attributed to vandalism and theft. In addition, emergency out of hours contact numbers should be clearly displayed at all appropriate entrances.
- 3.56 It will be the responsibility of the Principal Contractor to ensure that:
- (i) All fuel and chemical storage are sited on an impervious base within a secured impervious bund;
 - (ii) Refuelling of mobile vehicles is undertaken in a designated area, on an impermeable surface and away from any drains or watercourses;
 - (iii) Diesel pumps or similar equipment are placed on drip trays to collect any minor spillages; and
 - (iv) Drip trays are checked at least weekly and any accumulated oil removed for disposal.
- 3.57 It will be the responsibility of the Principal Contractor to ensure that all plant washing facilities used are securely constructed with no overflow and the effluent is contained for proper treatment and disposal. The Principal Contractor will also be responsible for ensuring that all site roads are regularly brushed or scraped and kept free from dust and mud deposits. In dry weather, dust suppression measures will be used.
- 3.58 The storage of any construction materials will be situated away from areas fenced for their ecological sensitivity (EPZs) including retained woodland, hedgerows, trees and scrub, ditches and the re-aligned water course.

Lighting Strategy

- 3.59 To reduce the impact of artificial light spillage on the ecological features of interest on-site, namely the retained hedgerows and trees within the Main Order Limits, as well as any such features in adjacent off-site land, which will be used by nesting birds, foraging/commuting bats and badgers, a sensitive lighting strategy is to be adopted

throughout the construction phase of the development as set out in the Lighting Strategy (document reference 6.2.3.2).

- 3.60 Good practice guidance, at present, includes the following specific requirements for bats which have been incorporated into the Lighting Strategy (document reference 6.2.3.2):
- LED sources are preferable; metal halide and fluorescent sources should not be used;
 - Emitted light should not include UV wavelengths;
 - A warm white spectrum, ideally <2700 Kelvin, should be used to reduce blue light;
 - Peak wavelengths of luminaires should be higher than 550nm;
 - Luminaires should always be mounted horizontally with no upward light spill;
 - Column heights should be carefully considered to minimise light spill;
 - Timers and dimming regimes should be incorporated where appropriate; and
 - Baffles, hoods and louvers should be used as a last resort to reduce light spill.
- 3.61 Any illuminated site compounds will be sited away from all retained features of ecological interest described in this document, namely the retained hedgerows, woodland and scattered trees, water course and ditches on-site and adjacent woodland. Overnight working in areas used by foraging or commuting bats will be controlled through the use of method statements, including measures to minimise any potential negative effects, as defined above.
- 3.62 Where required, the times during which lights are on should be controlled to avoid lights illuminated between, and including, dusk and dawn hours between March and November inclusive, to allow some dark periods for bats, badgers and other wildlife. Lighting with a low UV component should be used to reduce invertebrate attraction, and directional lighting/shielding of lights with accessories such as hoods, covers, louvres and shields is to be used throughout to avoid excessive light spill.

Other Measures

- 3.63 Any holes or trenches should be filled or covered overnight during construction, to prevent badgers and/or small mammals falling in. If this cannot be achieved, then at least one side of the trench or hole should have a sloping side to allow easy exit for wildlife. This will be enforced through site briefings ('toolbox talks') given by the ECoW, and through ECoW supervision, throughout the pre-construction and construction phases.

RELEASE OF CONSTRUCTION SITE TO DEVELOPER

- 3.64 Upon completion of the activities described in this document within the relevant period (i.e. pre-construction and/or construction periods), and confirmation from the supervising

ecologist(s) that all relevant tasks have been completed successfully, the Main Order Limits will be released for pre-construction/construction works to commence. It is noted that whilst some tasks may be ongoing, others may be completed and thus, assuming the relevant task has been signed off by the supervising ecologist(s), various parts of the pre-construction/construction process may be operating in tandem.

Section 4 ◆ Timetable of Work, Summary and Conclusions

- 4.1 Table 4.1 overleaf provides a summary timetable for the optimal timings to undertake tasks anticipated in relation to the development.

SUMMARY AND CONCLUSIONS

- 4.2 This EMMP details measures specific to the consented development, considered necessary to protect and conserve the ecological and landscape interest features of the DCO site. It sets out when operations should occur and details sensitive clearance methodologies so that no protected/priority species are harmed during the pre-construction/enabling works. Detailed measures have also been provided to ensure that existing and retained features of ecological interest, are suitably protected during the pre-construction/construction works phase of the development.
- 4.3 The responsibility of the undertakings set out within this EMMP rests with the Principal Contractor appointed by TSH for the pre-construction phase and with any Contractor appointed by end users during the construction works phases. Any deviation from that prescribed within this EMMP is to be agreed in writing with the relevant Local Planning Authority.
- 4.4 Provided that the measures set out in this EMMP are fully implemented, the relevant ecological features present within the Main Order Limits will be adequately protected in accordance with legal and planning policy requirements.

Table 4.1: Optimal Timings to Undertake Tasks Anticipated in Relation to the Development.

Task	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pre-commencement Site Check	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Clearance of trees and scrub, above ground ^[1]	Blue	Blue	White	White	White	White	White	White	Blue	Blue	Blue	Blue
Removal of roots/tree stumps, below ground ^[2]	White	White	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	White	White
Clearance of grassland ^[3]	Light Blue	Light Blue	Light Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Light Blue	Light Blue
Installation of tree protection fencing	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue

^[1] Outside of main bird breeding seasons unless vegetation is inspected by an ECoW immediately prior to clearance and no active bird nests present.

^[2] Assuming hibernating habitats exist and these cannot be reasonably hand searched to confirm likely absence of protected/notable species prior to removal.

^[3] During main reptile active season phased clearance required and during hibernation season dismantling of refugia by ECoW