TREE & HEDGEROW REMOVAL ECOLOGICAL METHOD STATEMENT

INTRODUCTION

Works will require the removal of hedgerows either in full or partially. This could have the following adverse ecological effects:

- fragmentation of wildlife corridors;
- reduction in connectivity between habitats;
- loss of important or species rich native hedges; and
- loss of shelter and food resource for birds and small mammals, including loss of food resource and interruption of commuting routes for bats.

GENERAL

Pre-start Planning and Liaison

The following principles apply to all hedgerows including those which do not enjoy special protection.

In each working area, the ECoW will identify the relevant ecological receptors by reference to the Environmental Constraints Plans.

Surveys and Inspections

Once the hedgerows have been marked out in each working area, the affected hedgerows will be subject to inspections for protected and invasive species.

The proposed surveys/inspections will concentrate on:

- Inspection of trees for bat roosts,
- Search for old dormouse nests and nuts etc
- Survey for badger setts
- Check for the presence of nesting birds (March – August inclusive)
- Potential for use as a reptile refugia/hibernation site

During bird breeding season, checks will be required no more than 48 hours in advance of clearance works.

Notifications/licences/permits

Where hedgerows are in a designated wildlife site, the procedures for prior notification and liaison with regulatory bodies and landowners will apply.

The vegetation contractor and the ECoW will meet to discuss the ecological requirements and the contractor will ensure all protection measures and constraints are incorporated into the RAMS for the works.

Pre-start

In advance of any construction works commencing, the ECoW will provide a toolbox talk where required. All contractors will sign to confirm attendance at the toolbox talk and acceptance and understanding of the Hedgerow Removal Method Statement.

Contractors will be instructed on maintaining vigilance for environmental constraints. If at any time protected species is found or suspected to be present or there are any issues with sensitive habitats all works in the affected area will cease immediately and advice sought from the ECoW.

Prior to vegetation clearance commencing in each working area, all sections of hedge due for removal or requiring pruning will be marked out by the Contractor, and the ECoW shall confirm this to ensure contractors operate within the agreed working limits.

Working areas will be kept to the strict minimum required with the ECoW demarcating sensitive habitats to ensure contractors operate within the agreed working limits.

Micro siting of works to minimise effects on hedges will include using existing gaps or gated access points along hedgerows and small scale adjustments to working areas to enable retention of better quality features within Order Limits. This will be achieved through the ECoW verifying hedgerow sections for removals or pruning and advising on adjustments and mitigation requirements as required.

Access into and out of the working area will be along agreed routes only. Machinery and vehicles will not be permitted to move outside the agreed access routes and working area.

Cut vegetation will not be stockpiled in the working area as this may create suitable habitats for protected species. Locations for storing arisings for biodiversity purposes will be specified by the ECoW.

Protection of Retained Trees and Vegetation

Existing trees to be retained will be protected during the development. Protection measures will comply with BS5837 (2012) standards for tree protection.

All tree and hedgerow works will comply with BS3998:2010 Tree Work – Recommendations.

In order to restrict spread of tree pathogens, all equipment and machinery and vehicles used for tree, hedge and shrub removal will be cleaned and disinfected and used in accordance with Forestry Commission's contemporary biosecurity guidance.

The BB Environmental Advisor will advise on whether each working area is to be regarded as "low-risk" or "high-risk" in relation to the required level of biosecurity precautions as set out in *Biosecurity – good working practice for those involved in forestry, Forestry Commission November 2012*.

General Work Measures

The cutting of the hedges will be undertaken by either using tree shears, tracked excavators with mulcher heads or by hand held chainsaws.

The use of tracked machines will enable the hedges to be cut without disturbing the root systems by being approximately 5 m from the hedges when operating.

The cut material will either be retained for use as dead hedges (not when using mulchers) or chipped at a point more than 10 m from the hedges.

Fires will be completely prohibited on site. A no smoking policy will be implemented except in designated areas of the site.

Machinery will be switched off when not in use. Where practicable to do so, machinery will be stored in sites which are subject to 24 hour security. All tools will be secured overnight in a locked container or compound.

Temporary storage of materials and equipment will only be undertaken in areas pre-agreed with the ECoW.

Dealing with Arisings and Invasive Species

Cut vegetation will be removed from the working area daily or chipped and spread thinly in areas agreed with the ECoW and subject to landowner agreement. Alternatively, it may be stored in areas unlikely to be disturbed until it can be removed or chipped.

Any vegetation clearance in areas with invasive species will be dealt with in accordance with the method statement for invasive species and the Waste Management Plan.

NESTING BIRDS MITIGATION PROPOSALS

No hedge, woodland removal or large-scale ground vegetation clearance will take place within the breeding bird season (March to August inclusive), unless nesting bird checks by the ECoW indicate that no breeding birds will be affected.

Within the bird nesting season the survey for nesting birds will be undertaken within 48 hours of the proposed works starting.

If nesting birds are identified an exclusion buffer will be erected around the nest. The size of the exclusion buffer will be determined on a 'case-by-case' basis by the ECoW. A minimum standoff of 5 m will be implemented, but this distance will likely increase in the presence of ground nesting birds or nesting Schedule 1 species. There will be no works in the exclusion area and the nest will be left undisturbed until the young have left the nest.

Potential Impact	**Disturbance or destruction of active bird nests in hedges, shrubs, trees or dense vegetation.**
Area Affected/Location	All hedges, shrubs, trees or dense vegetation within Proposed Development.
Time Period during which effect may occur	March to August inclusive (bird breeding season).
Mitigation Measure Proposed	
All hedges, shrubs, trees or dense vegetation will be retained as far as is practicable. Where these measures are not possible and works are needed to be carried out during the bird breeding season, all areas to be affected will be checked for evidence of nesting birds no more than 48hrs prior to the vegetation removal or tree felling works taking place. If any active bird nests are discovered these will be given a minimum standoff of 5m (this may increase depending on species, proposed works and location) where no potentially disturbing works will take place until the young have fledged and the nest vacated. A second nesting bird check would then be undertaken to ensure the tree or vegetation does not contain any further active nests prior to felling or removal works taking place.	

Potential Impact	**Disturbance, destruction of active nests of ground nesting birds**
Area Affected/Location	Open fields
Time Period during which effect may occur	March to August
Mitigation Measure Proposed	
Where the development passes through open fields within the listed locations during the period where an effect may occur, a nesting bird check would be carried out by an ecologist to establish whether ground nesting birds such as lapwing and skylark are nesting within that location. If active bird nests are located, the nest would be marked and all potentially disturbing works within at least 20m of the nest location would be stopped until the active nest had been vacated. Prior to works in the area commencing a further nesting bird survey would be required to establish that no active bird nests were present within the area.	

Potential Impact	**Barn owl** **Disturbance, destruction or displacement of active barn owl nests**
Area Affected/Location	Any works within 50m of barn owl boxes. Any mature trees proposed for removal (locations)
Time Period during which effect may occur	Any time of year
Mitigation Measure Proposed	
Barn owls are protected under Schedule 1 of the Wildlife and Countryside Act and so are protected from disturbance during the breeding season. Barn owls may breed at any time of year. Where works are proposed to be undertaken within 50m of a known barn owl box, the box will be inspected for signs of current nesting activity by a licensed barn owl surveyor a maximum of 24hrs prior to works commencing. Should barn owls be found to be nesting, no works will take place within a minimum disturbance buffer distance of 50m surrounding the nest location while the nest is active. Retained trees with the potential to support breeding barn owl may fall within disturbance distances of works. These will be identified by a licensed ecologist and covered by the measures outlined in this method statement. Any nest boxes lost through the development would be re-instated on a 2:1 basis. The replacement nest boxes will be sited in appropriate habitat as near as possible to the locations of the nest boxes to be removed.	

Potential Impact	**Habitat Loss (breeding and non-breeding birds)**
Area Affected/Location	All hedges, shrubs, trees or dense vegetation within Proposed Development. Any locations where nest boxes may be lost through development. Any wet grassland areas (e.g. Nailsea Moor, Kenn Moor)
Time Period during which effect may occur	Any time of year
Mitigation Measure Proposed	
All hedges, shrubs, trees or dense vegetation will be re-instated following works through replacement planting Any nest boxes lost through the development will be re-instated on a 2:1 basis. Replacement nest boxes will be sited in appropriate habitat as near as possible to the locations of removed nest boxes. All watercourses will be avoided where possible and alterations to hydrology minimised. Any loss of wet grassland habitat will be re-instated following development works.	

RETENTION OF BAT COMMUTING CORRIDORS

Hedgerow removal may affect bat commuting along the proposed underground cable route and access points. Where hedgerow removal will result in gaps of more than 15m, temporary linear features (temporary bat flyways) will be used to ensure that bat flight corridors are maintained at night during the active season (March to October inclusive). This will involve using cut material to form a thin “dead hedge” to replicate the removed hedge. This hedge should not be too thick to become a potential bird nesting habitat.

DORMOUSE MITIGATION MEASURES

All hedgerows as being identified as having potential for dormouse will be removed using a two phase cut method.

Stage 1 is the removal of aerial parts of the hedge more than 300 mm from the ground and will be undertaken whilst dormice are in hibernation. This is normally between **November and April** inclusive. At this stage a suitably qualified ecologist will check for dormouse presence and if found to be present, works will stop on that hedgerow and a licence applied for.

Stage 2 is the removal of roots when dormice have left hibernation (**May to October**).

Clearance of the hedgerows will be undertaken as carefully as possible with as little disturbance to the ground around the roots. This can be achieved by the mechanical flailing of the hedge in situ, use of tree shears or hand-held chainsaws.

If there is negligible potential for dormice being present, prior to the excavation of roots within the hibernation period they will be checked for potential hibernation features such as cavities at the root bole.

The minimum length of hedge is to be removed and the individual breaches made as small as possible. It is recognised that the removal of the aerial sections may need to be greater than the subterranean parts.

Clearance will seek to minimise removal of species valuable to dormouse where possible, for example bramble, hazel and oak.

Maintaining Connectivity

The use of 'dead hedging' will be utilised in the interim periods between hedge removal and prior to hedge replanting and adjoining hedgerow identified as having habitat suitable for dormouse but bat flyways are not required. This will maintain connectivity between dormouse habitats but will be created in a manner that does not encourage nesting dormouse or nesting birds.

In addition, the bat flyways will create connectivity along a number of the hedgerows for the dormouse.

If dormice are found within any of the hedges, a licence will be applied for and suitable mitigation measures agreed with Natural England, such as displacement, installation of dormouse nest boxes and translocation, as part of the application process.

Reinstatement

The planting will reflect the habitat preferences of dormice and will be subject to agreement with landowners. This would include species important for dormice such as bramble, hawthorn, hazel as well as yew, ash, oak, sallow and hornbeam should also be considered to be planted in the dormouse areas.

Further opportunities for additional habitat enhancement would be sought to ensure habitat links and maintenance of local population such as provision of nest boxes, gapping up hedgerows etc if dormouse are found to be present and a licence is applied for.

BADGER MITIGATION MEASURES

The hedges to be removed will be checked for badgers prior to clearance. The check will include adjacent stretches of hedge for 30 m.

If a badger sett is discovered a 20 m exclusion zone will be installed around setts which will be subject to disturbance only, and 30 m around setts which will be damaged.

The closure of any setts will only be undertaken between 1st July and 30th November once the site is either registered under an individual's Natural England Class 35 licence or under a full badger licence.

Hedge cutting can be undertaken (under ecological supervision) using hand-held equipment within these zones at any time. All cut material is to be either chipped at a location >30 m from the sett, or left in situ but ensuring the sett entrances are not blocked.

Reptile Mitigation Measures

Some hedgerows may be suitable hibernation sites for reptiles and when the hedgerows are cut it is important not to damage these sites.

The removal of the hedge roots will be undertaken, under ecological supervision, when the reptiles are active (normally between April and October inclusive) and day time temperatures are consistently above 9°C.

Key Timings

Species	Activity
Nesting Birds	Avoid vegetation clearance between 1st March and 31st August
Badgers	If setts are to be closed or subject to undue disturbance this must occur between 1st July and 30th November.
Bats	Any roosts to be destroyed should ideally be undertaken between 15th September and 15th November or during April.
Dormouse	Vegetation clearance: 1st November to 30th April Root removal: May to October
Reptiles	Removal of root systems and potential hibernation sites to be undertaken between 1st April and 30th October.