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Appendix 30/1: General

30/1.1 Quality Management Schemes

The Specification for Highway Works is published as Volume 1 of the Manual of Contract Documents for Highway Works (MCHW). This manual contains an Introduction, 27 Series documents and 8 Lettered Appendices.

The MCHW sets out the Overseeing Organisations' requirements for contracts for Trunk Road Works within a structured system. The manual has been developed to ensure that all relevant information needed to prepare contract documents is located in one place and to support quality assurance systems. The Design Manual for Roads and Bridges (DMRB) is a companion manual covering road and bridge design. These manuals form part of a suite of technical documents produced by the Highways Agency, related to the design, construction and maintenance of highways.

Numbered Appendices (identified as 30/1, 30/2 etc) contain Contract-specific information and requirements. This document (Series 3000) is a part of a collection of documents describing work in relation to landscape, ecology and archaeology. These are:

- CEMP
- LEMP
- OEMP
- Series 3000: Landscape and Ecology: Appendix 30/1-30/13 (this document)

These documents are based on the specifications for highways work and cover advanced mitigation works that will be undertaken by the Appointed Contractor unless stated otherwise. These will be referenced in and supplemented by the Construction Environmental Management Plan (CEMP), which will define any additional arrangements for managing environmental issues on site.

The planting plans for the main landscape works are drawings B1297000-PH2/3000.01a/0000 – 0014 and are called the Landscape Design Drawings in these appendices. The master schedule, species schedule and plant spacing details of plants is on drawing B1297000-PH2/3000.01a/0001.

The seeding drawings for the main landscape works are drawings B1297000-PH2/3000.01a/0030 – 0043 and are called the Landscape Seeding Drawings in these appendices.

An Environmental Clerk of Works will be required to supervise a number of tasks during site clearance and construction. The Environmental Clerk of Works is referred to as ECoW throughout these Appendices. The Environmental Clerk of Works may delegate inspection duties to other suitably qualified environmental professionals.

An ECoW will be on site during site clearance to supervise all mitigation works. The ECoW will be on site to supervise clearing of areas with ecological constraints such as protected species. When these areas have been assessed as clear of protected species by the ECoW, the areas will be handed over to the contractor.

The ECoW will be required on site to suit the works in progress from the *Land entry* date (programmed as January 2013) until the end of construction. The ECoW will

induct the site sub-contractors about ecological issues on site prior to commencement of all work phases with ecological constraints.

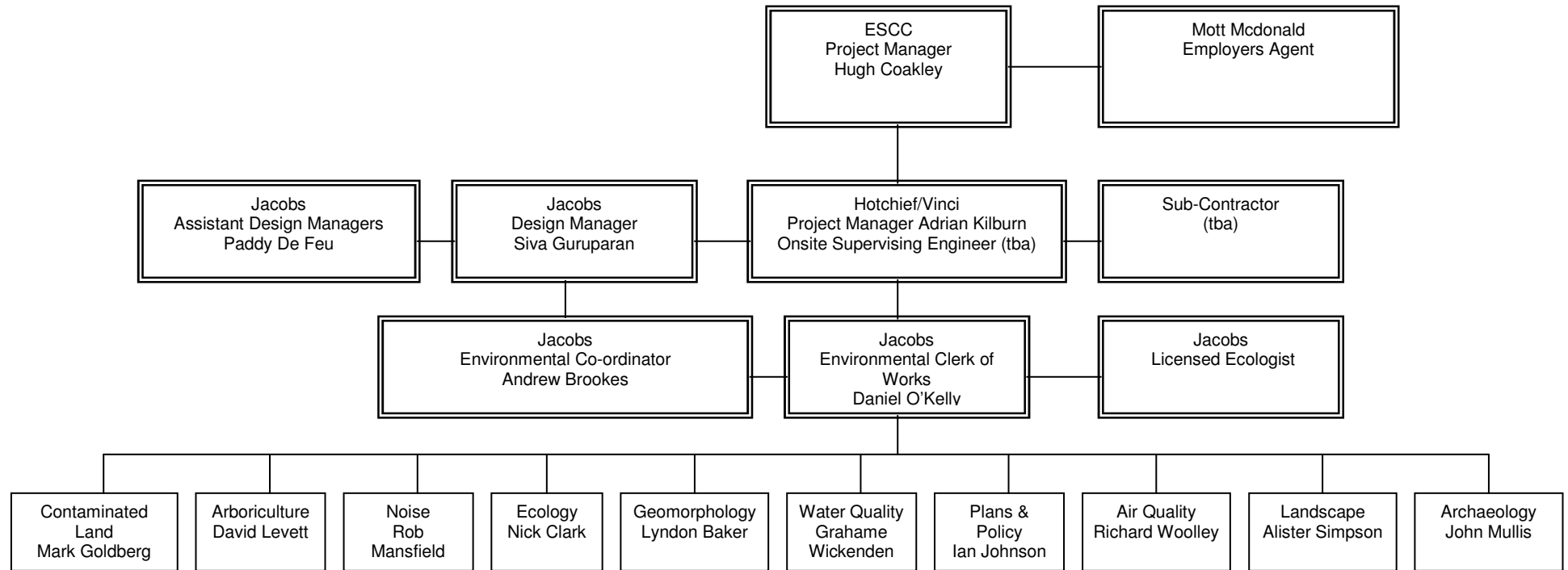
The ECoW role will be covered by the appropriate qualified person according to the work phase, and this person may therefore change throughout the works period. Phases involving dormouse mitigation will be supervised by a Jacobs ecologist holding a Natural England dormouse conservation licence and will be the named ecologist on the dormouse Natural England mitigation EPS licence or the accredited agent. The ECoW supervising stages of the work involving great crested newt mitigation will be a Jacobs ecologist holding a Natural England Great crested newt conservation licence and be the named ecologist on the great crested newt Natural England mitigation EPS licence or the accredited agent. The ECoW on site supervising soft felling of trees with bat potential will be a Jacobs ecologist holding a Natural England Bat Conservation Licence.

Communication in relation to environmental issues and constraints during the vegetation clearance and construction phase will follow the reporting chain shown in Figure 1 below.

Removal of Litter, Debris and Refuse

During the contract and during the 5 year Maintenance/Aftercare Period, the contractor shall keep all completed landscape areas clear of litter, debris and refuse to the satisfaction of the ECoW.

Figure 1 Reporting chain



30/1.2 Notice and Liaison

Clause 3001.2: Refer to Figure 1 Reporting Chain. The ECoW requires 48 hours notice ahead of the commencement of the operations listed in Clause 3001.2 plus the following operations:

- Removal of shrub and tree stumps,
- Removal of hedges or hedgerows,
- Topsoil spreading,
- Installation or removal of fencing.
- Works within or on the banks of existing ponds, ditches and watercourses.
- Watering visits.

This notice will be repeated subsequent to periods when the operations have been temporarily suspended. The onsite supervisor will liaise directly with landowners to give notice and arrange precise access dates for works outside the highway boundary and will inform the Overseeing Organisation in writing of all such arrangements, as per the reporting chain provided in Figure 1.

The following areas have been designated as Sites of Special Scientific Interest:

- Decoy pond wood
B1297000-PH2/3000.01a/0011 & B1297000-PH2/3000.01a/0041
- Park Wood
B1297000-PH2/3000.01a/0010 & B1297000-PH2/3000.01a/0040
- Marline Wood
B1297000-PH2/3000.01a/0014
- South of Adam's Farm
B1297000-PH2/3000.01a/0008 & B1297000-PH2/3000.01a/0038
B1297000-PH2/3000.01a/0013 & B1297000-PH2/3000.01a/0043
- 300m east of Acton' Farm
B1297000-PH2/3000.01a/0006 & B1297000-PH2/3000.01a/0036
B1297000-PH2/3000.01a/0011 & B1297000-PH2/3000.01a/0041

Access to the planting plots north of Marline wood shall be via a Breadsell Lane adjacent to Park Farm House.

Constraints on vegetation clearance and protection of protected species during vegetation clearance are set out in the Environmental Constraints drawings B1297000-PH2/0200.01a/0020 to 0034. Special ecological measures within the area of the landscape works are set out in Appendix 30/12 of this document.

The location and protection of known archaeological sites within the construction area is shown on drawing B1297000-PH2/0200.01a/0000 to 0014. The method of conservation is specified in Numbered Appendix 30/13.

30/1.3 Peat

Peat or peat-based products shall not be used.

30/1.5 Pesticide Application

All pesticides, methods of application, materials tank mixes, transportation and storage shall be strictly in accordance with current legislation, the DEFRA Code of Practice for Using Plant Protection Products and the Control of Substances Hazardous to Health Regulations and the ESCC list of approved products.. No pesticides shall be used in or near watercourses unless prior permission has been fully obtained from the Environment Agency.

30/1.13 Pesticide Application

Pesticide record sheets shall be submitted weekly. The record sheets shall be submitted on the form Sheet 2. A copy of the record will be submitted to the ECoW on a monthly basis.

30/1.14 Bird Nesting Season

Vegetation can be cleared from 1st of November 2012 till 1st of March 2013. No vegetation clearance can be carried out between 1st March and 31st August inclusive. Clearance timing constraints are highlighted on the Environmental Constraints drawings B1297000-PH2/0200.01a/0020 to 0034.

30/1.15 Inspection Reports

The Contractor shall submit Inspection Reports monthly as Sheet 3 of this Appendix for the activities carried out under specification clauses 3007, 3009, 3010, 3011, 3012 and for the following activities: Rabbit, Deer and other pest control.

SHEET 2: Information to be provided by the Contractor

LANDSCAPE WORKS – PESTICIDES RECORD

Contract Reference number: Contract Name:

**Date of visit/....../.....
(minimum one record/day)**

Name of Contractor: Contractor’s telephone no:

Operations carried out	Pesticide used	Locations of Operations	Application Rate	Time of Application	Weather Conditions (particularly wind speed and direction)
Total weed control					
Weed control in any water body					
Selective herbicide to areas of grass					
Herbicide to cultivated plant beds					
Total herbicide around individual plants in grass					
Other (state purpose)					

Names of operatives on site:

Qualifications of operatives named: Signed (for contractor):

Supervisor:

Contractor’s observations on damage by others or any incidents:

Storeman:

.....
.....

Application by:

SHEET 3: Information to be provided by the Contractor

LANDSCAPE WORKS – INSPECTION RECORD

Contract Reference number: Date of visit/....../....

Contract Name:

Name of Contractor:

Contractor's telephone no:

Operations Carried Out

Locations of Operations

Names of operatives on site:

.....
.....

Contractor's observations on damage by others, additional work required or general conditions of the works:

.....
.....

Observations of Overseeing Organisation on standard of workmanship, additional work required or general conditions of the works:

.....
.....

This visit has been satisfactorily completed:

SIGNED (for Contractor)

Name:

Date/....../....

SIGNED (for Overseeing Organisation).....

Name:

Date....../....../....

Appendix 30/2: Weed Control

30/2.1 General

Clause 3002.1: Infestations or the occurrence of injurious and invasive weeds will be controlled and removed in all areas of new planting. This will be detailed in the CEMP.

A significant part of the construction footprint is within agricultural land. Surveys have not been carried out for injurious and invasive weeds (as per Schedule 9 of the Wildlife and Countryside Act 1981) as it is assumed that many of the following species occur on site.

- Broad leaf dock
- Curled dock
- Common Ragwort
- Creeping thistle
- Spear thistle
- Himalayan balsam
- Giant hogweed
- Japanese knotweed

Japanese Knotweed

Eradication of Japanese knotweed within the construction footprint is required prior to onset of construction to prevent it spreading.

Japanese Knotweed will be eradicated and a programme of works implemented as described in the Japanese Knotweed Control Programme (included within the CEMP)

Fencing will be maintained until all Japanese knotweed has been eradicated. Stands will be regularly inspected by the ECoW who will check and record any spread.

Herbicides will only be handled and applied by persons holding a valid Certificate of Competence issued under the Control of Pesticides Regulations. Storage of herbicides will be carried out in accordance with the Control of Pesticides Regulations. The approved product label is the principal source of reference for each product. A copy of the product label with the MAPP or HSE number will be supplied to the ECoW before application together with a brief method statement. The Contractor will be responsible for notifying the ECoW where necessary.

A record of the use of herbicides will be recorded on Contractor's QA forms and submitted to the ECoW on a monthly basis.

30/2.4 Total Weed Control

Clause 3002.4 applies to the following:

Tree and shrub planting plots. - All planting areas will have 0.5m radius around all planting stations cleared of all vegetation by means appropriate to achieve a weed free state, so that the new plants will grow in a weed-free condition,

Hedge planting Strips and hedge enhancement planting strips. - Hedge planting strips and hedge enhancement planting strips will have all existing

herbaceous vegetation killed/removed in a 1m wide strip centred along the line of the hedge. For hedge enhancement strips this will be done without damaging the branches of, and minimising damage to the roots of the existing hedge.

Stored heaps of mulch chippings.

Frequency of application: Twice during the active growing season.

Topsoil and subsoil heaps. - Frequency of application: a minimum of three times during the active growing season. To prevent weed infestation and weed seeding.

All areas of new grassland and wildflower seeding. - As site preparation to ensure that cultivation and sowing takes place into vegetation - free ground.

30/2.5 Total Weed Control

Clause 3002.5: The contractor should note that there are watercourses, ditches and water bodies on site. Approval is required from the Environment Agency before applying pesticides in or near watercourses, ditches and water bodies.

30/2.6 Selective Weed Control in Grass

Clause 3002.6: This clause applies to all grassland areas sown with Grass Seeding Mix A. Frequency of application: Twice during the active growing season until the ECoW confirms that the grass has established and thereafter as necessary to control the injurious weeds listed in 3002 plus Nettles and Brambles. Only herbicides that are on East Sussex County Council's approved list shall be used.

30/2.7 Weed Control by Spot Application of Herbicide

Clause 3002.7: Spot application of herbicide will be carried out (where appropriate) to control weeds without damaging planted vegetation and/or at the instruction of the ECoW. Only herbicides that are on East Sussex County Council's approved list shall be used.

30/28 Weed Control by Spot Application of Herbicide

Hand weeding shall be carried out in locations where cutting or treatment with herbicide is not possible or would threaten the survival of landscape plants. Weeds that are growing inside tree/shrub shelters shall be removed by hand. Alien invasive weeds in sensitive locations such as ditch and stream banks or in other sites where valuable existing vegetation would be damaged by other treatment methods shall be removed by hand or using hand tools.

30/2.9 Weed Control by Cutting

In all areas to receive Mix A (Standard amenity and Arable grass seed mix), Mix B (species rich), Mix C (marsh wet grassland and fen) and mix D (Improved grassland) seeding, if prior to sowing grass seed or in the period between sowing and first cut, vigorous weed growth results in weeds reaching a height in excess of 200mm, the Contractor will cut and/or remove such weeds listed in Clause 3002.1. If at any time before the second cut weeds reach a height in excess of 300mm, the Contractor will similarly cut and/or remove such weeds.

30/2.10 Arisings from Weed Control Operations

All arising from weed control will be removed from site, except for areas of weeds covered by legislation that require specific handling, e.g. Japanese knotweed. This

will also be detailed in the CEMP. Japanese knotweed will be treated as controlled waste and treated in accordance with the Environment Agency Japanese Knotweed Code of Practice 'Managing Japanese knotweed on development sites' if moved or disturbed by the works.

Appendix 30/3: Control of Rabbits and Deer

30/3.1 General

Rabbit and Deer control and plant replacement during the main landscaping works shall be in accordance with the 3003 Rabbit and Deer Control clauses and Appendix 30/3, sections 30/3.1 and 30/3.2

30/3.2 Rabbit Control Within the Road Boundary and Landscape Works Areas

Rabbit control sufficient to achieve effective control (defined in Clause 3003.7) will apply within the construction areas and offsite planting areas for the full duration of the construction and maintenance/aftercare periods.

Monthly joint inspections will be carried out by the Contractor and ECoW for the first six months after planting to check whether effective control has been achieved.

Deer control measures may be required for the works. The Contractor should provide suggestions in this regard. This is a Contractor designed item.

30/3.3 Replacement of Plants Damaged by Animals

The period for replacement of plants damaged by animals will end at the conclusion of the five-year Maintenance/Aftercare Period required in the Contract. Planted areas will be inspected by the Contractor each summer to record damaged plants requiring replacement. Plants will be replaced during the first planting season after the damaged plants are recorded. For the specified protection of all trees and shrubs see 30/6.52 Tubes Guards and Ties.

Appendix 30/4: Ground Preparation

30/4.1 Vegetation Clearance

Shall apply to all areas of planting and seeding. The Contractor shall note that the extent of areas requiring cutting will depend on the length of time between soil placement and seeding/planting.

30/4.2 Vegetation Clearance

Apply herbicide to achieve total vegetation clearance as per Appendix 30/2.4: Weed Control clause 3004.2 shall apply to all planting plots.

30/4.5 Subsoil Treatment

Subsoil ripping shall only be carried out if directed by the ECoW.

30/4.7 Final Preparation of Soils

Ground preparation during the main landscaping works shall be in accordance with the 3004 Ground Preparation clauses and 30/4.1. Refer to the 600 series specification , 6/8 and 6/9 appendices for top soiling requirements.

In accordance with Series 600 6.8 and 6.9 soil depth build-ups shall be the following:

Tree, shrub and hedge planting areas shall either be planted in prepared existing ground that in the written opinion of the ECoW has not been disturbed by construction works, or the areas shall have a minimum of 300mm depth topsoil (Class 5A or 5B) over a minimum depth of 150mm subsoil or sub grade (Classes 1, 2 or 4).

Areas to be seeded with seed mix A (Standard amenity grass seed mix) shall either be sown on to prepared existing ground that in the written opinion of the ECoW has not been disturbed by construction works, or the areas shall have a minimum depth of 150mm topsoil (Class 5A or 5B) over a minimum depth of 150mm subsoil or sub-grade (Classes 1, 2 or 4).

Areas to be seeded with seed mix A (Arable) shall either be sown on to prepared existing ground that in the written opinion of the ECoW has not been disturbed by construction works, or the areas shall have a minimum depth of 300mm topsoil (Class 5A or 5B) over a minimum depth of 150mm subsoil or sub-grade (Classes 1, 2 or 4).

Areas to be seeded with seed mix B (Species rich neutral grassland or open grassland suitable for badger foraging) either be sown on to prepared existing ground that in the written opinion of the ECoW has not been disturbed by construction works, or the areas shall have a minimum depth of 150mm topsoil (Class 5C) over a minimum depth of 150mm subsoil or sub-grade (Classes 1, 2 or 4).

Areas to be seeded with seed mix C (Marsh wet grassland and fen) shall either be sown on to prepared existing ground that in the written opinion of the ECoW has not been disturbed by construction works, or the areas shall have a minimum depth of 150mm topsoil (Class 5C) over a minimum depth of 150mm subsoil or sub-grade (Classes 1, 2 or 4).

Areas to be seeded with seed mix D (Improved grassland) shall either be sown on to prepared existing ground that in the written opinion of the ECoW has not been disturbed by construction works, or the areas shall have a minimum depth of 150mm topsoil (Class 5A or 5B) over a minimum depth of 150mm subsoil or sub-grade (Classes 1, 2 or 4).

Appendix 30/5: Grass Seeding, Wildflower Seeding and Turfing

30/5.1 Season

Grass and wildflower seed shall be sown from the beginning of March to mid May or from the beginning of September through to the end of October.

30/5.4 Seed

Grass and wildflower seed mixes, seeding densities and locations requiring seeding areas shall be as shown on the Landscape Design Drawings. Clause 3005.7: Grass and wildflower seed shall be certified UK provenance and local provenance where possible. Potential local sources include the Weald Native Origin Seed project managed by the Grasslands Trust.

See details of each of the grass and wildflower seed mixes and seeding densities on Seeding Drawings: B1297000-PH2/3000.01a/0030 – 0043.

30/5.8 Conventional Sowing

Seeding densities shall be as illustrated on the Seeding Drawings: B1297000-PH2/3000.01a/0030 – 0043

30/5.11 Grass Seed Germination

A check of the extent of germination of the seed mix will be made at a suitable time after sowing (depends on season, temperatures and availability of moisture).

For wildflower areas seeded with mixes B and C, germination and establishment of the seeded mixture will be monitored by the Contractor and ECoW until a full vegetation cover including a representative and thriving presence of at least 70% of the wildflower species in the mix has been achieved in the seeded areas. Where in the opinion of the ECoW, less than 70% of the wildflower species in the mix have a representative and thriving presence after 1 year of establishment, the contractor shall submit to the ECoW for approval his proposals for reseeded to remedy the lack of species,

30/5.29 Establishment Cuts

All areas of new grass verge seeding shall be cut four times during the first growing season. Where wheeled vehicles are used for cutting, only low pressure tyres shall be used.

30/5.30 Establishment Cuts

Arisings from mowing grass verges shall be left evenly spread on site. Areas seeded with seed mixes B and C (Species rich neutral grassland or open grassland suitable for badger foraging, or Marsh, Wet/Dry Grassland and Fen Seed Mix) shall be left clear of grass cuttings after mowing.

Appendix 30/6: Planting

30/6.1 Planting

Clause 3006.1: The locations of planting shall be as shown on the Landscape Design Drawings B1297000-PH2/3000.01a/0000 – 0014.

All plants shall be pit planted in staggered rows, at centres and mixes detailed on the Landscape Design drawings and as detailed below.

Setting out:

Unless otherwise specified on the drawings setting out shall be in accordance with the parameters below.

- i) Plot edges: No shrubs shall be planted within 4.5m of the edge of the carriageway so that when fully grown there shall be not less than 3m from the edge of the carriageway to the edge of the shrub.
- ii) Plots: Plants shall be distributed throughout the plots in accordance with the Landscape Design Drawings B1297000-PH2/3000.01a/0000 – 0014.
- iii) Trees: Large growing trees shall be planted a minimum of 7m from the edge of the carriageway. Medium sized trees shall be planted a minimum of 5m from the edge of the carriageway. Small trees and shrubs shall be planted a minimum of 3m from the edge of the carriageway. A definition of large, medium and small growing tree species and shrubs is given on Landscape Design Drawing B1297000-PH2/3000.01a/0001.
- iv) Infill planting to existing plots: With the exception of infill planting along existing hedges, no tree species shall be planted within 6m of the trunk of any existing tree. Distribute new tree species evenly throughout the planting area and intersperse with shrub species. Maximum density of planting shall be 1.5m centres. If plant numbers exceed this consult ECoW for further instructions.
- v) Planting patterns: Plots shall not be planted in rows; the planting layouts shall appear to be random but shall conform on average to the specified spacing.
- vi) Native species hedgerows shall, unless otherwise specified, be planted as double staggered rows, 4 plants per metre with 500mm between the rows.
- vii) Native hedgerows with trees shall, unless otherwise specified, be planted as double staggered rows, 4 plants per metre with 500mm between the rows. Trees shall be planted between the rows at an average spacing of 10-15m.

30/6.3 Planting

Plant species, size, root condition, numbers and locations are detailed on the Landscape Design Drawings. The planting schedule is on drawing Landscape Design Drawing B1297000-PH2/3000.01a/0001.

30/6.4 Plants

Grafted stock is not permitted.

30/6.5 Plants

Mycorrhizal granules shall be added to each planting pit for container grown or rootballed stock, as per manufacturer's recommendations. Mycorrhizal root dip shall be applied to all bare root plants as per manufacturer's recommendations. Apply 'Rootgrow Professional' or similar approved by ECoW, which can be obtained from

PlantWorks Limited
Unit 930 Cornforth Drive
Kent Science Park
Sittingbourne, Kent ME9 8PX
Tel:01795 411527, www.plantworksuk.co.uk; info@rootgrow.co.uk

30/6.6 Plants

All bare root transplant nursery stock shall be of British native origin and sourced from Forestry Authority Region of Provenance 405, wherever possible. Evidence of the Provenance of stock shall be available to the ECoW during the period of the planting seeding maintenance/aftercare contract.

30/6.7 Plants

Arrangements shall be made for the ECoW to inspect and approve all standard and larger nursery stock trees at the supply nurseries.

30/6.13 Topsoil, Compost, Fertiliser and Antidessiccants

Slow-release fertiliser, such as Enmag CRF or similar (to be approved by the ECoW) Fertiliser shall be incorporated in all planting pits. The slow release fertiliser will be mixed into the backfill of each planting pit at the rate recommended for establishment of trees and shrubs by the manufacturer of the fertiliser. Fertiliser shall not be used within 5m of a watercourse, ditch or pond.

30/6.14 Topsoil, Compost, Fertiliser and Antidessiccants

PAS 100 compost shall be added to ameliorate the topsoil. The following rates of compost shall be thoroughly incorporated into planting pits as follows:

- Transplant (including hedge plants): 3 litres per plant.
- Feathered and all grades of standard: 6 litres per plant.
- Climber: 3 litres per plant.
- Shrub: 3 litres per plant.

30/6.17 Time of Planting

Planting of trees, climbers and shrubs shall take place between the beginning of November and the middle of March.

30/6.24 Planting Pits, Beds and Trenches

Planting pits for all planting shall be excavated according to the Series 3000 Table 30/1. Arisings that are surplus shall be broken up to 25mm maximum particle size and scattered evenly on site.

30/6.28 Planting in Cultivated Beds and Hedges

Hedge plots are as illustrated on the Landscape Design Drawings B1297000-PH2/3000.01a/0000 – 0014.

30/6.34 Planting of Whips, Transplants and Shrubs into Pits and Trenches

Where climbers are planted next to environmental barrier/reinforced earthworks retaining structures, they shall be planted such that the cane is angled towards and if possible, fixed to the adjacent structure.

30/6.36 Stakes and Ties

Timber shall be FSC certified.

30/6.49 Planting of Trees

Water in all trees on the day of planting. All trees shall be watered to ensure the full depth of topsoil within the tree pit is at field capacity, (where appropriate in accordance with the Landscape Institute Technical Bulletin on Watering unless otherwise agreed with the ECoW). The topsoil shall not be watered if the soil is already at field capacity.

30/6.52 Tubes Guards and Ties

Oxo-Biodegradable shrub shelters and tree shelters (tubes) shall be used to protect all shrubs and trees, with the exception of large feathered trees and extra heavy standard trees. Spiral guards shall be used to protect the bark of feathered and larger size trees. Tree/shrub shelters shall be constructed from translucent pale green plastic sheet material, 600mm tall and 150mm - 200mm wide. Shelters/spiral guards shall be secured with 900mm long stakes, pointed at one end for driving, tied to the tube or guard with a tie as required in Clause 30/6.52. Tubes or guards over 150mm internal diameter will require two stakes and two ties

30/6.56 Organic Mulches

All planting trenches for native species hedgerows and native hedgerows with trees shall be mulched (600mm width) with mulch mats. Native species hedgerow and native hedgerow with trees mulch mats shall manufactured from coir or wool, jute & hair mix 500gm/m² fixed to the ground with evenly distributed 200mm long steel fixing pins at 4 per sq/m. Alternatively each native species hedgerow or native hedgerow with trees strip can be mulched to a width of 1m centred on the planting centreline with 100mm depth of wood chippings in a size range of 3mm to 50mm without fines. If raw recently pruned chippings are used, an extra 20g application of nitrogen rich slow release fertilizer shall be added at each planting station to offset Nitrogen depletion that would be caused by the fresh chippings.

30/6.58 Individual Mulch Mats

Each individual tree or shrub other than hedge/hedgerow planting shall be protected with a 500mm radius round mulch mat made from matting coir 500g/m² to include 3 x 200mm steel fixing pins per mat. Alternatively where ground level inclines are less than 1:3, each tree or shrub can be mulched with 100mm depth of wood chippings in a size range of 3mm to 50mm without fines. If raw recently pruned chippings are used an extra application of nitrogen rich slow release fertilizer 20g shall be added at each planting station to offset Nitrogen depletion that would be caused by the fresh chippings.

30/6.87 Replacement of Failed or Defective Plants

The contractor shall annually replace all plants which are missing, have died, or in the opinion of the ECoW are failing to make satisfactory extension growth, for a period of 5 years from the date the ECoW certifies or confirms that the planting is complete.

30/6.92 Post-planting Maintenance

The aftercare period shall be 5 years from the date the ECoW certifies or confirms that the planting is complete.

Appendix 30/7: Grass, Bulbs and Wildflower Maintenance

30/7 General Grass Maintenance

The areas of grass and wildflower seed mixes A, B, C & D shall be as shown on the Landscape Seeding Drawings

30/7.1 General Grass Maintenance

All areas of wildflowers and grassland shall be maintained for a period of 5 years from the date the ECoW certifies that the planting/grass seeding is complete.

30/7.5 General Grass Maintenance

Do not cut within 0.5 m of individual trees shrubs or climbers.

30/7.6 General Grass Maintenance

Clippings and arisings from areas sown with mixes B and C shall be removed off site. Clippings and arisings from mixes A and D shall be dispersed evenly over the sward.

30/7.9 Grass Cutting Medium Frequency

The 2.5m wide verge strips to be sown with amenity grass mix A next to the link road, shall be mown according to Clause 3007.9 Grass Cutting Medium Frequency.

30/7.17 Grass Cutting Low Frequency

Areas sown with Improved Grassland Mix D shall be cut 4 times in the first growing season to a height of 40-70mm, the timing to vary according to whether the grass was spring or autumn sown. In subsequent years the grass shall be cut twice annually to 100mm height.

30/7.22 Grass Cutting: Banks and Ditches

Grass Cutting: Banks and Ditches. This clause applies to all banks of watercourses, batters and ditches within the site boundary. Cutting of banks and ditches shall be biennial with one bank cut one year and the opposite bank cut the next year etc. Cuts shall be timed to ensure that desirable species have set seed. The ECoW shall approve the date for cutting before it is undertaken.

30/7.23 Grass Cutting: Areas of Planting

In the first year of maintenance, within the planted areas sown with a seed mix, first cutting shall take place in June/July only when the sward has established ready for cutting as directed by the ECoW.

Cut to a height of 10cm (or as instructed), arisings shall be raked up be dispersed evenly over the sward. Continue to mow/strim as above at approximately monthly intervals until November when directed by the ECoW. Allow for a total of 4 cuts in the first year.

In the second and third years of maintenance, within the areas of planting, grass cutting shall take place once each June, July and August. Arisings shall be raked up and disposed of off site. In years four and five grass cutting shall take place in June and August and the arisings shall be raked up and disposed of evenly within the area of planting.

30/7.26 Wildflower Areas and Areas of Nature Conservation

Species-rich neutral grassland (Mix B)

Cut 4 times annually in first growing season, cut height to be 40-70mm. Timing to vary according to whether the grass was spring or autumn sown. In subsequent years: cut twice annually to 100mm height. Timing of cuts to be instructed by the ECoW. Remove arisings at all times.

Neutral Grassland with Scrub (Mix B)

Cut 4 times annually in the first growing season avoiding the planted scrub species. Cut height to be 40-70. Timing to vary according to whether the grass was spring or autumn sown. In subsequent years cut twice annually to 100mm. Timing of cuts to be instructed by the ECoW. As other scrub species emerge, identify on site the limits of the areas using suitable markers to avoid cutting and allow scrub areas to develop.

Open Grassland for Badger Foraging (Mix B)

Cut 4 times annually in the first growing season, cut height to be 40-70mm. Timing to vary according to whether the grass was spring or autumn sown..

Subsequent years: cut twice annually to 100mm height. Timing of cuts to be instructed by the ECoW. Remove arisings at all times.

Improved Grassland (Mix D)

Cut 4 times annually in the first growing season. Subsequent years: cut twice annually to 100mm height.

30/7.28 Wildflower Areas and Areas of Nature Conservation

Ground scarification of wild flower areas shall be carried out as instructed by the ECoW.

30/7.29 Wildflower Areas and Areas of Nature Conservation

Spot herbicide control of weed species shall be carried out twice per year as appropriate to keep weed infestations to less than 5% coverage of the area. Notwithstanding this 5% limit, noxious weeds shall always be cut or treated with herbicide before they grow sufficiently to set seed.

30/7.30 Wildflower Areas and Areas of Nature Conservation

Hand weeding of undesirable weed species shall be carried out as necessary. Refer to 30/2.8.

Part 1: Main Landscaping Works

Clause 3008.6: The establishment period for watering shall be 5 years from the date the Supervisor certifies that the planting/grass seeding is complete. The Contractor shall apply water in sufficient amounts and at a suitable frequency to ensure the establishment and survival of all whips transplants, translocated trees/shrubs, feathered trees and larger tree stock. For all shrubs and trees planted at Feathered and larger sizes and all live-translocated woody vegetation, a minimum of 5 No watering at the rates described for additional watering in clause 3008.7 of the MCDHW specification, shall be allowed for during the growing season of the first year after planting.

Plants planted on the green bridge at Chainage 4135 shall be watered regularly and frequently during the first two growing seasons after planting to ensure that the plants become established. During the first year, a minimum of 2 watering visits per month is required in April, May, June and July and one watering visit per month is required in August, September and October. During the second year, one watering visit per month is required from May to September. Sufficient water shall be supplied at each visit to ensure that the whole of the root zones of all the plants on the bridge shall be saturated to the satisfaction of the ECoW.

Appendix 30/9: Establishment Maintenance for Planting

Part 1: Main Landscaping Works

General

Clause 3009.1: The locations of plants and planting areas to be maintained shall be as shown on the Planting Plant Drawings sheets B1297000-PH2/3000.01a/0000 to 0014 and B1297000-PH2/3000.01a/0030 to 0043.

The establishment aftercare period for planting shall be 5 years from the date the ECoW either certifies or confirms that the planting/grass seeding is complete.

Stakes, Guards, Tubes and Ties

Clause 3009.4: Stakes, Guards, Tubes and Ties shall be removed and disposed off site before the end of the 5th year of establishment aftercare, prior to handover to ESCC, with the exception of replacement planting that the ECoW has confirmed still requires support or protection

Clause 3009.10: Weed Control: Young Trees and Shrubs in Grass Plots
Grass Plots shall include planting plots sown with General Grass Wild flower seed mix. Translocated herbicide shall be selectively applied at appropriate intervals during the establishment aftercare period, a minimum of 4 times per year, to ensure that a 1m diameter circle around the individual plants remains substantially free of vegetation at all times.

Clause 3009.11: Residual herbicides are not permitted unless authorised in writing by the ECoW.

Weed Control: Hedges

Clause 3009.20: All mulched hedge bases shall be maintained substantially free of vegetation at all times in accordance with clause 3009.10.

Weed Control: Trees

Clause 3009.25: All mulched tree positions shall be maintained substantially free of vegetation at all times in accordance with clause 3009.10.

Removal of Litter, Debris and Refuse

During the full 5 years of the Maintenance/Aftercare Period, the contractor shall keep all landscape areas clear of litter, debris and refuse to the satisfaction of the ECoW.

Appendix 30/10 – Maintenance of Established Shrubs and Trees

Part 1: Main Landscaping Works

Not required during this phase.

Appendix 30/11: Management of Waterbodies

Part 1: Main Landscaping Works

The Management of Waterbodies is set out in Series 3000 (Clause 3011).

Weed control and silt monitoring and aftercare shall be undertaken where required as detailed in Clause 3011.

As detailed in Sub-clause 3011.2, all rubbish and debris shall be removed from the entire surface of the waterbody, including any partially submerged items. This shall be undertaken within the area of channel excavation/realignment.

Weed Control

All necessary vegetation clearance shall be undertaken before any channel excavation.

Silt

The release of sediment into the watercourse may potentially arise from channel realignments through the following activities:

- Removal of vegetation
- Channel excavation
- Backfilling of existing culverts and channels
- Installation of new headwall structures

Works near or in watercourses will require sediment control measures which are outlined in Pollution Prevention Guidelines 5 (PPG5) (Environment Agency, 2007) and in the Construction Environmental Management Plan (CEMP). The measures outlined in CEMP to prevent silt pollution include among the others:

- The hazards of silt pollution will be emphasised in the Site Induction
- No water will ever be pumped directly into a watercourse
- The minimum area of topsoil will be stripped at any one time
- The spread will be 'lipped' as it crosses a watercourse to prevent direct run-off
- A 5 metre buffer strip of vegetation will be left on either side of a watercourse if possible to provide a barrier and treatment area
- Straw bales and Spill Kits will be stored at all sensitive receptors
- All pumping operations will be carried out under the Permit Procedure
- Water will be pumped at low volume and treated as necessary. A settlement tank and straw bales will be used if the quantity of water justifies this
- Care will be taken to avoid soil erosion of river and stream banks
- Settlement Lagoons may be constructed
- Silty water can be disposed of by pumping to grassland, to sewer or to watercourse after sufficient treatment. The correct permissions and consents must be obtained prior to disposal.

Furthermore, to reduce the risk of fine sediment release into the watercourses earthworks will be avoided during winter months and excavated spoil will be under sheeted. New channel cuts (watercourse realignments) will be seeded to minimise the loss of sediment from such areas following construction. Additionally, channel excavation works will be undertaken offline and connect one new culvert has been installed and channel excavation has been completed.

Appendix 30/12: Special Ecological Measures

Pre-construction

Surveys

Table 1 summarises the surveys to be carried out by Jacobs ecologists during the construction phase of the Scheme (January 2013 - December 2014)

Table 1 Summary of construction ecology surveys and species translocation

Survey	No. of site visits / dates programmed	Summary of survey methodology	Requirements
Badgers: On going monitoring for the creation potential setts within the construction footprint	Regular checks by the ECoW	DMRB Advice Note issued in 1992 HA 59/92. Survey the CPO boundary for badger activity.	Survey needed to inform development licence requirements and site clearance design
Bats (trees): Sectional / soft felling of specific trees (trees 1, 4, 5, 9, 10, 11, 12, 15, 16, 18.) being lost as part of site clearance. Additional trees may require soft felling following an on-the-day inspection by an ecologist. Contractors to climb tree 30 and wedge feature open and lower to the ground. Climb and inspect tree 17 once hornets nest inactive. Undertake assessment of trees 14 and 31 from ground level when have access.	January – March 2013. December – March 2013 December – March 2013	Works to be undertaken under the direction of a licensed bat ecologist. Surveys to follow Bat Conservation Trust (BCT) guidelines. Surveys to follow Bat Conservation Trust (BCT) guidelines.	Supervision required minimising risk of / avoiding contravention of protected species legislation. Works to be undertaken by a qualified tree climber with a bat licence. To inform the requirement for further surveys or mitigation.
Bats (structures affected by the scheme): Soft stripping of features which have been identified as offering bat roosting potential.	January – May 2013.	Works to be undertaken under the direction of a licensed bat ecologist.	Supervision required minimising risk of / avoiding contravention of protected species legislation.
Bats (Adam's Farm Barn – known roost). Bats to be excluded from structure prior to its demolition.	March 2013	Works to be undertaken under the direction of a licensed bat ecologist.	Works to take place under EPS mitigation licence.
Bats (construction monitoring): emergence / re-entry surveys will be undertaken at Adam's Farm Barn and other known roosts along the scheme.	May – Sept 2013 & 2014	Surveys to follow Bat Conservation Trust (BCT) guidelines.	To inform on the efficacy of mitigation and allow a return on the EPS licence
Bats (construction	May – Sept 2013 &	Surveys to follow Bat	To inform on the

Survey	No. of site visits / dates programmed	Summary of survey methodology	Requirements
monitoring): static monitoring and activity transects along the scheme to assess bat activity within CPO boundary	2014	Conservation Trust (BCT) guidelines.	efficacy of mitigation
Great crested newts	Fencing of GCN exclusion zones in March 2013 followed by trapping and translocation of animals March – May 2013 or until the area has been declared clear by ECoW.	Follow Great Crested Newt Guidelines (English Nature, 2001). Works to be undertaken by licensed GCN ecologists.	Works to take place under EPS mitigation licence. Translocation will be carried out before site clearance. Receptor site preparation will be completed in January – March 2013.
Dormice	Vegetation clearance undertaken in phase way: cutting to stump level (no less than 500mm from ground level) Jan-Feb 2013 following by grubbing out stumps in May 2013.	Follow Dormouse Conservation Handbook (EN, 1996) Works to be undertaken by licensed dormouse ecologists.	Works to take place under EPS mitigation licence.
Dormouse surveys	Five monthly checks between May and Sept 2013/14.	Dormouse nest box and tube inspections in retained habitats	To inform on the efficacy of mitigation and allow a return on the EPS licence
Reptiles	Fencing of reptile exclusion zone in February / March 2013 followed by trapping and translocation of animals March – May 2013 or until the area has been declared clear by EcOW.	Follow HGBI guidelines (1998).	Translocation will be carried out before site clearance. Receptor site preparation will be completed in January – March 2013.

Management of Existing Woodland

Existing areas of woodland, scrub and grassland within the scheme boundaries shall be managed as specified in sections 3.6 and 4 of the Landscape and Environmental Management Plan (LEMP) and according to the relevant sections of Clause 3010 Maintenance of Established Trees and Shrubs.

Temporary Special Ecological Measures

Fencing

Temporary fencing of various designs is required along the Scheme footprint at a number of locations. Certain areas require fencing to protect protected species. These are described below in relation to each species/group.

Temporary fencing is described below and shown on drawings B1297000-PH2/3000.01a/0300.01a/0000-0032

Temporary herptile (great crested newt and reptile) fencing

Reptile and amphibian exclusion fencing is required around and within the construction footprint principally within 250m of ponds in which great crested newts (GCN) have been recorded, and within areas suitable for reptiles.

Reptile mitigation methods are described in detail in the LEMP and are in accordance with HGBI guidelines (1998). Great crested newt mitigation will be carried out according to agreed Natural England mitigation licence (EPSM 2012 4719: yet to be approved).

Design

Fencing specification will follow the DMRB Volume 10 Section 4 PART 7 HA 116/05 Annex B guidelines for reptile exclusion fencing. This will consist of polythene sheeting fixed to stakes and installed following the methods outlined below.

A trench will be excavated such that the bottom section of the polythene sheeting is buried 150mm below the soil. The excavated soil must then be replaced and compacted on both sides of the sheeting and:

- The fence stakes must be placed on the construction side of the polythene sheeting to prevent animals from using them to scale the fence (see Figure 2)
- The fencing will be turned back on itself at each end of the length of the fence so that any reptiles / amphibians following the line of the polythene is then redirected back the way it came deterring it from entering the construction area (see Figure 3)

Prior to installation of fencing, vegetation within a 1.0m wide strip along the line of the fence will be strimmed. This will be carried out by hand to a maximum of 100mm above ground level. Installation of the fence will be supervised by the ECoW.

Timing

Fencing will be in place prior to site clearance (excavation) to enable reptile and great crested newt trapping and translocation (i.e. early March 2013, once a Natural England great crested newt licence has been granted and prior to any ground works being carried out in the identified areas illustrated in drawings B1297000-PH2/3000/01a/0300.01a/0000-0032).

Areas to be fenced are shown on drawings B1297000-PH2/3000/01a/0300.01a/0000-0032. The ECoW will inspect the fence prior to works commencing on site and throughout the construction period. Fencing must remain in place until construction is complete or the cleared area is deemed unsuitable for reptiles and great crested newts.

Maintenance and Aftercare

Fencing will be maintained in good working order for as long as it is required (see above). Checks will be made to fencing on a weekly basis and any repairs

necessary carried out immediately. If the integrity of wildlife fencing is not maintained at all times, it would be viewed as a breach in the conditions of the great crested newt mitigation licence. Natural England, the regulatory body, has the power to issue Civil Sanctions (which include monetary penalties and various notices to stop work, restore habitats or comply with licenses) or prosecute if the breach is considered serious enough.

Vegetation within 300mm of the exclusion fence on the non-construction side of the fence line will be maintained at a height less than 150mm above ground level throughout the duration of the works. This will prevent animals from climbing over the fence. The integrity of the fence must not be compromised as a result of this so it is recommended not to use strimmers when working close to the fence to avoid tearing it. Any tears would need to immediately be made good.

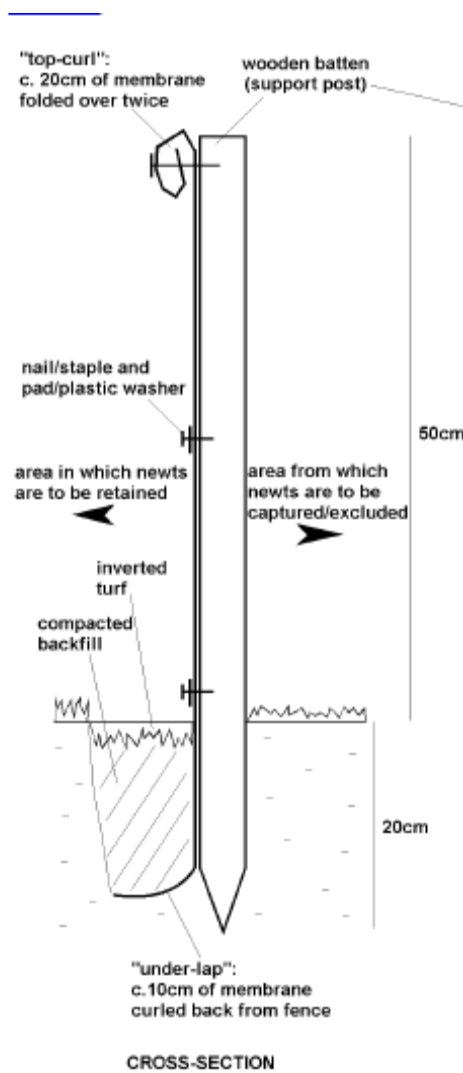


Figure 2 Reptile fencing detail

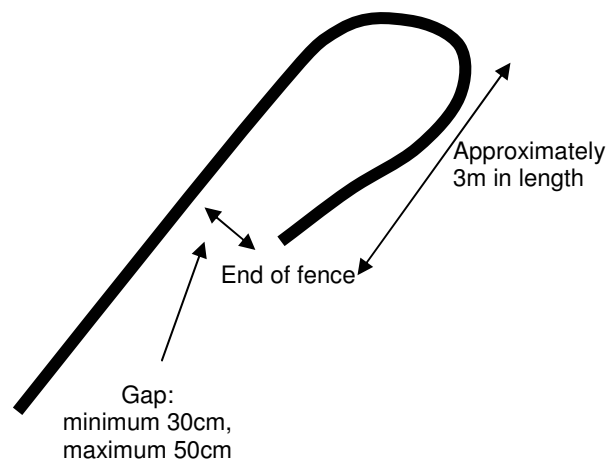


Figure 3 Fence turn around (birds eye view)

Great crested newt and reptile site clearance

Great crested newt and reptile trapping and translocation will be carried out in spring (March, April and May) 2013 before the start of main construction. Great crested newt translocation will only be carried out by the named ecologist on the Natural England mitigation licence, or delegated suitably qualified ecologists. Reptile translocation will be carried out in conjunction with the great crested newt translocation.

Reptile mitigation methods are described in detail in the LEMP. Great crested newt mitigation will be carried out according to agreed Natural England mitigation licence (EPSM 2012 4719: yet to be approved).

Pitfall traps in the form of plastic buckets approximately 300mm diameter by 500mm deep will be sunk every ten metres flush with the fence line (Figure 4). Artificial refuges in the form of 500mm square carpet tiles or roofing felt will also be placed flush with the fence line at a similar spacing (Figure 4). Further artificial refuges will be placed within suitable habitat (e.g. along hedge lines, within rough grassland, around scrub habitat, etc.) at a density of approximately 100/ha.

Strimming of vegetation on the construction side of exclusion fencing is required to maintain low vegetation throughout the trapping period to increase efficiency. This will be supervised by the ECoW and agreed with the named ecologist on the great crested newt mitigation licence holder or a delegated suitably qualified ecologist. GCN/reptile exclusion fencing is shown on drawings B1297000-PH2/3000/01a/0300.01a/0000-0031. Strimmed vegetation will be removed off site.

Reptiles captured in the Queensway/Crowhurst Road trapping site will be translocated to habitat immediately adjacent to the trapping area (receptor site E – see Appendix G of the LEMP). Any animals trapped in the western reptile exclusion zone (north east of Acton's Farm) will be translocated into receptor site D (see Appendix G of the LEMP), an area adjacent to retained woodland and marshy ground that will remain largely unaffected by the Scheme and which will be planted up as species-rich neutral grassland.

Captured great crested newts will be translocated to the closest of three receptor sites located north from Pond 5 (trees and hedgerows 200m from the development

at TQ 7531 0986), adjacent to Pond 16 (retained woodland within the CPO boundary at TQ 7676 1094) and adjacent to Pond 20 (retained habitat within the CPO boundary at TQ 7683 1073).

Certain areas outside the GCN and reptile exclusion zones have been identified as presenting moderate potential to support reptiles. These areas are shown on Annex A drawing B1297000/Ecology/Reptile/0. These areas should be cut short over winter and maintained as very short (<50mm sward height) until earthworks / landscaping works occur. These measures will make the areas unsuitable for reptiles prior to works commencing.

Post-trapping of GCN and reptiles, destructive searches of all suitable refuge / shelter habitat will be undertaken as described in the GCN mitigation licence and the reptile mitigation strategy (See LEMP). This entails the ECoW walking ahead of the vegetation stripping and inspecting areas suitable for GCN/reptiles and clearing these. Any animals found will be relocated to receptor sites identified in the reptile mitigation strategy (See LEMP).

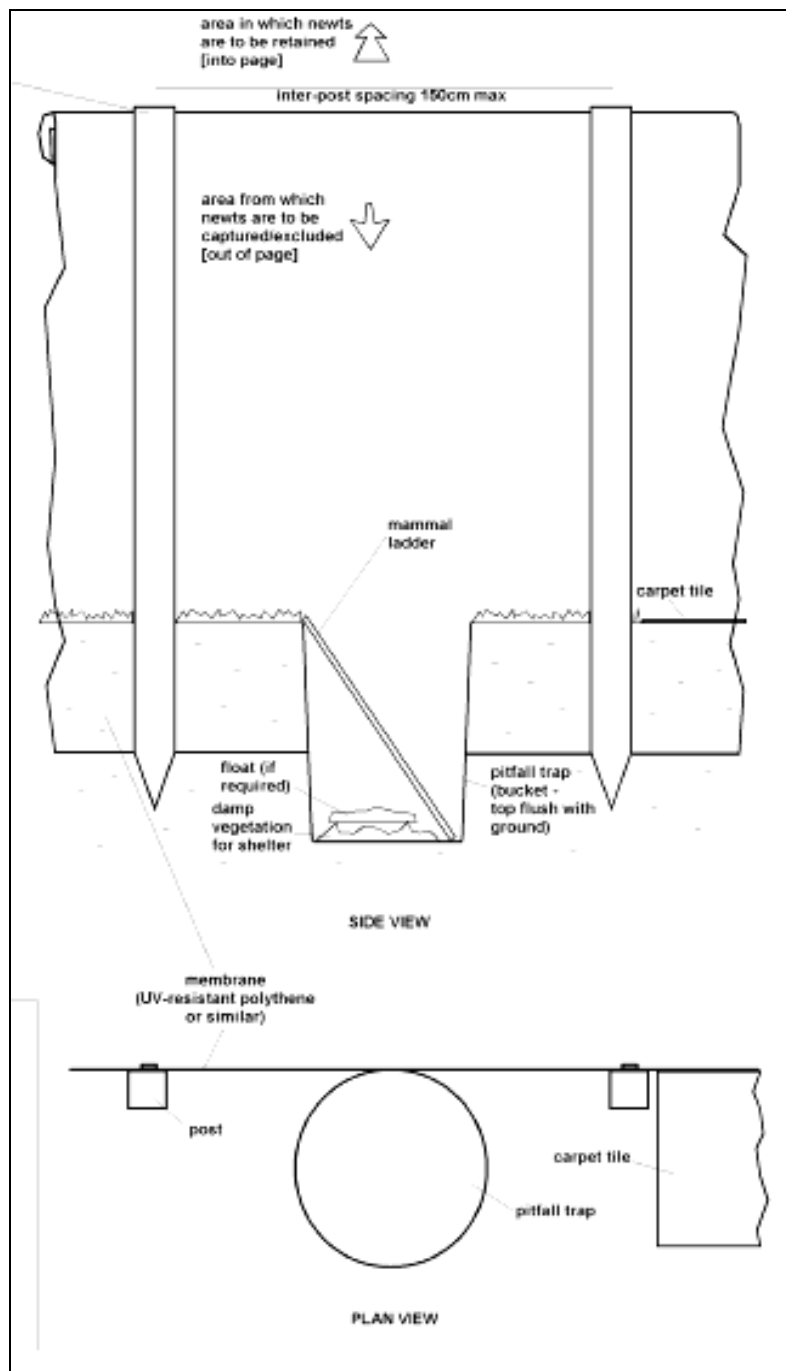


Figure 4 Pitfall trap and artificial refuge design along herptile exclusion fencing

Permanent Special Ecological Measures

Great crested newt / reptile hibernacula

Four hibernacula will be constructed during the site clearance works under the supervision of the ECoW. The location of each hibernaculum is shown on drawings B1297000/Ecology/GCN/Licence/05b. The precise locations will be decided by the ECoW but will be within 50m of the locations indicated in the drawings.

Design

Hibernacula will consist of piles of material arising from site including stones and wood. The illustrated design below (Figure 5) would be suitable for locating on an

impermeable substrate. On free-draining substrates, the design is largely similar but the bulk of the fill is sited in an excavated depression in the ground.

The design requirements of the hibernacula are set out in points 1 to 5 below:

1. Hibernacula will be constructed above areas susceptible to flooding on sloping ground if found suitable.
2. Hibernacula dimensions will not be less than 2m length x 1m width x 1m height.
3. Mounds will be constructed from site arising material such as piled up rocks, logs, and dead wood. Log diameters will be between 50-600mm and lengths between 200-750mm. Soil can be loosely filled between layers during construction.
4. The mounds will be capped with a layer (50 to 100mm thick) of topsoil, turf or moss. Gaps will be left in the capping material at ground level to allow access (see Figure 5 below).
5. A geotextile membrane will be added to prevent soil, or other loose material, from collapsing into the voids below.

On completion of the first hibernacula the Project Manager (HVJV) will co-ordinate a site visit attended by the Contractor, Designer and Employers Agent to agree that its form fulfils the requirements set out in points 1 to 5 above.

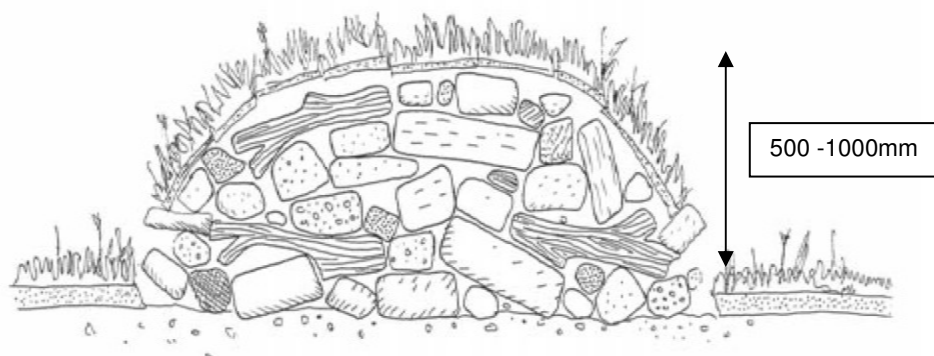


Figure 5 Sketch of hibernacula

Timing

The hibernacula will be constructed in advance of trapping and translocation of any reptile and / or great crested newt (i.e. prior to March 2013). Their construction should coincide with vegetation felling to stump level (Jan-Feb 2013) so arisings can be used in their design. Their construction will need to be supervised by the ECoW to ensure it does not have the potential to impact on GCN which may be present within the area.

Maintenance

The hibernacula will be maintained for the duration of the construction period and five year aftercare period. During the remainder of the construction period, the hibernacula will be inspected a minimum of twice a year by the ECoW or a delegated suitably qualified ecologist. Any damage will be repaired and any other works considered necessary by the ECoW carried out under their supervision as early as possible.

Wildlife Boxes

Wildlife boxes will be sited across the scheme to mitigate for loss of potential nesting habitat. Boxes will be erected in retained habitat between January – March 2013, as shown on drawings B1297001/Ecology/Bats/01/03 within the Bat Survey Report & Mitigation strategy 2012.

Bat boxes

Bat boxes will be installed as mitigation for loss of trees offering moderate to high bat roost potential. Boxes will be installed at a ratio of four per individual tree lost – see Bat survey and mitigation strategy. In addition, four bat boxes will be installed around Adam's Farm barn, the only known roost affected by the scheme. This will provide mitigation for potential loss of roosting habitats. Additional bat boxes will be installed in retained woodland and on a number of the structures being constructed as part of the scheme (one Schwegler 2FE wall mounted bat shelter and one Schwegler 1FQ bat roost will be installed on each of the structures listed below):

- Egerton Stream Culvert
- Ninfield Road Bridge
- Combe Haven Bridge
- Watermill Stream Bridge
- Powdermill Valley Bridge
- Powdermill Stream Bridge
- Decoy Pond Bridge

Bat boxes will be sited in retained vegetation according to Bat Conservation Trust guidance (see Bat survey and mitigation strategy). The precise locations will be decided on site by the ECoW or a suitably qualified bat ecologist.

Design

150 Swegler woodcrete bat boxes (a mix of Schwegler 1FF and 2F boxes) will be placed in appropriate trees as determined by the ECoW.

Boxes will be fixed to trees 3 to 5m above ground level using aluminium nails or metal wire tied around the tree trunk.

Timings

Bat box erection in retained woodland will be carried out as part of the advance mitigation works during January - March 2013. Those boxes to be installed on structures will be done once the construction of each structure is completed.

Maintenance

Bat boxes will be inspected on an ad-hoc basis by Jacobs ecologists during annual monitoring. Any damage will be repaired and any other works considered necessary will be carried out by the Contractor as soon as possible.

Dormouse boxes

Dormouse boxes will be installed as mitigation for loss of potential breeding habitat and sited according to Natural England guidance, in line with the dormouse

mitigation licence. Boxes will be installed in retained woodland, with specific locations decided on site by ECoW. Figure B1297000/Ecology/Dormouse/06 shows the distribution of boxes within retained habitat.

Design

313 wooden dormouse boxes of appropriate heavy duty design following DMRB Guidance Volume 10 Section 4 Part 5 HA 97/01. Boxes will be fixed to trees using metal wire or grip-lock at 1-1.60m height.

Timings

Dormouse boxes will be installed as part of the advanced mitigation works during January - March 2013.

Maintenance

Dormouse boxes will be cleaned out and maintained by Jacobs ecologists each March / April as part of the annual monitoring programme.

Management of Existing Woodland

Existing areas of woodland, scrub and grassland within the scheme boundaries shall be managed as specified in sections 3.6 and 4 of the Landscape and Environmental Management Plan (LEMP) and according to the relevant sections of Clause 3010 Maintenance of Established Trees and Shrubs.

Appendix 30/13: Special Cultural Heritage Measures

Pre-construction Measures

Archaeological evaluation works have been undertaken in accordance with the approved Written Scheme of Investigation (WSI) (Oxford Archaeology, June 2012) by Oxford Archaeology. Oxford Archaeology (OA) will issue a report on their findings from the evaluation works with recommendations for any further archaeological mitigation works before the construction phase in 2013.

In accordance with the conditions of the Planning Consent for the scheme, OA will produce an updated WSI to be agreed with ESCC. The updated WSI will incorporate the proposals for further archaeological mitigation works, comprising strip, map and sample, set piece excavation and watching brief, with the existing agreed archaeological mitigation works for building recording and topographic survey. The archaeological mitigation works agreed within the updated WSI will be required to be completed in during the construction phase of the scheme.

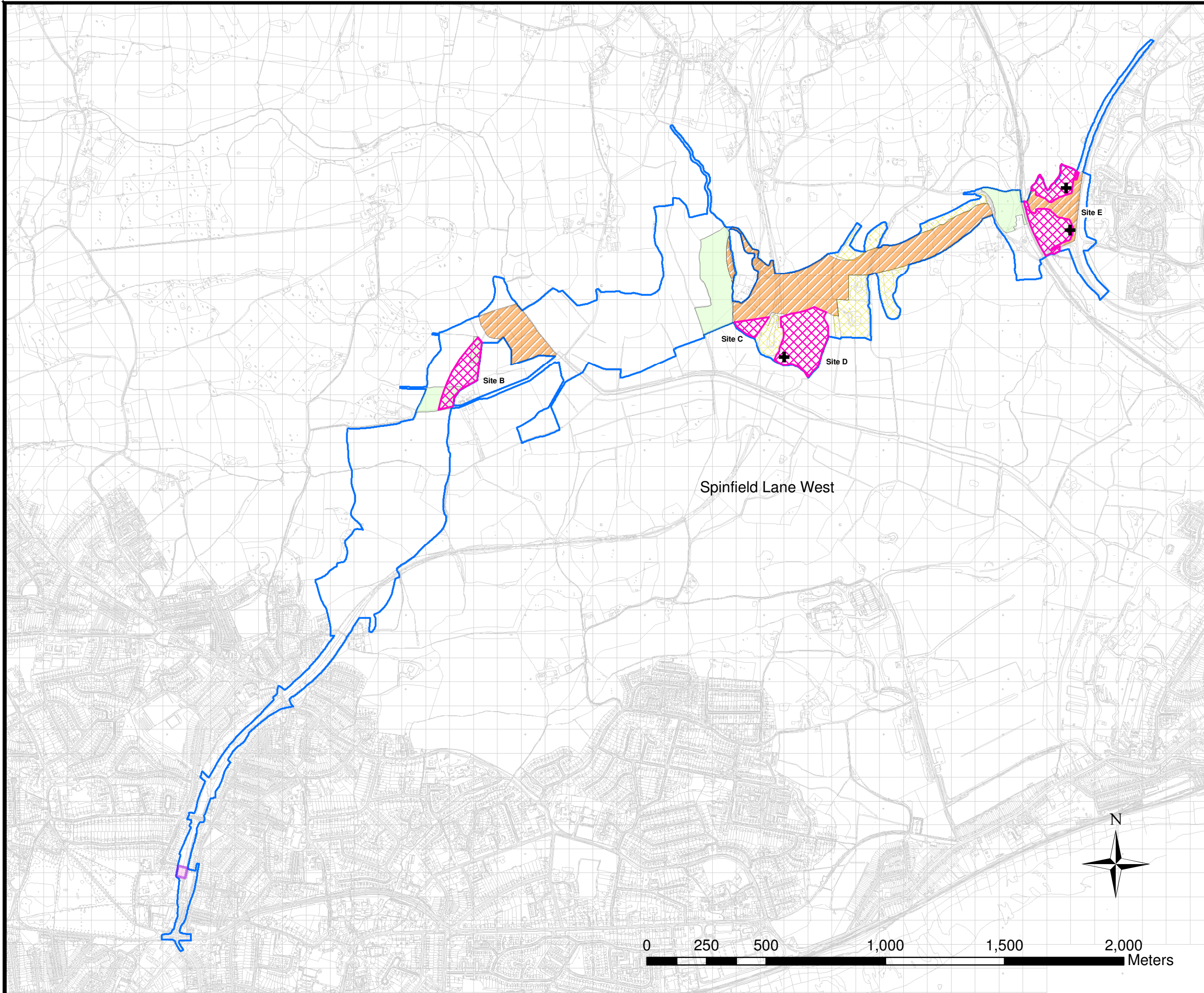
Dismantling and reconstruction of the barn at Adam's Farm

In accordance with planning permission the interior and exterior of Adam's Barn will be subject to an archaeological survey to record the building as part of the mitigation measures, prior to dismantling and re-building in a new location. The barn will be converted to a bat hibernaculum which will not compromise the integrity of the structure and all modifications to create the bat hibernaculum shall be reversible.

During Construction

The strategy for Cultural Heritage and Archaeological mitigation is detailed in the revised WSI submitted under Planning Condition 17.

Annex A Reptile mitigation strategy



- Legend**
- CPO boundary
 - GCN Retained Areas
 - Area Cut Short
 - Fence & Trap
 - Trap
 - Proposed Receptor Site
 - Hibernaculum

R1	Dec 12	For Issue	JG	NC	NC	SG
0	Nov 12	For Information	JG	NC	NC	SG
Rev	Rev. Date	Purpose of revision	Drawn	Checked	Rev'd	Appr'd

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Project: **Bexhill to Hastings Link Road**

Drawing title: **Reptile Mitigation Strategy**

Drawing status: **FINAL**

Scale: 1:15000 @ A3 DO NOT SCALE
 Jacobs No. B1297000
 Client no.

Drawing number: **B1297000/Ecology/Reptile/0** Rev: **R1**

This drawing is not to be used in whole or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

