



Liz Lord Ecology



Land off Richer Rd, Badwell Ash, Suffolk

Wildlife Sensitive Lighting Design Scheme

Client: Mr B Sutton

Author: Liz Lord BSc (Hons) MCIEEM

Date: 26th October 2023

Ref: 1833B LDS

Issue: FINAL

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1.0 INTRODUCTION

Instruction

1.1 This report has been prepared by Liz Lord following instruction by Mr B Sutton to address condition 13 of planning permission DC/20/02989 relating to land west of Richer Road, Badwell Ash, Bury St Edmunds, Suffolk IP31 3EU. Outline permission has been granted for the construction of 14 residential dwellings at the site, accessed off Richer Road.

1.2 Condition 13 of DC/20/02989 states:

“Concurrently with the first application for approval of reserved matters a lighting design scheme for biodiversity shall be submitted to and approved in writing by the local planning authority. The scheme shall identify those features on site that are particularly sensitive for bats and that are likely to cause disturbance along important routes used for foraging; and show how and where external lighting will be installed so that it can be clearly demonstrated that areas to be lit will not disturb or prevent bats using their territory. All external lighting shall be installed in accordance with the specifications and locations set out in the scheme and retained thereafter in accordance with the scheme. Under no circumstances should any other external lighting be installed without prior consent from the local planning authority.

Reason - To allow the LPA to discharge its duties under the Conservation of Habitats and Species Regulations 2017 (as amended), the Wildlife & Countryside Act 1981 as amended and s40 of the NERC Act 2006 (Priority habitats & species).”

Relevant Documents

1.3 This report refers to and incorporates information presented in the Preliminary Ecological Appraisal report dated 7th July 2020, the Reptile Survey Report dated 28th September 2020, and the results of eDNA surveys for great crested newts presented in an addendum letter dated 19th July 2020; all by Liz Lord. No bat activity surveys of the site were undertaken since all potential foraging and commuting habitat is due to be retained.

Site Description

1.4 In 2020 the site comprised a field of patchily grazed semi-improved grassland with ruderal and short perennial vegetation, partially bordered by semi-mature tree and shrubs. Further detailed habitat descriptions and images are provided in the PEA report (Lord, 2020).



- 1.5 The site lies on the southern outskirts of Badwell Ash village, with Richer Road running along the eastern site boundary and arable fields extending to the east and south east. Small fields of grazed pasture lie offsite to the south, surrounded by a network of hedgerows. To the north is a small area of waste ground and woodland with residential development beyond, and to the west extends further closely grazed semi-improved grassland with a copse and fallow arable land beyond.
- 1.6 An aerial location plan is provided below.



Fig 1: Aerial plan, with approximate site boundary outlined in red. Aerial photograph sourced from Google Earth Pro

Existing Survey Results

- 1.7 The boundary trees and small area of woodland offsite to the north, and the mature wide hedge along the southern site boundary both provide high quality potential foraging and commuting features for bats.
- 1.8 In the absence of mitigation both foraging and commuting bats could be adversely affected by nocturnal illumination of the mature vegetated site boundaries. As a direct result, a wildlife friendly lighting scheme is necessary to ensure compliance with planning condition 10.



2.0 LIGHTING SCHEME

- 2.1 There will be no street lighting on site, and no high powered security / flood lights.
- 2.2 External lighting will be provided above front, rear and terrace doors only, i.e. at two or three locations per property.
- 2.3 Porches / canopies are present over all of the front doorways, and these will be fitted with a single, downward facing LED light in the roof of the porch, which will naturally direct all light to ground level. This avoids the need for a separate wall light.
- 2.4 The rear / side doors and rear terrace doors of all single storey properties will be illuminated by downward facing LEDs located in the soffits immediately above the doors, which direct all light to ground level and will also avoid the need for separate external wall lights.
- 2.5 For all two storey properties, each rear / side door will each be fitted with a single, downward facing light positioned at no more than 2m height and fitted with a short duration PIR motion sensor. Two of the same lights i.e. downward facing on a short duration PIR motion sensor, will be fitted at no more than 2m height either side of the rear terrace doors.
- 2.6 All external lights will be warm white (<3000K) and no greater than 5 watts.
- 2.7 The low number, low height, low intensity and targeted downward nature of the lights will prevent light spill beyond 1-2m of the buildings and will therefore avoid potential illumination of the sky and all existing boundary hedgerows and tree lines. As shown on the layout in Appendix 1, all of the new buildings are located at least 5m, and generally further, from vegetated boundaries.
- 2.8 The proposed external light fitting is detailed below. Where the exact light is not available, one meeting the same specification will be used. Lights in soffits will be warm white LEDs (<3000K) of no more than 5 watts.



Fig 1: Arki 20 Wall Light

To be fitted with warm white (<3000K) ≤5 watt bulbs and a short duration PIR motion sensor



Appendix 1:
Site Layout



LANDSCAPE SPECIFICATION:

All landscape works to be carried out broadly in accordance with the relevant current British Standards; National Planting Specifications Guidelines; Horticultural Trades Association Standards; CPSE 'Plant Handling' Standards & COSHH Regulations.

- The agreed landscape scheme is confirmed as being timetabled for implementation by or during the first planting season (mid-November to mid-March) after substantial completion of the development, or (where applicable) prior to sale of any individual plot(s), whichever is the sooner.
- The public/communal landscaped area(s) will be managed in perpetuity, it will be competently monitored and follow best landscape management practice principals, it will follow a maintenance schedule sufficient to keep it well maintained, safe, tidy and in a good state of repair. The native hedge to the southern boundary of the site will be maintained at a minimum mature height of 3m.

TOPSOIL

Importation:
 Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work. Any imported soil should be to BS 3882.

Handling:

- Ensure that any aggressive weeds are removed from site – do not cut or distribute.
- Select and use plant to minimize disturbance, trafficking and compaction.
- Do not contaminate topsoil with subsoil, stone, hardcore, rubbish or material from building works.
- Alleviate any compaction of the soil prior to planting or turling and do not handle topsoil in wet conditions or after heavy rainfall.

PLANTING

Seeding:
 Ensure that there is a healthy, vigorous grass sward, free from the visible effects of pests, weeds and disease.
 The final sward should form a closely knit, continuous ground cover of even density, height and colour.

Watering:

- As and when required to ensure healthy establishment of plants. During drought periods the plants should be watered twice a week.

Site Clearance:

- Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.

Soil Conditions:

- Soil for cultivating and planting must be moist, friable and not waterlogged.
- No planting to take place if soil is frozen or snow covered and any plants waiting to be planted should be given additional root protection.
- Prevent planting pit sides and bases and backfill materials from freezing.

Plants:

- Plant names, forms, dimensions and other criteria: To be labelled as per the applicable section of BS 3936.
- Frost: Protect plants from frost and handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
- Planting: Upright or well balanced with best side to front, well firmed in and evenly spaced.
- Trees to be staked with a single low stake at 45degrees to the stem and tied with an adjustable rubber tie.
- Hedges and shrub whips to be slot planted and unprotected in order to encourage more natural growth form.
- Newly planted mixed native hedges to be maintained at a height of 1.5m within the Site.
- Single species hedges to be maintained at a height of 800mm.

Timing:

- The landscape scheme/planting programme is confirmed as being timetabled for implementation by or during the first planting season (mid-November to mid-March) following commencement of works.

Cultivation:

- Compacted topsoil to be broken up to full depth. Cultivate, aerate and break up soil a few days before planting when weather and ground conditions are suitably dry, leaving the surface regular and even.
- Any undesirable material brought to the surface including visible weeds, roots and large stones to be removed.

Weeding of planted areas:

- All areas to be checked regularly and kept free of invasive weeds. Either remove by hand (root included) or spot treated with a non-residual herbicide in accordance with the Manufacturer's instructions.

Mulching:

- Well-rotted bark mulch, free of pests, disease, fungus and weeds to be applied 100mm thick to be applied to all planting areas.

Spot treatment of weeds:

- Weeding of planted areas to be undertaken on a regular basis to ensure that the plants are given a fair chance to establish. Care to be taken to ensure that invasive and aggressive weeds do not become a problem and impact on the overall planting scheme. Where necessary, spot treatment of weeds in planted and grassed areas would be undertaken to ensure that they do not seed and establish elsewhere.
- Regular tidying of the planting beds – including:
 - removal of leaf litter and any other debris
 - shrubs and trees to be regularly pruned in order to maintain healthy growth and vigour.
 - Any dead, diseased or dying trees or shrubs to be taken away or affected limbs removed.

MANAGEMENT

Protection of existing vegetation:

- Existing trees on the peripheries of the site will be retained where possible. Protection of trees would be in accordance with BS 5837: 2012 Trees in relation to design, demolition and construction should be taken when working adjacent to the existing trees and hedges, particularly in relation to the washing out of machines, storage of materials and other activities which may be deemed hazardous to the health and well being of the existing vegetation.

Inspection Timetable:

- The planting will be subject to an annual inspection each summer for the first 5 years to ensure that any dead, dying or diseased plants are removed. Those removed will be replaced with the same size or species as per the planting specification. Management of the overall scheme will incorporate regular reviews to check that the scheme is establishing well and any concerns highlighted and an appropriate professional consulted in.

KEY

- SUDS Grass Mix
- Grass - lawns
- Shrub Specimen
- Planting Hedges
- Planting Shrubs
- Tree-proposed
- Black top wearing surface for pedestrian areas designed to engineers detail. Colour: Black.
- Gravel top dressed asphalt.
- Black top wearing surface for trafficable areas designed to engineers detail. Colour: Black.
- Marshalls Tegula Pura permeable block paving (Traditional), size 100 x 200mm, laid in a herringbone pattern.
- Marshalls Tegula Pura permeable block paving (charcoal), size 100 x 200mm, laid in a herringbone pattern.
- Marshalls Towngate® (grey multi) sandstone slab paving, size 610 x 305 x 18 & 610 x 610mm, laid stretcher pattern.
- Timber closeboard fence, 1800mm high.
- Timber post and twin rail fence, 1200mm high.
- Gate.
- 1m Black Ecotile style fence.

PLANT SCHEDULE

SHRUBS					
QTY	CODE	PLANT NAME	STOCK	SIZE	SPACING
1No.	Cof Gra SL	Calluna vulgaris 'Grace'	C 3L	50-70cm	3/m ²
4No.	Epi rub	Epidendrum x rubrum	C 1L	10-20cm	4/m ²
3No.	Sar Hum	Sarcococca hawkestoniana 'humilis'	C 3L	20-30cm	3/m ²

TREES					
QTY	CODE	PLANT NAME	STOCK	FORM	GIRTH/HEIGHT
2No.	ACE CAM 1	Acer campestre	B	STD	8-10cm
2No.	CRA PAU 1s	Cornus kousa 'Pauls Scarlet'	B	STD	12-14cm
1No.	PRU AVI 1s	Prunus avium	B	STD	12-14cm
2No.	QUE Rob 1s	Quercus robur	B	STD	8-10cm
4No.	SOR LUT 1s	Sorbus aria 'Lutescens'	B	STD	12-14cm
1No.	SOR AUC 1s	Sorbus aucuparia	B	STD	10-12cm
1No.	TL COR hs	Tilia cordata	B	STD	12-14cm

HEDGES					
QTY	CODE	PLANT NAME	STOCK	SIZE	
9m	Hambeam Hedge	Carolina betulus	B Trans	40-60cm	3No. Plants spaced @ 4m in a Double Staggered Row
41m	Yew Hedge1	Taxus baccata	C 3L	40-60cm	
164No.					Plants spaced @ 4m in a Single Row

HEDGE MIXES

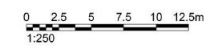
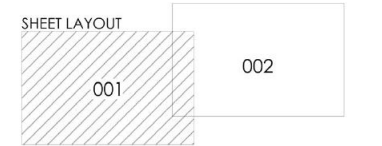
PERCENT	QTY	PLANT NAME	STOCK	SIZE
55m NATIVE HEDGE MIX 7 planted @ 4m in a Double Staggered Row				
20%	44No.	Crataegus maritima	8 Trans	60-80cm
10%	22No.	Cornus avellana	8 Trans	60-80cm
20%	44No.	Cornus sanguinea	8 Trans	60-80cm
5%	11No.	Ilex aquifolium	C 3L	40-60cm
10%	22No.	Prunus spinosa	8 Trans	60-80cm
5%	11No.	Malus sylvestris	8 Trans	60-80cm
5%	11No.	Eucalyptus europaeus	8 Trans	40-60cm
10%	22No.	Viburnum opulus	8 Trans	40-60cm
10%	22No.	Acer campestre	8 Trans	60-80cm
To be planted in species groups of approximately 5.				

PLANT MIXES

PERCENT	QTY	PLANT NAME	STOCK	SIZE
25m ² NORTH FACING SHRUB MIX 1 planted @ 3/m ²				
15%	11No.	Skimmia 'Nymans'	C 3L	40-60cm
15%	11No.	Sarcococca confusa	C 3L	40-60cm
20%	15No.	Colchastera tomentosus	C 3L	40-60cm
20%	15No.	Viburnum davidii	C 3L	40-60cm
30%	23No.	Eucalyptus Emerald Galaxy	C 3L	40-60cm
Individual varieties to be planted in groups of approximately 10.				
4m ² ORNAMENTAL SHRUB MIX 4 planted @ 3/m ²				
20%	2No.	Nandina domestica 'Obsessed'	C 3L	30-40cm
20%	2No.	Viburnum x juddii	C 3L	40-60cm
25%	3No.	Ilex 'Red Edge'	C 3L	20-30cm
15%	2No.	Pittosporum 'Tom Thumbs'	C 3L	30-40cm
20%	2No.	Ceanothus thyrsiflorus var. repens	C 3L	20-30cm
Individual varieties to be planted in groups of approximately 3, 5 or 7.				
8m ² EAST FACING SHRUB MIX planted @ 3/m ²				
15%	4No.	Pachyrhiza terminalis	C 3L	40-60cm
20%	4No.	Spirea japonica 'Goldflame'	C 3L	40-60cm
10%	2No.	Eucalyptus 'Emerald Galaxy'	C 3L	40-60cm
25%	4No.	Viburnum x Prins 'Eve Prince'	C 3L	40-60cm
25%	4No.	Pittosporum 'Tom Thumbs'	C 3L	40-60cm
Individual varieties to be planted in groups of approximately 3, 5 or 7.				

NOTES AND ABBREVIATIONS:

B = Bare root (bagged).
 C = Container (or pot) grown, followed by site of the container (or pot).
 FORM = Shape of tree as supplied by the nursery.
 QTY = Quantity.
 RB = Rootballed (balled and wrapped).
 SIZE = Height or spread of juvenile plant.
 STD = (barer stem) Standard.
 STOCK = Root condition/protection method eg Bare root.
 Trans = Transplant (or undercut seedling).



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REVISION	DATE	DESCRIPTION
REV	DATE	DESCRIPTION

Kirsten Bowden
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Site	Richer Road, Badwell Ash.		
Client	Harlog Hutton Ltd.		
Drawing Title	Landscape Proposals - Sheet 1 of 2		
Drawn by:	KS	Purpose of Issue:	Planning
Date	03.10.2023	Scale	1:250 @ A1
Job Number	2023_110	Drawing No.	001
		Rev	

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PLANT SCHEDULE

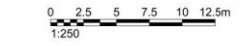
Table with columns: QTY, CODE, PLANT NAME, STOCK, SIZE, SPACING. Includes sections for SHRUBS, CLIMBERS, TREES, and HEDGES.

Table with columns: PERCENT, QTY, PLANT NAME, STOCK, SIZE. Includes sections for HEDGE MIXES and notes on bare root and container plants.

PLANT MIXES

Table with columns: PERCENT, QTY, PLANT NAME, STOCK, SIZE. Lists various plant mixtures like '14m2 NORTH FACING SHRUB MIX 1' and '24m2 ORNAMENTAL SHRUB MIX 4'.

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Table with columns: REVISION, REV, DATE, DESCRIPTION. Shows revision history.

Kirsten Bowden CHARTERED LANDSCAPE ARCHITECT logo and contact information.

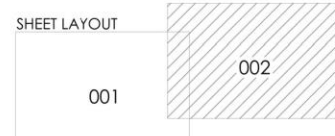
Site: Richer Road, Badwell Ash.

Client: Harlog Hulton Ltd.

Drawing Title: Landscape Proposals - Sheet 2 of 2

Drawn by: KB Purpose of Issue: Planning

Date: 03.10.2023 Scale: 1:250 @ A1 Job Number: 2023_110 Drawing No.: 002 Rev:





Liz Lord Ecology

