Derek Finnie Associates®
CONSULTANT ECOLOGISTS

Mowbray

Bailey Road Extension

Ecology Mitigation and Management Plan

July 2024

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PRACTICE 2023-2024

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Mowbray

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Ecology Mitigation and Management Plan

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Report Ref: DFA23074

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CONTENTS

1 INTRODUCTION 1
1.1 Background 1
2 AIMS AND OBJECTIVES 2
2.1 Overall aims and objectives and consistency with other plans 2
2.2 Sources of information 2
2.3 Overall Management Strategies 2
3 BASELINE ECOLOGICAL INFORMATION 4
3.1 Background to survey work undertaken 4
3.2 Habitats 4
3.3 Fauna 5
3.4 Summary of Ecological Receptors 5
4 AVOIDANCE / DESIGN MITIGATION/ COMPENSATION 7
4.1 Background 7
5 CONSTRUCTION PHASE MITIGATION/COMPENSATION 8
5.1 Great crested newts 8
5.2 Reptiles 8
5.3 Bats 9
5.4 Dormouse 9
5.5 Badgers 9
5.6 Nesting Birds 10
5.7 Other mitigation/compensation/enhancements 10
6 AFTERCARE AND MANAGEMENT 12
6.1 Background 12
6.2 SuDS 12
6.3 Wildflower meadows and wet grassland 12
6.4 Tree and Scrub Management 12
7 MONITORING 13
7.1 Ecological Monitoring 13
7.2 Monitoring Report 13

FIGURES

Figure 1. Phase 1 Habitat Map 14
Figure 2. Bird and Bat box Locations 15

APPENDICES

Appendix 1. Landscape Masterplan 16
Appendix 2. Hillside Indicative Landscape Masterplan 18

1 INTRODUCTION

1.1 Background

1.1.1 In March 2018 outline planning permission (Planning Reference: DC/16/1677) was granted by Horsham District Council (HDC) for a site to the north of Horsham (known as 'Land North of Horsham') for:

> *"A mixed-use strategic development to include housing (up to 2,750 dwellings), business park (up to 46,450 m2), retail, community centre, leisure facilities, education facilities, public open space, landscaping and related infrastructure."*

1.1.2 This planning consent was granted subject to several conditions, five of which (Conditions 11, 12, 13, 14 and 49) relate directly to ecology. This report addresses Condition 49 of planning permission DC/16/1677 which states:

> *"Any application seeking approval of Reserved Matters pursuant to the planning permission shall be accompanied by a detailed Ecological Mitigation and Management Plan (EMMP), which shall be in accordance with the approved Phase-wide EMMP, shall incorporate any additional or amended recommendations arising from the up to date Ecological Surveys relevant to that Reserved Matters Area and shall include details of protection of retained habitat and avoidance measures with regards to protected and notable species. The EMMP shall include details of pre-works, during works and post-works measures including any on-going management and maintenance necessary to ensure the effectiveness of the mitigation and enhancement measures. Any application seeking approval of Reserved Matters which includes a Proposed Primary Road, as shown on the Parameter Plan: Movement and Access reference 2153A-103P received by the LPA on 6th March 2017 shall be accompanied by detailed design proposals for those road(s), including all ecological mitigation, such as dark corridors, underpasses and bridges and drawings including cross sections and details of associated fencing and landscaping to guide wildlife. The development shall thereafter be carried out in accordance with the approved details.*
>
> *Reason: As this matter is fundamental to safeguard and enhance the ecology and biodiversity of the area in accordance with Policy SD6 and Policy 31 of the Horsham District Planning Framework (2015), the Wildlife and Countryside Act 1981 (as amended), Conservation of Habitats and Species Regulations 2010 (as amended), The Badger Act 1992, NERC Act 2006 and the NPPF."*

1.1.3 The following report, therefore, has been prepared to provide sufficient information to allow Condition 49 to be discharged as far as they relate to the Bailey Road Extension Reserved Matters Application.

2 AIMS AND OBJECTIVES

2.1 Overall aims and objectives and consistency with other plans

2.1.1 The primary aim of this EMMP is to provide details of the mitigation, enhancements and management that will be implemented for the benefit of the ecology, landscape and surface water drainage features within the Bailey Road Extension RMA area. Whilst this is a stand alone EMMP< consideration has been given to the objectives of the Phase 1 overarching EMMP, the neighbouring Sports Hub EMMP and the developing Phase 2 EMMP.

2.1.2 It should also be noted that whilst the current EMMP focuses on the mitigation and management of the Bailey Road extension land, the mitigation component also covers the adjoining phases, namely RM8, RM12, RM13 and RM16. This mainly due to the presence of a breeding great crested newt population within Pond P2; the terrestrial component of which is likely to extent into the adjoining Phases. Hence, including these Phases within the current RMA will allow the derogation licence to include land utilised by the entire population, thus allowing the newt population to be translocated in a single exercise.

2.2 Sources of information

2.2.1 The objectives for the management detailed in this EMMP are derived from, and are consistent, with the recommendations and commitments set out in the following planning documents:

- Chapter 12 of the Environmental Statement (ES), its appendices, and the subsequent ES addendum;
- Updated Ecology Appendices;

2.2.2 In addition to the above, update surveys have been conducted across the wider Phase 2 area during 2022 and 2023. These are detailed in separate report submitted to discharge Condition 13 of the OPP for Phase 2 (Derek Finnie Associates Report Ref: DFA230xx).

2.3 Overall Management Strategies

2.3.1 In summary, the recommendations for the wider site include:

- To obtain derogation licences for works that have the potential to impact great crested newts, bats and hazel dormice where necessary;
- To design SuDS features, including open swales, that are to be incorporated into the scheme, to increase the quality of surface water discharge, and to provide additional features for great crested newts and foraging bats;
- To manage the Green Infrastructure for a range of species including reptiles, badgers, great crested newts, dormouse and bats;
- To produce an ecological management plan for the larger areas of Green Infrastructure, with the plan including the mowing regimes for areas of semi-natural grassland for the benefit of reptiles and cutting regimes for the hedgerows;
- To mount bat and bird boxes on retained trees;

- To use native species of a composition present within the existing woodland and hedgerows for the creation of the landscape buffers;
- To include fruit/berry bushes within the landscape plan to provide an additional foraging resource for badgers and birds.

2.3.2 Taking the recommendations above into account, the specific objectives for the Bailey Road Extension RMA are to:

- To obtain derogation licences for works that will impact great crested newts and hazel dormice, whilst conforming with the wider strategic strategy for both species;
- Provide compensation planting for habitats lost as part of the works, be this within the Phase boundary itself, or within future RMA submissions;
- Ensure the adjoining ancient woodland is protected through and adequate buffer zone, and introduce enhancements wherever possible;
- Ensure the retained and newly created habitats within the scheme are connected and permeable to allow species to pass through the site;
- Ensure the proposed planting will enhance the biodiversity and nature conservation interest of the RMA and the wider development site;
- Provide a biodiversity resource which is valued by local residents, and which can deliver nature-related education to residents and other visitors;
- Establish and undertake a programme of monitoring and reporting post-construction.

3 BASELINE ECOLOGICAL INFORMATION

3.1 Background to survey work undertaken

3.1.1 The RMA, along with the wider 'Land North of Horsham' site, has been subject to numerous ecological studies undertaken since 2010. The results of these surveys have enabled a picture of the ecological interest of the site to be built up. The surveys were initially carried out to support the allocation of the site in the local plan (Horsham District Planning Framework 2015), and then, following allocation, further ecological surveys were undertaken to inform the application for outline planning consent (Planning Ref: DC/16/1677) (Bioscan, various reports).

3.1.2 The current application site sits between the Phase 1 and Phase 2 areas of the wider Mowbray development. Further surveys of the Phase I area were undertaken in 2018, 2019 and 2020. The methodologies of the 2018 surveys were scoped, as required under Condition 13 of the OPP, with HDC (Bioscan, Report Ref: E1585R1/Scope/P1/V1, dated July 2018). The scope for the 2019 ecological surveys, were set out in Bioscan report E1585R1/Scope/P1/V2 and subsequently agreed by HDC through a further partial discharge of Condition 13 in June 2019 (HDC reference: DISC/19/0132).

3.1.3 The Phase 2 land has been subject to update surveys in 2022 and 2023; these surveys also included the current RMA site. The scope of these surveys are presented in a report submitted to discharge Condition 13 for Phase 2 (Derek Finnie Associates Report Ref: DFA 230072)

3.1.4 The surveys undertaken across the current RMA, are presented in detail in the above reports, hence are not repeated here. However, a summary of the findings is presented in the following sections.

3.2 Habitats

3.2.1 The RMA comprises three field areas delineated by mature, outgrown hedgerows with numerous standard trees. The northern most field has been in arable production for a number of years, whilst the central area supports species-poor, semi-improved grassland. The western most field was previously in arable production but has not been actively farmer for several years and currently supports more or less bare ground with some developing pioneer and tall ruderal species.

3.2.2 The outgrown hedgerows are dominated hawthorn, with lesser amount of blackthorn, hazel and elder. Numerous standard trees are present within the hedgerow, comprising oak and ash.

3.2.3 Towards the east of the RMA is an area of poorly manage fruit trees, which from historic aerial photography appear to be approximately 25 years old; this area would be classified as an orchard Habitat of Principle Importance, albeit of low quality. A small area of allotment beds is present to the south west of the orchard.

3.2.4 Two waterbodies are present within the Phase area, referred to a P2 and P30 (this is consistent with the annotation used in the site wide newt surveys). The larger of the

two ponds, P2, is located in the centre of the RMA and appears to b e have been dug sometime between 2005 and 2011. P30 is a small, squared, lined pond within the allotment beds.

3.2.5 To the north east and south of the RMA area are blocks of oak dominated woodland which are said to be ancient in origin.

3.3 Fauna

3.3.1 A low population of slow worm (maximum count 4) and a low population of common lizard (maximum count 3) have been recorded from within the RMA in 2022, principally along the northern edge of the central fields. This is consistent with surveys undertaken to inform the outline application in 2016.

3.3.2 Great crested newt been recorded breeding within both P2 and P30 in 2023; these ponds are said to be part of medium sized meta-population using Natural England's population size class assessment methodology (EN 2000). Given the nature of the habitats within the site, the majority RMA area itself is unlikely to provide high valuable terrestrial habitat for this species. However, the hedgerows and adjacent woodland would be classified as good quality terrestrial habitat.

3.3.3 No badger activity has been recorded within the RMA area, but setts are known to be present in the area, although none within 30m of the site boundary.

3.3.4 Bat foraging activity in and around the RMA is relatively low when compared to the wider site, with only common pipistrelle, soprano pipistrelle, *Myotis* species and brown-long eared bat being recorded.

3.3.5 No bat roosts have been identified within any of the trees which may have to be removed to facilitate the development with all being assessed as having negligible or Low potential to support bats. There are no buildings within the RMA area.

3.3.6 Dormouse have not been recorded within the RMA area itself, but they have previously been recorded within the tree belt along the southern boundary of the RMA area as well as along the southern section of the linear tree belts either side of Channell Brook. Given the direct connectivity to the areas, which are within 450m of the RMA boundary, it has been assumed that dormouse may be present within the application site.

3.3.7 Several common and widespread bird species have been recorded breeding within the RMA.

3.4 Summary of Ecological Receptors

3.4.1 Based on the above, the key ecological receptors relevant to his RMA area are limited and have been identified as:

- Reptiles
- Great crested newts
- Bats
- Nesting birds
- Dormouse

- Higher value habitats:
  - ponds
  - hedgerows,
  - mature trees;
  - orchards; and
  - ancient woodland.

4 AVOIDANCE / DESIGN MITIGATION/ COMPENSATION

4.1 Background

4.1.1 Since the project's inception, the designers have been evolving a detailed masterplan for the site. The production of the masterplan has been an iterative process, with input from the Project Ecologist to ensure that avoidance measures and ecological mitigation measures have been included within the scheme in the appropriate locations. The design and layout of the RMA has again been an iterative process, with ecological input to the landscape scheme to provide ecological enhancement measures wherever possible. One of the objectives is to maximise the biodiversity value of the RMA through creating species rich habitats, hence the design has sought to retain the vas many of valuable ecological receptors within the RMA as possible, whilst providing new species rich habitats through appropriate new planting. However, given the RMA is comprises mainly a new road is a restricted road corridor, the opportunities for new habitat creation is limited. The Landscape Masterplan, produced by David Jarvis Associates, is reproduced at Appendix 1.

4.1.2 Nevertheless, it is assessed that the impacts that cannot be avoided by design are as follows:

- A limited amount of vegetation removal to facilitate access;
- The loss of the orchard;
- The removal of limited amount of small trees to facilitate the construction of the footpath through the woodland;
- The loss of ponds P2 and P30;
- Loss of potential dormouse habitat through the removal of hedgerows;
- The loss of both great crested newt aquatic and terrestrial habitat; and
- The loss of a limited amount of reptile habitat.

5 CONSTRUCTION PHASE MITIGATION/COMPENSATION

5.1 Great crested newts

5.1.1 The proposal would see the loss of both Pond P2 and P30, as well as areas of terrestrial habitat that may provide valuable foraging and resting areas for great crested newts. As such, it will be necessary to implement a comprehensive newt mitigation strategy prior to the commencement of site works. The proposed mitigation strategy will align with the Phase 2 Strategic Newt Mitigation Masterplan and will comprise a capture, exclusion and translocation exercise. Semi-permanent newt exclusion fencing will be erected around the perimeter of the construction zone and associated areas; drift fencing will also be installed in appropriate locations throughout the Site. Pitfall traps will be installed along the fence line to aid in the capture of terrestrial phase newts.

5.1.2 Both ponds will be carefully drained with any newts or efts (larvae) encountered also caught and removed.

5.1.3 All amphibians encountered will be translocated to a dedicated receptor site, which is deemed to be the 'Hillside' to the north of Phase 1, which covers over 6ha. Here, numerous ponds will be created which accord to the specifications presented in the Great Crested Newt Mitigation Guidelines (EN 2000). Areas of new scrub and tree planting will be undertaken in conjunction with new and re-enforced hedgerow planting as well as several hibernacula. An indicative layout for the Hillside proposals is incorporated at Appendix 2.

5.1.4 The exact details of the newt mitigation scheme will be presented in a method statement which will be submitted to Natural England as part of derogation licence application under Regulation 55 of the Conservation of Habitats and Species Regulations 2017 (as amended).

5.2 Reptiles

5.2.1 The majority of the habitats within the RMA are considered largely unsuitable for reptiles, however, a small population of slow worm and common lizard are known to be present along the northern edge of the central fields. Hence, a capture, exclusion and translocation exercise will be undertaken for reptiles as well.

5.2.2 Use will be made of the exclusion fencing that will be installed for the newt mitigation scheme; this will prevent any reptiles form re-entering the Site. Refugia, in the form of squares of roofing felt, measuring approximately 0.5m^2, will be distributed in areas that have been shown to support reptiles. The refugia will be installed at approximate density of 100ha^{-1} and left i*n situ* for at least a week before the translocation begins proper. After which time they will be checked on suitable days for a minimum of 30 days, or until five capture free days area are achieved.

5.2.3 Any reptiles encountered will be translocated to the Hillside receptor site.

5.3 Bats

5.3.1 Several bat species have been recorded foraging within the RMA area, although the activity levels were found to be lower compared to the wider area. Whilst no tree roosts have to date been confirmed within the RMA, the limited number of trees that will be removed to facilitate the RMA will be re-inspected for bat potential bat roost features prior to the commencement of works. Should evidence of bats be found, then a derogation licence from Natural England will be sought prior to their removal.

5.3.2 In part to compensate for the loss limited amount of vegetation clearance required within the RMA, the proposals incorporate new landscape planting throughout the RMA area. This new native planting will provide new foraging opportunities for bat, whilst also creating new green corridors across the RMA area. In addition, the provision of SuDS features within RMA will provide additional new foraging opportunities for bats.

5.3.3 Whilst no bat roosts have been confirmed within the mature trees within the RMA area, eight bat boxes will be installed on retained trees within the RMA area to create new roosting opportunities (indicative locations provided on Figure 2) for species such as pipistrelles, long-eared bats and barbastelle.

5.4 Dormouse

5.4.1 Two sections of hedgerow need to be removed to allow for the road itself to pass through the RMA, with a third smaller area removed to the north for an internal road. No dormouse have been recorded from the RMA itself, but given the presence of dormouse within habitat connected to the area of proposed vegetation removal, due regard will need to be given to the potential presence of dormouse.

5.4.2 The removal of the hedgerow sections will be conducted under a dormouse derogation licence issued under Regulation 55 of the Conservation of Habitats and Species Regulations 2017 (as amended). It is likely that the vegetation will be removed employing a two-phase removal strategy, with the hedge being removed to approximately 150mm over the winter period and the roots removed in the following spring. The exact working method will be determined by any conditions attached to the licence.

5.4.3 Compensation planting to offset the loss of hedgerow will be undertaken in the vicinity of the RMA in line with the Phase 2 Dormouse Mitigation Strategy (Derek Finnie Associates; Report Ref: DFA23002V2).

5.5 Badgers

5.5.1 Although no badger activity has been recorded in the vicinity of the RMA, a precautionary approach will be adopted prior to and during the works.

5.5.2 In order to protect badgers, in the unlikely event they pass through the RMA during construction, the following measures will be undertaken when working on the site:

- Ramps, in the form of scaffold planks or similar, will be placed into the excavation/trench at the end of each working day to allow any badgers which may fall into the trench to escape.

- Sections of any larger (e.g. >10cm) pipes left in holes/trenches overnight will be blocked to prevent badgers becoming trapped were they to enter any pipe work.

5.6 Nesting Birds

5.6.1 In order to avoid impacting nesting birds, works to areas capable of supporting birds' nests will be carried out outside the breeding bird season, nominally March to August inclusive.

5.6.2 If vegetation clearance is unavoidable during the nesting bird season, then a pre-clearance check for nesting birds by an experienced ecologist will be carried out no more than 48 hours prior to the commencement of clearance. In the event that any active bird nests are encountered, the nest will be retained *in situ* until nest is deemed no longer active by the supervising ecologist. If an active nest is found within the vegetation to be removed, then a buffer zone of at five metres from the nest will be established using barrier tape, and the nest will be monitored until such time as it can be confirmed that the chicks have fledged and/or the nest is no longer in active use. Only then will vegetation removal be permitted to continue.

5.6.3 In order to enhance the area for nesting birds ten nest boxes will be installed on trees within the RMA to create new nesting opportunities (See Figure 2 for indicative locations). These will comprise tits boxes (Schwegler 1B Bird Box or similar), open fronted boxes, treecreeper, woodpecker and owl boxes.

5.7 Other mitigation/compensation/enhancements

5.7.1 SuDS Features. The SuDS features within the RMA will be constructed in accordance with the following specification:

- Low flow channels will be incorporated into the SuDs basin to ensure there is always a flow of water.
- A fringe of marginal planting will form part of the perimeter of each low flow channel along the line of the retained water level. The planting list contains only UK native species, and is primarily based on species known to occur locally (e.g. marsh marigold, greater pond sedge, yellow flag iris, common reed, flowering rush, purple loosestrife and water mint).

5.7.2 Wetland Wildflower areas. The ground for this area will be suitably prepared to receive the seed mix in accordance with the seed manufacture's specification. This will then be sown with a wildflower seed mix such as Emorsgate EM8 - Meadow Mixture for Wetlands. Sowing will be carried in autumn or spring and once sown the ground will be rolled. During the first growing season after sowing the vegetation will be cut regularly at a height of 40-60mm in order to control undesirable weeds. Spot treatment of residual perennial weeds such as docks will be undertaken as appropriate. These areas will not only provide a visually attractive floral display but will also provide a foraging resource for bees and butterflies.

5.7.3 Tree planting. Approximately 538 new native trees will be planted within the RMA area. The exact location and species to be used are shown on David Jarvis Drawing 2898-

5-2-15 DR-2002 (appendix 1). The majority of these (494) will be planted together adjacent to an area of existing woodland to extend the amount of woodland cover.

5.7.4 Scrub planting. Over 1250m^2 of new scrub planting, incorporating over 1000 shrubs, utilising native species, will be undertaken throughout the RMA area as shown on David Jarvis Drawing 2898-5-2-15 DR-2002.

6 AFTERCARE AND MANAGEMENT

6.1 Background

6.1.1 The aftercare and management below will be carried out by a management company engaged by LGSLNH.

6.2 SuDS

6.2.1 Each year, commencing in year two after the completion of the construction, the SuDs within the RMA will have 15-20% of its marginal vegetation resource cut (on a rotational basis) in order to promote structural variety. This will be carried out between September and November to minimise disruption to wildlife.

6.2.2 Any rubbish collected in the waterbodies will be cleared as soon as possible and disposed of at a suitable facility off-site.

6.3 Wet grassland

6.3.1 Following the first growing season after creation, a cut will be taken in early spring and in late summer/early autumn at a height of approximately 5cm. The cut vegetation will be left on the grassland for no more than seven days to aid seed dispersal before removal to the designated composting area either on-site or off-site. If perennial weeds such as docks, nettles and ragwort start to become established then these will be spot treated by the management company before they set seed.

6.4 Tree and Scrub Management

6.4.1 Once planted, the long-term management for the tree and scrub planting will be minimal. The scrub will be monitored on a three-year basis and cut back if it encroaches into the surrounding grassland areas excessively.

7 MONITORING

7.1 Ecological Monitoring

7.1.1 The ecological monitoring programme will comprise the following:

- Bat boxes. These will be checked in Years 4 and 5 after installation in October for evidence of bats by a licenced bat ecologist. Concurrently, the condition of the boxes and brackets will be checked and replaced if damaged or are showing signs of wear.
- Bird boxes. These will be cleared of nest debris annually for the first five years after construction in October. Concurrently, the condition of the boxes and brackets will be checked and replaced if damaged or are showing signs of wear.
- SuDS features. Walkover surveys of these features at completion of the construction period and in Years 1 and 2 thereafter to check that the marginal planting has established successfully (appropriate remedial action to be taken if not).
- Log piles. The log piles will be checked during the walkover surveys in years 1 and 2 after creation. However, the log piles will not be dismantled to facilitate the surveys to avoid disruption to wildlife, so the monitoring will check for any easily accessible small mammal signs.
- Wildflower and wetland planting areas. The walkover surveys in years 1 and 5 after the planting has been carried out will incorporate checks of the wildflower and wetland meadow areas to assess how their growth is progressing. The management plan will be modified as appropriate based on the survey findings.
- Landscape planting. The walkover surveys in years 1 and 5 after the planting has been carried out will incorporate checks of all the landscape planting to assess how their development is progressing.
- Appropriate remedial action will be taken in the event that any of the monitored features are not assessed to be in satisfactory condition and/or functioning as required. The results of the above surveys will be used to inform the eventual LEMP as appropriate.

7.2 Monitoring Report

7.2.1 An annual monitoring report covering the RMA will be submitted to the LPA for the first two years post completion of Sports Hub.



Legend

- Broad-leaved woodland
- Orchard
- Hedgerow
- A — Arable
- SI — Species-poor grassland
- Bare ground
- Waterbody
- Phase boundary

Drawing Number:
Figure 1

Title:
Phase 1 Habitat Map

Date:
July 2024

Project:
Bailey Road Extension

Client:
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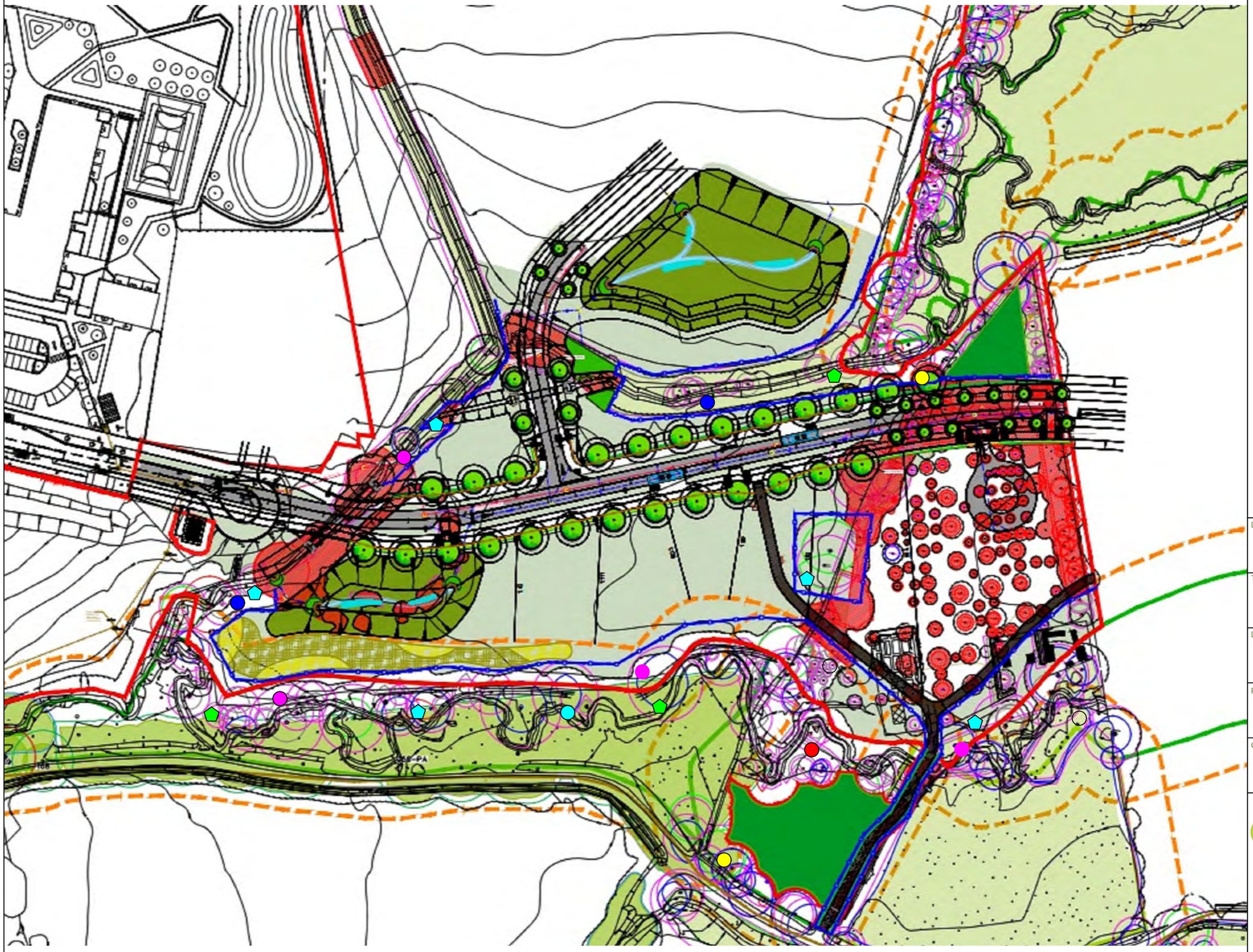

Legend

Bird Boxes

- Tit Box
- Open fronted box
- Owl box
- Treecreeper box
- Woodpecker box

Bat Boxes

- Schwegler 1FF
- Schwegler 2FN

Drawing Number:
Figure 2

Title:
Bird and Bat Box Locaitons

Date:
July 2024

Project:
Bailey Road Extension

Client:
L & G

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Appendix 1

David Jarvis Associates

Landscape Masterplan

Notes

Related Drawings: DIA Drawing based on
MK Survey: 31246 Phase 2 - North Horsham
SDA: 2898-17-2-DR-0001-S0-P1 Phase 2 BS5837 Arboricultural Survey 150223
Glanville: 'Mowbray-GLA-RMA1-Ph2-D-C-1201 - Drainage Layout - P1'
Glanville: 'Mowbray-GLA-RMA1-Ph2-D-C-1101 - General Arrangement - P3'

Issue: Drawn by David Jarvis Associates Limited (CROWN COPYRIGHT. ALL RIGHTS RESERVED 2024 LICENCE NUMBER 0100031). This drawing is for Planning purposes only - Do not use this drawing for Construction. The information contained in the drawing should be used as a guide to the final forms and finishes of the landscape scheme. Any revisions to be approved by the Client and Local Authority

Scaling: Do not scale this drawing. Use given dimensions only.

Setting out: refer to Engineers for information regarding setting out. In the event of discrepancy refer to Engineers in the first instance.

Survey: Original survey provided by the Client.

Services: Where possible these are identified on the drawings but, for the avoidance of doubt all service/utility locations should be considered indicative until identified on site. To ensure those services / utilities shown are current refer to the original survey provider or utilities designer or Client for confirmation and further information regarding easements. In the event of new services being installed refer to the appointed Engineer. It is recommended that hazard warning tape 'danger electric cable'/'danger services' to be installed over all service routes (to remain on site) to current BS guidelines (BS7671).

Lighting: Refer to lighting engineers drawings.

Planting: Plant species are selected and located in line with consideration of the site conditions, NHBC guidelines and discussions with the Local Authority and design team. All plants and planting procedure to conform to the David Jarvis Associates Limited Landscape Specification that will accompany the Construction issue drawings. No species or plant location is to be varied without prior consent of the Landscape Architect.

Biosecurity: All plant stock to be sourced from a supplier certified to be pest and disease free and in accordance with Plant Passport / Animal and Plant Health Agency (APHA) and current DEFRA requirements. Supplier information / certification to be retained for a period of not less than 12 years and must be made available upon request.

Foundations: Developers / Contractors to ensure that all foundations (buildings and external walling) are designed and constructed so as to take into account, at the time of maturity, any existing or proposed trees, hedgerows or other vegetation on the application site or existing vegetation on land adjoining the site at the time of construction and any trees felled or hedgerows removed on or adjacent to the site during the previous 15 years. For this purpose the developer / contractors will submit all relevant details to the authority dealing with the Building Regulations Certificate.

Design Levels: Refer to Engineers where design levels are not shown.

CDM: Drawings to be read in conjunction with Designers risk assessment. Potential risks above that of those associated with the general construction typical to the drawing are identified below;

Key

- APPLICATION BOUNDARY
- EXISTING TREES AND VEGETATION — RETAINED TREES AND HEDGEROWS TO BE REVIEWED BY ARBORICULTURAL CONSULTANT
- ROOT PROTECTION AREA (RPA) — WHERE HARD SURFACES ARE PROPOSED WITHIN AN RPA MITIGATION SYSTEMS MAY BE REQUIRED SUCH AS A CELLULAR CONFINEMENT SYSTEM. REFER TO ARBORICULTURAL CONSULTANT'S REPORT
- EXISTING TREES AND VEGETATION TO BE REMOVED — TREES AND HEDGEROWS TO BE REVIEWED BY ARBORICULTURAL CONSULTANT
- ANCIENT WOODLAND AND 15m BUFFER
- PROPOSED TREES
- WOODLAND PLANTING
- HEDGE PLANTING
- MIXED SHRUB PLANTING
- DORMOUSE COMPENSATION PLANTING
- AMENITY GRASS
- WETLAND GRASS - BASINS
- MARGINAL AQUATIC PLANTING
- TARMAC - CARRIAGEWAY — REFER TO GLANVILLE DRAWING GLA-RMA1-Ph2-D-C-1101 - General Arrangement
- TARMAC - FOOTPATH/CYCLEWAY — REFER TO GLANVILLE DRAWING GLA-RMA1-Ph2-D-C-1101 - General Arrangement
- SELF BINDING GRAVEL - TIMBER OR CONCRETE EDGE — COXWELL SELF BINDING GRAVEL - GOLDEN AMBER BY GRUNDON
- SELF BINDING GRAVEL - TIMBER EDGE — COXWELL SELF BINDING GRAVEL - GOLDEN AMBER BY GRUNDON
- ENTRANCE PIERS
- TIMBER POST AND RAIL FENCE — TIMBER POST AND RAIL CLEFT FENCE
- ESTATE RAILING — JACKSONS FENCING ESTATE RAILING
- TIMBER BOLLARD, LITTER BIN AND DOG BIN — BK17 POINTED SQUARE BOLLARD BY BROMAP; WINCHESTER CANOPIED LITTER BIN BY BROMAP; SIRIUS POST MOUNTED DOG WASTE BIN BY BROMAP, COLOUR BS 12 C 39 GREEN
- BENCH — CHESHUNT TIMBER SEAT BY FURNITURES
- LOW FLOW CHANNEL — REFER TO GLANVILLE DRAWINGS GLA-RMA1-PH2-D-C-1101 - Drainage Layout
- BOLLARDS AND SIGNANGE — REFER TO GLANVILLE DRAWING GLA-RMA1-PH2-D-C-1101 - General Arrangement
- LIGHTING COLUMNS — REFER TO GLANVILLE DRAWING GLA-RMA1-PH2-D-C-1101 - General Arrangement
- TREE PROTECTION FENCING
- PEDESTRIAN RAILINGS — REFER TO GLANVILLE DRAWING GLA-RMA1-PH2-D-C-1101 - General Arrangement

Trees

Species	Specification	Height	Girth	Number
Alnus glutinosa	RB .3x; Large Feathered	400-450cm	18-20cmg	29
Tilia cordata 'Greenspire'	Semi-Mature ,CSH 200min. ;3/5 brks ;RB	500-550cm	20-25cm	17

Native Hedge

Species	Specification	Height	Density	% of Mix	Number
Cornus sanguinea	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm	0.5Ctr Triple Staggered at 0.5m offset	5%	190
Corylus avellana	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm	0.5Ctr Triple Staggered at 0.5m offset	20%	743
Crataegus monogyna	1+1: Transplant - seed raised: B	60-80cm	0.5Ctr Triple Staggered at 0.5m offset	50%	1851
Prunus spinosa	1+1: Transplant - seed raised: Branched: 2 brks: B	60-80cm	0.5Ctr Triple Staggered at 0.5m offset	20%	743
Viburnum lantana	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm	0.5Ctr Triple Staggered at 0.5m offset	5%	190
					Total :3717

Dormouse Planting 1

Species	Specification	Height	Density	Number
Corylus avellana	1+1 ;Bushy ;3 brks	60-80cm	1/m²	423
				Total :423

Dormouse Planting 2

Species	Specification	Height	Density	% of Mix	Number
Lonicera periclymenum	Bushy	25-30cm	1/m²	50%	403
Rubus fruticosus	Bushy :0/1	30-40cm	1/m²	50%	403
					Total :806

Woodland Mix

Species	Specification	Height	Density	% of Mix	Number
Acer campestre	Feather .2x .5 brks .B	175-200cm	1/m²	10%	194
Betula pendula	Feather .2x .5 brks .B	175-200cm	1/m²	7%	137
Cornus sanguinea	Br:1+1 .2 brks :BR	40-60cm	1/m²	15%	291
Corylus avellana	Br :1+1 :BR	40-60cm	1/m²	25%	484
Crataegus monogyna	Feather .2x .5 brks .B	175-200cm	1/m²	5%	98
Euonymus europeaus	Br :1+1 .3 brks :BR	40-60cm	1/m²	10%	194
Ilex aquifolium	Lel.a:1+1 .2 brks .C	40-60cm	1/m²	2%	39
Prunus spinosa	T :1+1 :1/3 brks :BR	40-60cm	1/m²	7%	137
Quercus robur	T :1+1 :BR	40-60cm	1/m²	7%	137
Rosa canina	Br :1+1 .2 brks :BR	40-60cm	1/m²	2%	39
Viburnum opulus	Br :1+1 .2 brks :BR	40-60cm	1/m²	10%	194
					Total :1944

Marginal Planting

Species	Specification	Density	% of Mix	Number
Caltha palustris	Plug: Established Root min. 2-3 Months: Sept to April planting: British Native-origin: C	5/m²	20%	87
Carex riparia	Plug: Established Root min. 2-3 Months: Sept to April planting: British Native-origin: C	5/m²	20%	87
Iris pseudacorus	Clump: 3 buds: min. 1 Year: British Native-origin: B	5/m²	20%	87
Lythrum salicaria	Clump: 3 buds: min. 1 Year: British Native-origin: B	5/m²	20%	87
Mentha aquatica	Plug: Established Root min. 2-3 Months: Sept to April planting: British Native-origin: C	5/m²	20%	87
				Total :435

Native Shrubs

Species	Specification	Height	Density	% of Mix	Number
Cornus sanguinea	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm	1/m²	20%	32
Corylus avellana	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm	1/m²	10%	17
Lonicera periclymenum	Caned: Several Shoots: 2 brks: C	60-80cm	1/m²	20%	32
Prunus spinosa	1+1: Transplant - seed raised: Branched: 2 brks: B	60-80cm	1/m²	10%	17
Rosa canina	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm	1/m²	20%	32
Viburnum lantana	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm	1/m²	20%	32
					Total :162

Ivy Mix

Species	Specification	Height	Density	Number
Hedera helix	Several Shoots :2 brks	30-40cm	5/m²	236
Hedera hibernica	Several Shoots :2 brks	30-40cm	5/m²	236
				Total :472

PLANTING NOTES

All plants;
Tree and plant stock to be procured as per the Landscape Specification. All plant materials to be planted at the density and quantities shown.

Trees: Tree planting principles should be followed as set out in drawings 2898-5-5-VEG-0001-0003 Typical Tree Planting Details.

Hedgerow: Hedge planting to be supported using canes and protected using Green Tech Tree-bio Biodegradable Spiral Guard, 60cmx38mm, or similar approved. Bark mulch to be overlaid across planting area 75mm deep extending to 0.5m beyond planting.

Root barriers: To be placed where trees are located within 5m from hard surfaces, drainage and services.

Plant stock for use in the ancient woodland buffer planting is to be locally sourced as per Natural England guidance

0 10m 20m 30m 40m 50m

Drawing Revision

Rev.	Date	Description	Drawn	Checked
P2	29/03/2023	Scheme updates	PG	PG
P3	11/04/2023	Parcel 16b added	PG	PG
P4	24/04/2023	Parcel 16b and grassland area amended	PG	PG
P5	09/11/2023	Amended to suit latest Glanville layout	JG	PG
P6	21/11/2023	Updated to latest layout	JG	PG
P7	24/11/2023	Pedestrian railing added	JG	PG
P8	30/11/2023	Amended following client comments	JG	PG
P9	01/12/2023	Updated to client comments.	JB	PG
P10	14/03/2024	Updated to latest layout and comments	IE	PG
P11	21/03/2024	Updated to latest comments	IE	PG
P12	26/07/2024	Updated to latest comments	JE	PG
P13	01/08/2024	Updated to latest comments	JE	PG
P14	06/08/2024	Fence added to footpath	PG	PG

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Project
LAND NORTH OF HORSHAM - BAILEY ROAD EXTENSION

Drawing Title
LANDSCAPE PROPOSALS

Scale	Sheet Size	Date Plotted
1:500	A1	06/08/2024

Client Ref.	Drawing Ref.	Drawing No.	Version
-	2898-5-2-15	DR-2002	S5-P14

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Z:\2898 Land North of Horsham\2898-5-2\DESIGN\2898-5-2 DESIGN\2898-5-2-15 Bailey Road Extension RMA1 2-4\2898-5-2-15-DR-0001 0002-S4-P14 RMI Landscape proposals 060824.dwg

Appendix 2

David Jarvis Associates

Hillside Indicative Landscape Masterplan



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KEY

- SITE BOUNDARY
- 15m ANCIENT WOODLAND BUFFER
- GRASSLAND M10-M4 MIX
- INFORMAL GRASS PATH
- PROPOSED WOODLAND
- PROPOSED SCRUB
- PROPOSED MIXED NATIVE HEDGE
- PROPOSED TREES
- MARGINAL PLANTING
- PROPOSED PONDS
- PROPOSED HIBERNACULA
- OWL BOX
- EXISTING HEDGEROWS TO BE RETAINED
- BENCHES
  FURNITUBES - CHESTNUT SEAT: CHS 6 1800MM LONG. REFER TO DJA 2898-5-5-FRN-0001

SPECIMENS

Species	Height	Girth	Specification	No.
Acer campestre	400-450cm	16-18cm	Extra Heavy Standard: 5 brks: 3x: RB: Clear Stem min. 200cm	21
Betula pubescens	350-425cm	12-14cm	Large Feathered: 7 brks: 3x: RB	14
Carpinus betulus	400-450cm	14-16cm	Extra Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	11
Prunus avium	350-425cm	12-14cm	Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	24
Quercus robur	400-450cm	16-18cm	Extra Heavy Standard: 3x: RB: Clear Stem min. 200cm	10

HEDGE MIX

Species	Height	Specification	Density	Percentage	Number
Carpinus betulus	60-80cm	1+1: Transplant - seed raised: B	0.4Ctr Double Staggered at 0.2m offset	20%	382
Cornus sanguinea	60-80cm	1+1: Transplant - seed raised: Branched: 3 brks: B	0.4Ctr Double Staggered at 0.2m offset	20%	382
Corylus avellana	60-80cm	1+2: Transplant - seed raised: Branched: 3 brks: B	0.4Ctr Double Staggered at 0.2m offset	20%	382
Ligustrum vulgare	60-80cm	0/2: Cutting: Branched: 3 brks: B	0.4Ctr Double Staggered at 0.2m offset	20%	382
Prunus spinosa	60-80cm	1+1: Transplant - seed raised: Branched: 2 brks: B	0.4Ctr Double Staggered at 0.2m offset	20%	382
					Total :1910

SCRUB MIX 1

Species	Height	Specification	Density	Percentage	Number
Acer campestre	40-60cm	1+1: Transplant - seed raised: B	1Ctr	20%	666
Cornus sanguinea	40-60cm	Branched: 4 brks: C	1Ctr	20%	666
Corylus avellana	40-60cm	Branched: 2 brks: C	1Ctr	10%	337
Crataegus monogyna	60-80cm	1+1: Transplant - seed raised: B	1Ctr	20%	666
Euonymus europaeus	40-60cm	Branched: 3 brks: C	1Ctr	20%	666
Prunus spinosa	40-60cm	Branched: 3 brks: C	1Ctr	5%	172
Viburnum opulus	40-60cm	Branched: 3 brks: C	1Ctr	5%	172
					Total :3345

SCRUB MIX 2

Species	Height	Specification	Density	Percentage Contribution	Number
Acer campestre	40-60cm	1+1: Transplant - seed raised: B	1/m²	20%	344
Cornus sanguinea	40-60cm	Branched: 4 brks: C	1/m²	20%	344
Corylus avellana	40-60cm	Branched: 2 brks: C	1/m²	10%	173
Crataegus monogyna	60-80cm	1+1: Transplant - seed raised: B	1/m²	20%	344
Euonymus europaeus	40-60cm	Branched: 3 brks: C	1/m²	10%	173
Prunus spinosa	40-60cm	Branched: 3 brks: C	1/m²	5%	88
Salix caprea	60-80cm	0/1: Cutting: Branched: 2 brks: B	1/m²	10%	173
Viburnum opulus	40-60cm	Branched: 3 brks: C	1/m²	5%	88
					Total :1727

WOODLAND MIX

Species	Height	Specification	Density	Percentage	Number
Acer campestre	60-80cm	1+1: Transplant - seed raised: B	2Ctr	20%	312
Fagus sylvatica	60-80cm	1+2: Transplant - seed raised: B	2Ctr	15%	234
Quercus robur	60-80cm	1+2: Transplant - seed raised: B	2Ctr	50%	778
Tilia cordata	60-80cm	1+1: Transplant - seed raised: B	2Ctr	15%	234
					Total :1558

MARGINAL PLANTING

Species	Specification	Density	Number
Caltha palustris	Plug: Established Root min. 2-3 Months: Sept to April planting: British Native-origin: C	5/m²	123
Carex riparia	Plug: Established Root min. 2-3 Months: Sept to April planting: British Native-origin: C	5/m²	123
Iris pseudacorus	Clump: 3 buds: min. 1 Year: British Native-origin: B	5/m²	123
Lythrum salicaria	Clump: 3 buds: min. 1 Year: British Native-origin: B	5/m²	123
Mentha aquatica	Plug: Established Root min. 2-3 Months: Sept to April planting: British Native-origin: C	5/m²	123
			Total :615

Notes

Issue: Drawn by David Jarvis Associates Limited (CROWN COPYRIGHT. ALL RIGHTS RESERVED 2024 LICENCE NUMBER 0100031). This drawing is for Planning purposes only - Do not use this drawing for Construction. The information contained in the drawing should be used as a guide to the final forms and finishes of the landscape scheme. Any revisions to be approved by the Client and Local Authority

Scaling: Do not scale this drawing. Use given dimensions only.

Setting out: refer to Engineers for information regarding setting out. In the event of discrepancy refer to Engineers in the first instance.

Survey: Original survey provided by the Client.

Services: Where possible these are identified on the drawings but, for the avoidance of doubt all service/utility locations should be considered indicative until identified on site. To ensure those services / utilities shown are current refer to the original survey provider or utilities designer or Client for confirmation and further information regarding easements. In the event of new services being installed refer to the appointed Engineer. It is recommended that hazard warning tape 'danger electric cable'/'danger services' to be installed over all service routes (to remain on site) to current BS guidelines (BS7671).

Lighting: Refer to lighting engineers drawings.

Planting: Plant species are selected and located in line with consideration of the site conditions, NHBC guidelines and discussions with the Local Authority and design team. All plants and planting procedure to conform to the David Jarvis Associates Limited Landscape Specification that will accompany the Construction issue drawings. No species or plant location is to be varied without prior consent of the Landscape Architect.

Biosecurity: All plant stock to be sourced from a supplier certified to be pest and disease free and in accordance with Plant Passport / Animal and Plant Health Agency (APHA) and current DEFRA requirements. Supplier information / certification to be retained for a period of not less than 12 years and must be made available upon request.

Foundations: Developers / Contractors to ensure that all foundations (buildings and external walling) are designed and constructed so as to take into account, at the time of maturity, any existing or proposed trees, hedgerows or other vegetation on the application site or existing vegetation on land adjoining the site at the time of construction and any trees felled or hedgerows removed on or adjacent to the site during the previous 15 years. For this purpose the developer / contractors will submit all relevant details to the authority dealing with the Building Regulations Certificate.

Design Levels: Refer to Engineers where design levels are not shown.

CDM: Drawings to be read in conjunction with Designers risk assessment. Potential risks above that of those associated with the general construction typical to the drawing are identified below;

Drawing Revision

Rev.	Date	Description	Drawn	Checked
P1	26/10/2023	First draft	IE	PG
P2	26/10/2023	Pond relocated	IE	PG
P3	01/11/2023	Amended to clients comments received on 31/10/2023 and 01/11/2023.	IE	PG
P4	20/11/2023	Amended to clients comments received on 09/11/2023	IE	PG
P5	22/11/2023	Planting areas and tree details included	IE	PG
P6	23/11/2023	Woodland mix revised	IE	PG
P7	19/12/2023	Updated to latest tree survey	IE	PG
P8	01/02/2024	Updated to latest comments	IE	PG
P9	28/03/2024	Updated to latest comments	IE	PG
P10	01/07/2024	Updated to latest comments	IE	PG

Status
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Project
LAND NORTH OF HORSHAM HILLSIDE OPEN SPACE

Drawing Title
LANDSCAPE MASTERPLAN

Scale	Sheet Size	Date Plotted
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Client Ref.	Drawing Ref.	Drawing No.	Version
-	2898-5-2-21	DR-1001	S5-P10