Derek Finnie Associates®
CONSULTANT ECOLOGISTS

Mowbray

Moat Road Extension

Ecology Mitigation and Management Plan

August 2024

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PRACTICE 2023-2024

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Mowbray

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Report Ref: DFA24029V6

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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),* [redacted]

1.1.3 The following report, therefore, has been prepared to provide sufficient information to allow Condition 49 to be discharged as far as it relates to the Phase 1 Primary Road, referred to as Moat Road Extension Reserved Matters Application (RMA). Reserved matters approval was granted for the first section of Moat Road as part of the initial infrastructure works for Phase 1 of the development (ref. DC/20/2345, dated 27 November 2020).

1.1.4 The approval of reserved matters is now sought for the extension of Moat Road westwards to Old Holbrook and ecology enhancements and SUDs

1.1.5 For consistency across the whole of Phase1 area, this EMMP uses the EMMP submitted for Phase 1A as a template (Bioscan, Report Ref: E1585/EMMP/P1A/R1/V1). It provides a summary of the surveys carried to date, briefly assesses the likely impacts of the scheme and presents the mitigation, enhancements and management that will be undertaken.

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 Moat Road Extension RMA area. Whilst this is a stand-alone EMMP, consideration has been given to the objectives of the Phase 1 overarching EMMP (Bioscan E1585/EMMP/P1/R2/rev2, July 2020) and the Phase specific EMMPs for the neighbouring areas, where applicable.

2.1.2 It should also be noted that whilst the current EMMP focuses on the mitigation and management of the Moat Road extension land, the mitigation component also covers the adjoining development parcel, namely RM Area 4. This is mainly due to the presence of a breeding great crested newt population within Pond P4 which lies contiguous with the Phase boundary; the terrestrial component of which is likely to extent into the adjoining Phases. Hence, including the additional land within the current application 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 RMA area and adjoining land during 2022 and 2023.

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, [redacted] 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 [redacted] and birds.

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

- To obtain derogation licences for works that will impact great crested newts, whilst conforming with the wider strategic strategy for this 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 Mowbray '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 within the Phase 1 area 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 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 a field delineated by mature, outgrown hedgerows with numerous standard trees. The field was previously in arable production for a number of years, however, in 2023 it was given over to an agricultural grass ley which has been grazed by sheep. The exception to this in an area in the eastern section which was the subject to a newt exclusion exercise in 2021 to allow the construction of the current extent of Moat Road to progress in a lawful manner. This area was bare ground in 2021, but now supports a mosaic of bare ground and a pioneer community.

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 A waterbody is present within the east of the RMA, referred to a P4 (this is consistent with the annotation used in the site wide newt surveys). The pond is surrounded by a woodland block which extends north wards along the eastern RMA boundary; this woodland is said to be ancient in origin.

3.3 Fauna

3.3.1 Great crested newt been recorded breeding within P4 in 2023; the pond is known to support a medium sized 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 valuable terrestrial habitat for this

species. However, the hedgerows and adjacent woodland would be classified as good quality terrestrial habitat.

[redacted]

3.3.3 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.

3.3.4 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.

3.3.5 Dormouse have not been recorded within the RMA area itself, and there are no records within 450m of the RMA boundary.

3.3.6 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:

- Great crested newts
- Bats
- Nesting birds
- Higher value habitats:
  - ponds
  - hedgerows,
  - mature trees; 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 as many of valuable ecological receptors within the RMA as possible, whilst providing new species rich habitats through appropriate new planting. However, given the RMA comprise a new road in conjunction with areas required for landscape buffer, the opportunities for new habitat creation are 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 removal of limited amount of small trees to facilitate the construction of a footpath access through the eastern hedgerow; and
- The loss of poor quality great crested newt terrestrial habitat.

5 CONSTRUCTION PHASE MITIGATION/COMPENSATION

5.1 Ancient Woodland

5.1.1 A 15m buffer has been defined around the ancient woodland. However, a small section of embankment encroaches just over 1m into the buffer for approximately 13m. Whilst this will ultimately be planted with a semi-natural habitat, thus will be in line with NE's guidance of uses and habitats within the buffer zone, three standard oak trees will be planted within the adjoining woodland to improve the structural diversity of what is otherwise an impoverished sub-canopy/understorey layer.

5.1.2 Furthermore, it has come to light that approximately 0.5m of the new footpath along the completed section of the road encroaches into the buffer for approximately 9m. To compensate for this, a further four oaks will be planted within the retained woodland.

5.2 Great crested newts

5.2.1 The proposal would see the loss areas of sub-optimal terrestrial habitat that may provide poor quality 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 1 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.

5.2.2 All amphibians encountered will be translocated to a dedicated receptor site, which is deemed to be the woodland area around P4, as well as the woodland and grassland to the north of the pond, which connects directly with the 'Hillside' to the north of Phase 1, which covers over 6ha. The RM application for Hillside was submitted on 8th January 2024 (LPA ref. DC/24/0061). The Hillside has been identified as the principle area of ecological mitigation for Phase 2 of the wider Mowbray scheme, with creating good quality amphibian habitat on of the main drivers. Numerous ponds will be created which accord to the specifications presented in the Great Crested Newt Mitigation Guidelines (EN 2000), with areas of new scrub and tree planting 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.

5.2.3 Furthermore, a pond which meets the criteria presented within Great Crested Newt Mitigation Guidelines (EN 2000) will be created in the south west of the RMA, with good terrestrial links to the ponds.

5.2.4 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).

5.2.5 Part of the RMA area has previously been subject to a newt mitigation scheme to allow the current extent of the road to be constructed; the exclusion fence to the west of the culvert is still in place.

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, four 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; this is line with the proposals presented in Table 4 of the approved Phase 1 EMMP (Bioscan E1585/EMMP/P1/R2/rev2, July 2020).

[redacted]

5.5 Nesting Birds

5.5.1 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.

5.5.2 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.

5.5.3 In order to enhance the area for nesting birds eight 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 and woodpecker boxes.

5.6 Other mitigation/compensation/enhancements

5.6.1 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 plants that will be used will be UK native species, and comprise a mixture of marsh marigold, greater pond sedge, yellow flag iris, common reed, purple loosestrife and water mint.

5.6.2 Newt Pond. A pond specifically designed for amphibians will be created in the southwest corner of the RMA, adjacent to mature vegetation, providing good permeability to the wider countryside. The pond will be constructed to provide gently sloping sides and will be planted with as similar mix as the SuDs basin, e.g. marsh marigold, greater pond sedge, yellow flag iris, common reed, flowering rush, purple loosestrife and water mint.

5.6.3 Tree planting. Approximately 30 new native trees will be planted within the RMA area. The exact location and species to be used are shown on David Jarvis Drawing 2898-5-2-23 DR-0001 (Appendix 1).

5.6.4 Hedgerow. A new native hedge, approximately 170m long, situation along the western boundary of the RMA will be created using, dogwood, hazel and blackthorn be undertaken throughout the RMA area as shown on David Jarvis Drawing 2898-5-2-23 DR-0001.

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 and Pond

6.2.1 Each year, commencing in year two after the completion of the construction, the SuDs and pond 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 Hedgerow Management

6.3.1 The hedgerow will be managed for the benefit of wildlife as well as to provide screening to the offsite properties. Once established, this will involve trimming of each side of the hedgerow on a rotation basis every other year. Trimming will be undertaken take in late January/February in order to avoid the nesting bird season and to ensure that berries and nuts are present for the benefit of foraging birds during the autumn and early winter.

6.4 Tree Management

6.4.1 Once planted, the long-term management for the tree planting will be minimal. Any specimens that fail in the first five years will be replaced.

7 MONITORING

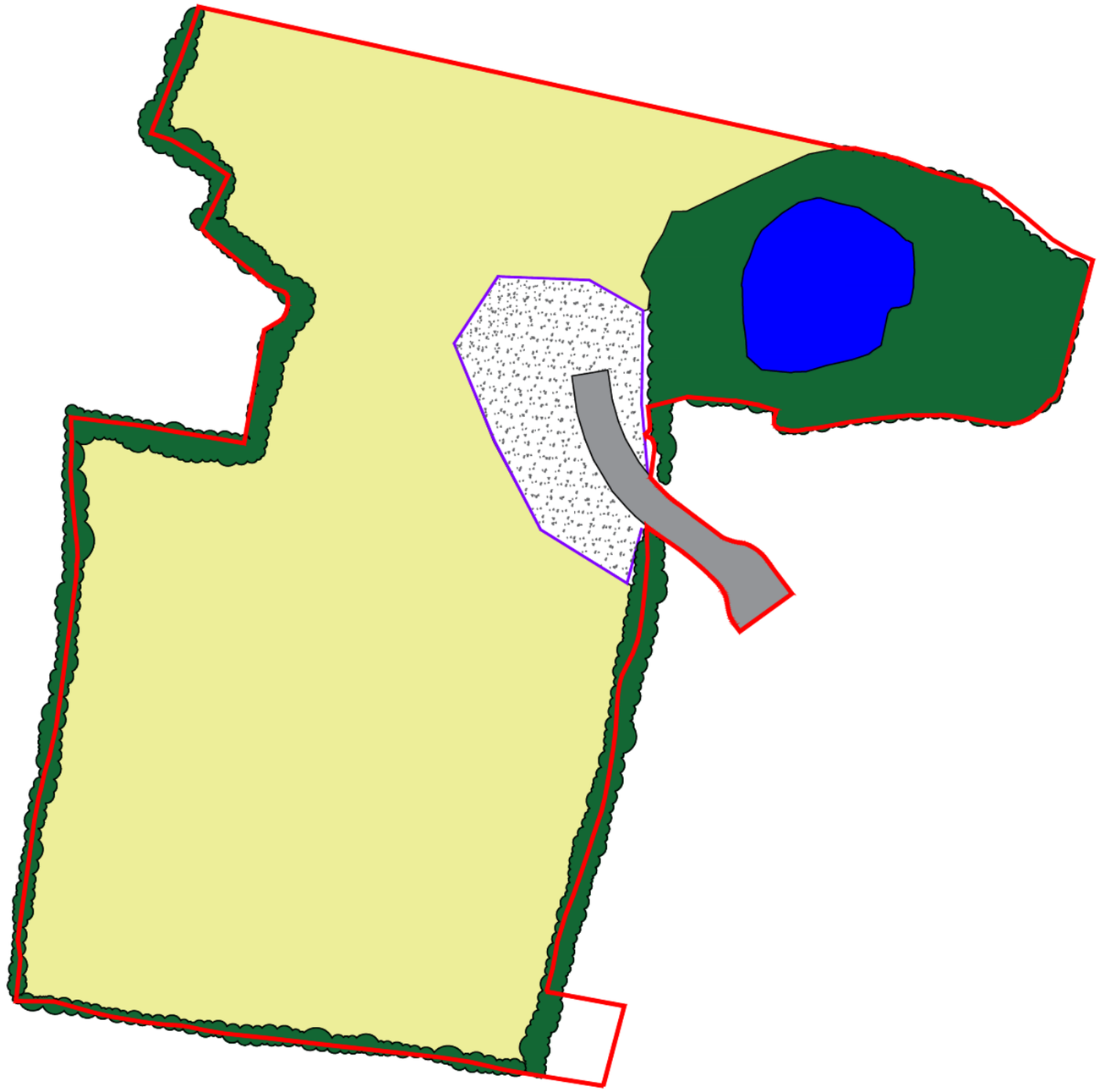
7.1 Ecological Monitoring

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 and Ponds 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).
- 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.



0 20 50 100
To be scaled for Planning purposes only metres

Legend

- Broad-leaved tree
- Pond
- Improved grassland
- Existing road
- Bare ground/pioneer
- Existing newt fence

Drawing Number:
Figure 1

Title:
Phase 1 Habitat Map

Date:
August 2024

Project:
Moat Road Extension

Client:
L & G

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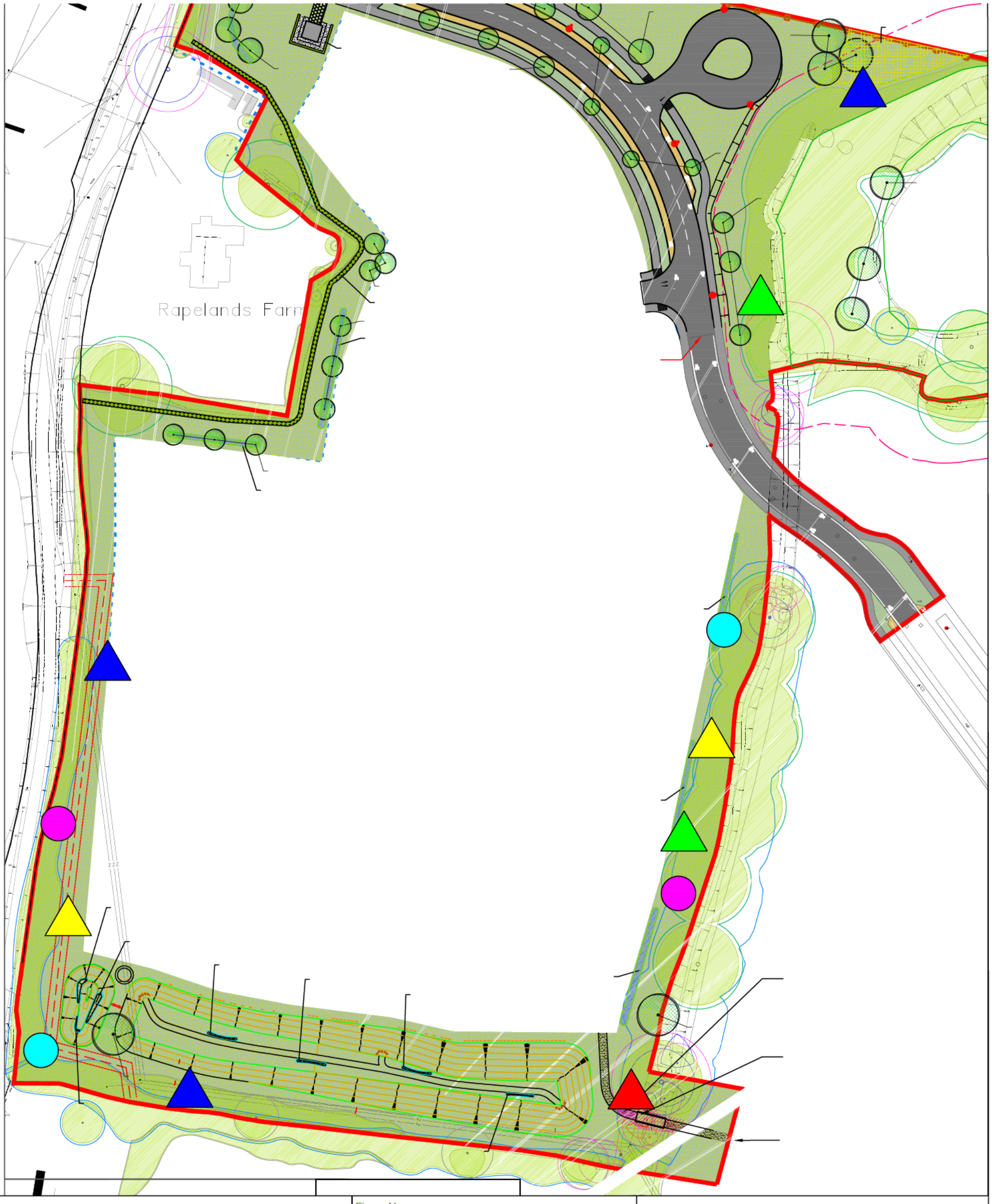

Legend

Bat boxes

- Schwegler 1FF
- Schwegler 2FN

Bird boxes

- Schwegler 1B
- Starling box
- Open fronted box
- Woodpecker box

N W E S

Figure No:	Figure 2
Title:	Bird and Bat Boxes
Date:	August 2024
Project:	Moat Road Extension
Client:	L & G

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Appendix 1

David Jarvis Associates

Landscape Masterplan

Z:\2898 Land North of Horsham\2898-5-DESIGN\2898-5-2 DESIGN\2898-5-2-23 Moat Road Extension 1-6\2898-5-2-23-DR-0001-S4-P11 MRE Landscape Proposals.dwg

SEE INSET

No.4 Tilia cordata 'Greenspire'

No.146 Crocus chrysanthus 'Cream Beauty'
No.98 Crocus speciosus 'Conqueror'
No.146 Cyclamen hederifolium
No.292 Galanthus nivalis
No.292 Narcissus pseudonarcissus

No.75 Carpinus betulus

No.3 Acer campestre

No.3 Tilia cordata 'Greenspire'

No.5 Acer campestre

No.3 Quercus robur

No.133 Corylus avellana
No.133 Crataegus monogyna

No.4 Corylus colurna

No.3 Tilia cordata

No.3 Quercus robur

Existing ground cover to be retained

No.4 Quercus robur

Rapelands Farm

No.3 Betula pendula
No.50 Cornus sanguinea
No.198 Corylus avellana
No.495 Euonymus europaeus
No.198 Prunus spinosa
No.50 Viburnum lantana

No.3 Betula pendula
No.228 Crocus chrysanthus 'Cream Beauty'
No.152 Crocus speciosus 'Conqueror'
No.228 Cyclamen hederifolium
No.455 Galanthus nivalis
No.455 Narcissus pseudonarcissus

No.3 Acer campestre

No.133 Crocus chrysanthus 'Cream Beauty'
No.89 Crocus speciosus 'Conqueror'
No.133 Cyclamen hederifolium
No.266 Galanthus nivalis
No.266 Narcissus pseudonarcissus

No.160 Crocus chrysanthus 'Cream Beauty'
No.107 Crocus speciosus 'Conqueror'
No.160 Cyclamen hederifolium
No.320 Galanthus nivalis
No.320 Narcissus pseudonarcissus

No.127 Crocus chrysanthus 'Cream Beauty'
No.85 Crocus speciosus 'Conqueror'
No.127 Cyclamen hederifolium
No.253 Galanthus nivalis
No.253 Narcissus pseudonarcissus

No.8 Caltha palustris
No.8 Carex riparia
No.8 Iris pseudacorus
No.8 Lythrum salicaria
No.8 Mentha aquatica

No.10 Caltha palustris
No.10 Carex riparia
No.10 Iris pseudacorus
No.10 Lythrum salicaria
No.10 Mentha aquatica

No.6 Caltha palustris
No.6 Carex riparia
No.6 Iris pseudacorus
No.6 Lythrum salicaria
No.6 Mentha aquatica

No.6 Caltha palustris
No.6 Carex riparia
No.6 Iris pseudacorus
No.6 Lythrum salicaria
No.6 Mentha aquatica

No.6 Caltha palustris
No.6 Carex riparia
No.6 Iris pseudacorus
No.6 Lythrum salicaria
No.6 Mentha aquatica

No.228 Crocus chrysanthus 'Cream Beauty'
No.152 Crocus speciosus 'Conqueror'
No.228 Cyclamen hederifolium
No.455 Galanthus nivalis
No.455 Narcissus pseudonarcissus

No.1 Betula nigra

No.3 Caltha palustris
No.3 Carex riparia
No.3 Iris pseudacorus
No.3 Lythrum salicaria
No.3 Mentha aquatica

No.5 Caltha palustris
No.5 Carex riparia
No.5 Iris pseudacorus
No.5 Lythrum salicaria
No.5 Mentha aquatica

No.1 Betula nigra

Footpath within RPA of SCD T020 (Oak) dug under Arboricultural Watching Brief

Footbridge foundations on western bank dug under an Arboricultural Watching Brief

To connect to future development parcel

DIVERTED HV

low flow channel

SOS

3.0m Min.

2.0m Min.

1.0m Min.

G111-PA
H110-PA
T112
T109-PA
G99-PA
G115-PA
G130-PA
T117
T118
T119
T120
T121
T122
T123
T124
T125
T126
T127
T128
T129

KEY

- APPLICATION SITE 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
- TREES AND VEGETATION TO BE REMOVED
- ANCIENT WOODLAND & 15M BUFFER
- STRATEGIC LANDSCAPE BUFFERS
- PROPOSED TREES
- AMENITY GRASS — GERMINAL SEEDS A18 ROADSIDES & EMBANKMENTS @ 35g/m², CAT 'D'
- MEADOW LONG GRASS — EMORSGATE SEEDS MEADOW MIXTURE OF LOAMY SOILS EM5 SOWN @ 4g/m², CAT 'H'
- BULB PLANTING — NARCISSUS PSEUDONARCISSUS. SOW IN 1.5m Ø CIRCLE AROUND ALL STREET TREES @ 25/m²
- NEWT COMPENSATION PLANTING
- MARGINAL PLANTING
- PROPOSED HEDGE
- KNEE RAIL — REFER TO DJA DWG.2898-5-5-BND-0005 TIMBER KNEE RAIL 450H
- REINFORCED GRASS
- LOOSE GRAVEL
- SELF BINDING GRAVEL — REFER TO DJA DWG.2898-5-5-SUR-0002-S5-P4 SELF BINDING GRAVEL
- BITMAC: PEDESTRIAN — TO ENGINEER'S SPECIFICATION
- BITMAC: VEHICULAR — TO ENGINEER'S SPECIFICATION
- BITMAC: CYCLEWAY — TO ENGINEER'S SPECIFICATION
- PERMANENT WATER
- LIGHTING COLUMN — TO ENGINEER'S DESIGN & SPECIFICATION
- VISIBILITY SPLAYS — TO ENGINEER'S DESIGN & SPECIFICATION
- SAFETY THROW LINE — REFER TO DJA DWG.2898-5-5-FRN-0003 SAFETY THROW LINE
- FOOTBRIDGE — REFER TO ENGINEER'S DESIGN & SPECIFICATION
- TIMBER POST AND RAIL FENCE — REFER TO DJA DWG.2898-5-5-BND-0002 TIMBER CLEFT 3 RAIL
- TIMBER BOLLARDS — REFER TO DJA DWG.2898-5-5-FRN-0009 TIMBER BOLLARD
- AREA OF ARBORICULTURAL WATCHING BRIEF

Planting Schedule

SPECIMENS

Species	Height	Girth	Specification	No.
Acer campestre	500-550cm	20-25cmg	Semi-Mature : :3x :CSH 200min. :RB	6
Acer campestre	500-550cm	20-25cmg	3x: Semi-Mature: CSH 200min.: RB	5
Betula nigra	500-550cm	20-25cmg	Semi-Mature :3x :CSH 200min. :RB	2
Betula pendula	500-550cm	20-25cmg	Semi-Mature : :3x :CSH 200min. :RB	6
Corylus colurna	500-550cm	20-25cmg	3x: Semi-Mature: CSH 200min.: RB	4
Quercus robur	500-550cm	20-25cmg	Semi-Mature : :3x :CSH 200min. :RB	10
Tilia cordata	500-550cm	20-25cm	3x: Semi-Mature: CSH 200min.: RB	3
Tilia cordata 'Greenspire'	500-550cm	20-25cm	CSH 200min. :Semi-Mature	7

HEDGING

Species	Height	Pot Size	Density	No.
Carpinus betulus	100-125cm	5L	0.3Ctr	75
Cornus sanguinea	60-80cm		0.5Ctr Triple Staggered at 0.5m offset	50
Corylus avellana	60-80cm		0.5Ctr Triple Staggered at 0.5m offset	198
Euonymus europaeus	60-80cm		0.5Ctr Triple Staggered at 0.5m offset	495
Prunus spinosa	60-80cm		0.5Ctr Triple Staggered at 0.5m offset	198
Viburnum lantana	60-80cm		0.5Ctr Triple Staggered at 0.5m offset	50

NEWT COMPENSATION PLANTING

Species	Height	Density	No.
Corylus avellana	80-100cm	1/m²	133
Crataegus monogyna	80-100cm	1/m²	133

MARGINAL PLANTING

Species	Pot Size	Specification	Density	No.
Caltha palustris	50cc min.	Plug: Established Root min. 2-3 Months: Sept to April planting: British Native-origin: C	5/m²	44
Carex riparia	50cc min.	Plug: Established Root min. 2-3 Months: Sept to April planting: British Native-origin: C	5/m²	44
Iris pseudacorus		Clump: 3 buds: min. 1 Year: British Native-origin: B	5/m²	44
Lythrum salicaria		Clump: 3 buds: min. 1 Year: British Native-origin: B	5/m²	44
Mentha aquatica	50cc min.	Plug: Established Root min. 2-3 Months: Sept to April planting: British Native-origin: C	5/m²	44

BULBS

Species	Specification	Density	No.
Crocus chrysanthus 'Cream Beauty'	Grade 6/8	30/m²	1022
Crocus speciosus 'Conqueror'	Grade 6/8	30/m²	683
Cyclamen hederifolium	Grade 15/20+ Topsize	30/m²	1022
Galanthus nivalis	Grade 6/+ Topsize	30/m²	2041
Narcissus pseudonarcissus	Grade 6/+ Topsize	30/m²	2041

Planting Notes

All plants;
Tree and plant stock to be procured as per the Landscape Specification.

Trees:
Tree planting principles should be followed as set out in drawing 2898-5-2-7-DR-1018 Typical Tree Planting Details. All trees to have a 1m dia. 75mm deep bark mulch ring.

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.

Marginal Aquatic Planting;
To be planted in naturalistic swathes and allowed to self-set within the basin to colonise the area shown as reed bed. Assume 60% cover at planting within areas specified as Marginal Aquatic Planting

Bulbs
Bulb planting to be set out as random drifts of bulbs working to overall average density and allowing for variations in density for naturalised appearance.

Notes

Related Drawings: DJA Drawing based on
- GLANVILLE: 'Mowbray-GLA-MRE-PH1-D-C-1101 - General Arrangement - P12'
-BROADWAY MALYAN '34854-02-700 RM4 Moat Road Extension Redline_RevE'

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;

INSET

No.3 Quercus robur

Existing ground cover to be retained

No.4 Quercus robur

Drawing Revision

Rev.	Date	Description	DWN	CKD
P11	13/06/2024	Updated to response schedule DC/24/0446 & CALA comments.	JB	PG
P10	10/06/2024	Updated to new layout.	JB	PG
P9	05/06/2024	Updated to client comments.	JB	PG
P8	05/06/2024	Updated to new GLANVILLE & BROADWAY MALYAN layouts.	JB	PG
P7	05/03/2024	Tree protection removed	JG/JB	PG
P6	29/02/2024	Latest engineering layout	JB	PG
P5	28/02/2024	Application boundary amended	PG	PG
P4	27/02/2024	Amended following client's comments	JB	PG
P3	20/02/2024	Amended following client's comments	JG	PG
P2	16/02/2024	Amended to suit latest engineering layout	JG	PG
P1	22/01/2024	First draft	JG	PG

Status
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Client
LEGAL & GENERAL (STRATEGIC LAND NORTH HORSHAM) LIMITED.

Project
LAND NORTH OF HORSHAM - MOAT ROAD EXTENSION

Drawing Title
LANDSCAPE PROPOSALS

Scale	Sheet Size	Date Plotted
1: 500	A1	13/06/2024

Client Ref.	Drawing Ref.	Drawing No.	Version
-	2898-5-2-23	DR-0001	S4-P11

N

0 10m 20m 30m 40m 50m

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Appendix 2

David Jarvis Associates

Hillside Indicative Landscape Masterplan

Z:\2898 Land North of Horsham\2898-5-DESIGN\2898-5-2 DESIGN\2898-5-2-21 Hillside 1-9\2898-5-2-21-DR-1001-S5-P9 NH Hillside Landscape Masterplan.dwg



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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

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

Notes

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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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Client
LEGAL AND GENERAL (STRATEGIC LAND NORTH HORSHAM) LIMITED

Project
LAND NORTH OF HORSHAM HILLSIDE OPEN SPACE

Drawing Title
LANDSCAPE MASTERPLAN

Scale	Sheet Size	Date Plotted
1:500	A0	01/07/2024

Client Ref.	Drawing Ref.	Drawing No.	Version
-	2898-5-2-21	DR-1001	S5-P10