



Wykham Park Farm

**Landscape and
Ecological
Management
Plan**

Prepared by:
**The Environmental
Dimension Partnership
Ltd**

On behalf of:
L&Q Estates Ltd

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Appendices

Appendix EDP 1	Habitat Descriptions, Phase 1 Habitat Plan and Target Notes
Appendix EDP 2	Tree Protection Plan (edp5378_d014d 26 October 2021 TC/LT)

Plan

Plan EDP 1	Landscape Strategy Plan (edp5378_d017e 05 October 2021 MA/PW)
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Section 1

Introduction

- 1.1 This Landscape and Ecological Management Plan (LEMP) has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of L&Q Estates Ltd (hereafter referred to as 'the Applicant').
- 1.2 This LEMP provides the ecological and landscape management principles for Indicative Landscape and Ecological Management Areas identified within **Plan EDP 1**, primarily areas of Green Infrastructure (GI) associated with the development of land at Wykham Park Farm (hereafter referred to as 'the site'). Outline Planning Consent for residential-led mixed-use development at the site (hereafter referred to as 'the Development') was granted by Cherwell District Council (CDC; planning ref: 14/01932/OUT).
- 1.3 This document has been structured to communicate the key information relating to the ongoing landscape management and maintenance on this site, including the statutory planning requirements (Conditions), the Design Parameter Code¹, those who will hold responsibility for carrying out the provisions of this document, the timescales involved and clear and concise tables of management and maintenance actions to be followed by those carrying out the work on the ground.

¹ David Lock Associates and L&Q Estates (April 2020) *Land at Wykham Park Farm: Design Parameter Code*.

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Section 2 Purpose, Scope and Responsibilities

Purpose

- 2.1 This LEMP proposes a written framework for the establishment, management and maintenance of the landscape features within GI, as illustrated by **Plan EDP 1** Indicative Landscape and Ecological Management Areas.
- 2.2 This LEMP is to be read in conjunction with the following drawing:
- 2.3 **Plan EDP 1** Landscape Strategy Plan prepared by EDP (drawing ref. edp5378_d017).
- 2.4 This LEMP has been produced in relation to Condition 18 of the Outline Approval for the Development, which states:

“A Landscape and Ecological Management Plan (LEMP) for areas identified on plan ref JJG043/057 C shall be submitted to and approved in writing by the Local Planning Authority prior to the commencement of new soft landscaping works or development (with the exception of works undertaken in accordance with condition 49) within those identified areas. The Landscape and Ecological Management Plan shall include:

- *Description and evaluation of the features to be managed;*
- *Ecological characteristics and constraints of the site that may influence management;*
- *Aims and objectives of management;*
- *Appropriate management options for achieving aims and objectives;*
- *Mechanism for management review, monitoring and, if necessary, remedial measures; and*
- *Personnel responsible for implementation of the plan.*

Thereafter, the LEMP shall be implemented and carried out as approved or in accordance with such modification/variation as may be agreed in writing by the local planning authority.

Reason -To protect habitats of importance to biodiversity conservation from any loss or damage in accordance with Policy ESD10 of the Cherwell Local Plan 2011-2031 and Government guidance contained within the National Planning Policy Framework.”

*“Policy ESD 10: Protection and Enhancement of Biodiversity and the Natural Environment
Protection and enhancement of biodiversity and the natural environment will be achieved
by the following:*

- In considering proposals for development, a net gain in biodiversity will be sought by protecting, managing, enhancing and extending existing resources, and by creating new resources;*
- The protection of trees will be encouraged, with an aim to increase the number of trees in the District;*
- The reuse of soils will be sought;*
- If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or as a last resort, compensated for, then development will not be permitted;*
- Development which would result in damage to or loss of a site of international value will be subject to the Habitats Regulations Assessment process and will not be permitted unless it can be demonstrated that there will be no likely significant effects on the international site or that effects can be mitigated;*
- Development which would result in damage to or loss of a site of biodiversity or geological value of national importance will not be permitted unless the benefits of the development clearly outweigh the harm it would cause to the site and the wider national network of SSSIs, and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity;*
- Development which would result in damage to or loss of a site of biodiversity or geological value of regional or local importance including habitats of species of principal importance for biodiversity will not be permitted unless the benefits of the development clearly outweigh the harm it would cause to the site, and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity;*
- Development proposals will be expected to incorporate features to encourage biodiversity and retain and where possible enhance existing features of nature conservation value within the site. Existing ecological networks should be identified and maintained to avoid habitat fragmentation, and ecological corridors should form an essential component of green infrastructure provision in association with new development to ensure habitat connectivity;*
- Relevant habitat and species surveys and associated reports will be required to accompany planning applications which may affect a site, habitat or species of known or potential ecological value;*

- *Air quality assessments will also be required for development proposals that would be likely to have a significantly adverse impact on biodiversity by generating an increase in air pollution;*
- *Planning conditions/obligations will be used to secure net gains in biodiversity by helping to deliver Biodiversity Action Plan targets and/or meeting the aims of Conservation Target Areas. Developments for which these are the principal aims will be viewed favourably; and*
- *A monitoring and management plan will be required for biodiversity features on site to ensure their long term suitable management.*

Section 15 of the governments NPPF sets out the following:

15. Conserving and enhancing the natural environment

Paragraphs 170 to 183

170. Planning policies and decisions should contribute to and enhance the natural and local environment by:

- (a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- (b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- (c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- (d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- (e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- (f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*

171. Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework 53; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

172. Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads 54 . The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development 55 other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

- (a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;*
- (b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and*
- (c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.*

173. Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 172), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.”

Habitats and Biodiversity

“174. To protect and enhance biodiversity and geodiversity, plans should:

- (a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity 56; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation 57; and*
- (b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.*

175. When determining planning applications, local planning authorities should apply the following principles:

- (a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- (b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- (d) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons 58 and a suitable compensation strategy exists; and
- (e) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

176. The following should be given the same protection as habitats sites:

- (a) potential Special Protection Areas and possible Special Areas of Conservation;
- (b) listed or proposed Ramsar sites 59 ; and
- (c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

177. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.
Ground conditions and pollution

178. Planning policies and decisions should ensure that:

- (a) a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);

- (b) *after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and*
- (c) *adequate site investigation information, prepared by a competent person, is available to inform these assessments.*

179. Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.

180. Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- (a) *mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life 60 ;*
- (b) *identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and*
- (c) *limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.*

181. Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.

182. Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or ‘agent of change’) should be required to provide suitable mitigation before the development has been completed.

183. The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or

emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities”.

Management Objectives

2.5 The objectives of management have been selected based on the important ecological features identified in the Ecology Chapter² of the Environmental Statement submitted as part of the Outline application. These features require specific measures to be implemented to mitigate any harmful effects of the Development. Therefore, the objectives of management are:

- **Objective 1** – The enhancement of the Salt Way potential Local Wildlife Site (LWS), directly to the north of the site, and its immediately adjacent habitats, through sensitive management and creation of new habitats, including native tree and shrub structure planting and meadow grassland, with a reptile hibernaculum, bird and bat boxes installed within appropriate locations;
- **Objective 2** – Enhancement and integration of a network of existing and new ecologically valuable habitats, comprising the Salt Way, parkland, new green link/swale corridors and existing hedgerow network, using complimentary planting and appropriate management to benefit biodiversity, landscape and visual amenity;
- **Objective 3** – Ensure the site supports a range of native faunal Protected/Priority (Designation under Section 41 of the *Natural Environment and Rural Communities Act* (NERC) 2006) species/groups by habitat enhancement and creation, including:
 - a. Tree, shrub and hedgerow planting to provide foraging, nesting and sheltering opportunities for bats, birds, badger (*Meles meles*), hedgehogs (*Erinaceus europaeus*), amphibians and reptiles;
 - b. Installation of reptile hibernacula, bird and bat boxes to benefit reptiles, nesting birds and roosting bats;
 - c. Planting palette to comprise fruiting and nectar-bearing species to attract foraging bats, birds, badgers and invertebrates, including disease-resistant elm varieties to benefit the white-letter hairstreak butterfly (*Satyrrium w-album*);
 - d. Creation of green corridors to enable species to continue to move through and around the development;

² David Lock Associates in association with Jubb Consulting Ltd, SLR Consulting Ltd, Wardell Armstrong LLP, Cotswold Archaeology Ltd (October 2014) *Environmental Statement: Land at Wykham Park Farm, Banbury Chapter 9: Ecology and Biodiversity*

- e. Creation and sensitive management of swales and attenuation ponds to benefit amphibians and reptiles; and
 - f. A sensitive lighting strategy including dark corridors to encourage nocturnal species such as bats and badgers.
- **Objective 4** – Ensure the site provides access to nature to promote human wellbeing and afford environmental education opportunities through the provision of footpaths and interpretation boards.
- 2.6 The management actions to achieve these objectives during the ‘Establishment Phase’ (Years 1 to 5) are detailed in **Section 4** which describes the habitat creation, maintenance and short-term management measures to be undertaken post-construction.
- 2.7 A broad framework for the long-term management of the site’s ecological and landscape features is provided in **Section 5**.
- 2.8 The process of monitoring and reviewing the objectives is detailed in **Section 6**.
- 2.9 Final summary and conclusion are given in **Section 7**.

Management and Maintenance Period

- 2.10 The management and maintenance works within this document are to be implemented following the defects rectification period and throughout the lifetime of the development. As such, this LEMP contains:
- Detailed proposals for the establishment phase – years 1 to 5 depending on landscape element type, see **Section 4** and **Table EDP 4.1**; and
 - A programme of responsibilities for the period of 6 to 15 years and beyond, see **Section 5**.

Provisions

- 2.11 This management plan includes long-term design objectives, management responsibilities, timescales and maintenance schedules.
- 2.12 The provisions of this LEMP should be read in conjunction with the Landscape Strategy Plan at **Plan EDP 1** and CDC’s Contract for the Provision of Landscape Maintenance Services, which is available from the council upon request. The Contract contains further detail on maintenance operations, methods and equipment.

Management and Maintenance Responsibility

Landscape Management and Maintenance

- 2.13 Landscape management and maintenance responsibilities will be undertaken by an independent landscape management and maintenance company.

Review Period

- 2.14 The provisions and responsibilities for the plan will be reviewed on an annual basis during the first five years (known as the establishment period), by those responsible for the provision of landscape management and maintenance, and every five years thereafter, or as required. Any substantial amendments will be approved in writing by the local planning authority (LPA).
- 2.15 Responsibility for management and maintenance in accordance with the provisions set out in this plan will be allocated through the mechanism set out in the S106 agreement for the site.

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Section 3

Key Features to be Retained, Enhanced and Created

Summary of Previous Survey Work

- 3.1 The site was subject to an initial appraisal by Halcrow in 2012, followed by a detailed ecological assessment by Wardell Armstrong, between 2012 and 2015, to inform the Outline Planning Application submission. The combined assessment surveys included a desk study, an Extended Phase 1 Habitat survey and a hedgerow survey, as well as detailed species surveys for badgers, bats and amphibians. Full details of the methodologies and results can be found in Wardell Armstrong reports, Environmental Statement (ES) Chapter 9: Ecology and Biodiversity and supporting Addendum to the ES Chapter submitted with the Outline Planning Application. A summary of the findings is provided where relevant to the scope of this LEMP.
- 3.2 EDP undertook a pre-commencement ecological walkover survey on 09 November 2020 to meet the requirements of planning condition 9 (report ref: edp5378_r006).
- 3.3 In addition, in 2019 EDP were instructed by the Applicant to prepare a Badger Mitigation Strategy for the site (report ref: edp5378_r002) in order to satisfy planning condition 18 attached to the outline permission (Planning application reference: 14/01932/OUT). This strategy provides the impact avoidance and mitigation measures to be deployed to ensure that badgers are protected during the course of construction works.

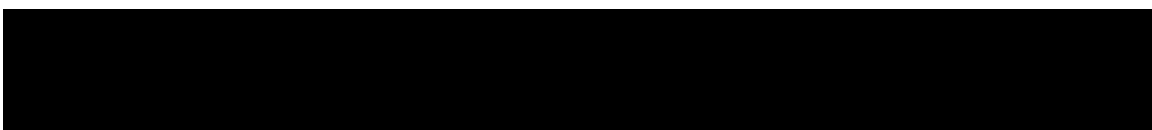
Description and Evaluation of Key Ecological Features on Site

- 3.4 A full description of the existing habitats on site is provided within Chapter 9: Ecology and Biodiversity of the ES submitted along with the original application for outline planning permission. For ease of reference the habitat descriptions provided within ES Chapter 9, along with the Phase 1 Habitat Survey Plan and accompanying Target Notes, are extracted and included as **Appendix EDP 1**. Through the course of various site visits since the production of the ES, it is confirmed that there have been no significant material changes to the habitats present, as described in **Appendix EDP 1**.
- 3.5 The key ecological features within the site to be managed are identified below, with an assessment of their ecological value (as described in ES Chapter 9, ES Addendum or confidential Badger Reports by Wardell Armstrong) summarised as follows:
 - Salt Way potential LWS along the northern boundary, assessed as being of County ecological value;
 - The network of existing hedgerows, several of which are to be retained, were assessed as being of Local ecological value;

- Mature and semi-mature trees, situated mainly within the hedgerow network and assessed as being of Neighbourhood value; and
- The semi-natural woodland block in the north-west corner of the site, assessed as being of Local ecological value.

3.6 These habitats also support a number of protected/notable species that will also require consideration in this LEMP. A summary of the protected/notable species is provided below:

- An assemblage of nesting birds (likely to be foraging and nesting in hedgerows, woodland and trees on site), for which the habitats are assessed as being of Local value;
- Roosting, foraging and commuting bats (roosting confirmed within four trees at the site. Twenty-nine trees were assessed as having bat roost potential ranging from low to high, as well as foraging and commuting within hedgerows and woodland edge habitats), for which the habitats are assessed as being of Local value;



- Hedgehogs (potential for foraging, sheltering and hibernating within hedgerows and woodland), for which the habitats are assessed as being of Neighbourhood value;
- Amphibians (potential presence in hedgerows, woodland and plantation habitats) and a total of 7 waterbodies were identified within 500m of the site. Two ponds were found to contain a low population of great crested newt (*Triturus cristatus*) and one pond contained a medium population of great crested newt. The habitats are assessed as being of Neighbourhood value;
- Invertebrates, specifically the white-letter hairstreak butterfly (within habitats containing elm (*Ulmus* spp.) which are suitable larval food plants), for which the habitats are assessed as being of Neighbourhood value; and
- Reptiles (grass snake (*Natrix natrix*) observed on northern boundary and potential for other common species to be present in hedgerows and field margins), for which the habitats are assessed as being of Neighbourhood value.

3.7 With respect to other wildlife, the site is considered to have limited potential to support significant/notable populations, given the predominance of intensively managed arable land.

3.8 Key protection measures during construction for the Protected/Notable species listed above are covered under the Framework Construction Management Plan (CMP) required for Condition 49. Habitat management works that will benefit these species post-construction are discussed in this LEMP.

Ecological Features to be Managed

- 3.9 To demonstrate how key ecological features to be retained and enhanced have been incorporated within the design of the Development, this section of the LEMP should be read in conjunction with the detailed planting schedules and soft landscaping scheme drawings for each of the green and blue infrastructure components within the site. A description of how each feature will be retained and enhanced is provided below.

Salt Way Edge

- 3.10 The Salt Way potential LWS is a green corridor, running along part of the northern boundary of the site, comprising a bridleway with hedgerows and trees along both the north and south margins. The Salt Way is to be maintained and enhanced as an “*informal linear green space*”³, with a 20m wide buffer created within the Development containing soft landscaping including meadow grass planting along with structure planting comprising new trees and shrubs. New Public Rights of Way (PRoW) to be created within the Development will connect into the Salt Way bridlepath, with new connections being made through the existing hedgerows. Existing hedgerows will be subject to a new maintenance schedule comprising of a three-year rotational cut, with one edge being cut each year (the proposed regime is detailed in full within **Table EDP 4.1**). This is aimed at achieving optimum ecological condition and managing hedgerows for biodiversity benefit. Large gaps in hedges should be replanted with native species whips to create a dense hedge. Disease-resistant varieties of elm will be included, to benefit white-letter hairstreak butterflies.

Parkland

- 3.11 Within the south-west corner of the site, a new area of parkland Public Open Space (POS) will be created adjacent and connected to existing open space situated between the site and A361 Bloxham Road. The new parkland will incorporate the existing hedgerows running along the boundaries of the site. As with the hedgerows within the Salt Way Edge landscape component, retained hedgerows will be managed on a three-year rotational cut to achieve optimum ecological condition and for the benefit of wildlife (the proposed regime is detailed in full within **Table EDP 4.1**), with an improved hedgerow flora created at the base through sowing with Emorsgate EH1F Wildflowers for Hedgerows.
- 3.12 The parkland will also incorporate and extend the parcel of broadleaved woodland present in the north-west corner of the site. New planting in this area will reflect the existing species diversity of the existing woodland, using species of Local provenance resistant to climate change and diseases. Maintenance of the woodland area will aim to retain and, where possible, enhance existing wildlife populations, such as nesting birds and roosting bats, through the creation of a woodland glade and installation of bird and bat boxes. The woodland will be managed through thinning by removing any diseased or weak trees, in addition to annual monitoring of the tree stock by a qualified arborist, and pruning of excess growth encroachment into glade areas, as detailed in full within **Table EDP 4.1**.

³ David Lock Associates (March 2020) *Land at Wykham Park Farm: Design Parameter Code*. David Lock Associates

Green Link/Swales/Leisure Routes

- 3.13 The drainage strategy for the Development has enabled the creation of a network of green links through the site, incorporating existing hedgerows where possible. The green links include the belt of mixed plantation woodland along the southern boundary, as well as existing corridors formed by hedgerows extending north from the tree belt (although it is expected that the hedgerows will be lost due to engineering works associated with the drainage strategy and construction works within the development plots).
- 3.14 Three Sustainable urban Drainage System (SuDS) basins and several swales will be created. The SuDS and swales will include native aquatic and emergent species planting and be buffered by adjacent grassland, tree and shrub structure planting. Management of these features will be aimed at maintaining their drainage functions as well as creating new wetland habitats within the site. The swales will be designed with a shallow sloping edge to allow wildlife to easily enter and exit. The swales are designed to be permanently wet.

Wider Tree and Hedgerow Network

- 3.15 The species rich hedgerows and mature/semi-mature trees that fall outside the landscape components described above but within land subject to this LEMP, are primarily situated within the east/south-eastern sections of the site and comprise a mixture of quality and condition.
- 3.16 Whilst small sections of these hedgerows will require removal, overall, the connectivity they provide will be retained and enhanced by incorporation into wider green corridors. These hedgerows will be enhanced by buffering from complimentary planting of biodiversity benefit, where currently margins are narrow, and hedgerows are subject to unfavourable management and the effects of drifting agricultural chemicals from the adjacent arable land.
- 3.17 Hedgerow management should be undertaken in accordance with best practice and follow Hedge-Links top ten tips⁴. Hedgerows **H9, G12, H20, H30, H32, H33, H46, G21/G24** are to be retained and enhanced. Large gaps in hedges should be replanted with native species whips to create a dense hedge. Disease-resistant varieties of elm will be included, to benefit white-letter hairstreak butterflies. Whips should be protected for the first three years with spiral guards and be protected from grazing animals. New gapping up to be watered to field capacity, and in dry weather during the first growing season. **G37** and **G38** are tree lines that have previously been laid, these will be laid again to create a dense hedgerow with standard trees. Hedgerow **H34** has become outgrown along with scrub that is encroaching into the grassland and degrading it. The scrub is to be cut back and the hedgerow laid and coppiced to increase the density. The long-term management of all the hedgerows will be by cutting on a three-year rotation with one side cut per year.
- 3.18 The green corridors will include the retained hedgerows with an appropriate hedgerow flora mix sown at the base alongside additional tree planting. This will result in an increase in area (wider corridors) as well as increased species and structural diversity and so will

⁴ <https://hedgelink.org.uk/hedgerows/top-ten-tips-for-a-healthy-hedge/> [Accessed 09 December 2021]

enhance the value of these corridors as dispersal routes for foraging and commuting bats, birds, badgers, amphibians and reptiles.

Protected and Notable Species Provisions

Birds

- 3.19 To further enhance opportunities for wildlife, bird boxes will be installed within the woodland and on retained mature trees within the site to increase nesting opportunities. Such features will also provide continuity of habitat for those bird species likely to be susceptible to habitat loss during construction.
- 3.20 A total of 27 bird boxes will be installed within the woodland and on retained trees within hedgerows, as specified within the Ecology ES Chapter. The models chosen are generic boxes suitable for a variety of small garden birds and comprise:
- Woodland – 3 x 26mm hole, 3 x 32mm hole, 3 x open fronted; and
 - Hedgerows – 6 x 26mm hole, 6 x 32mm hole, 6 x open fronted, or similar approved by the County Ecologist.
- 3.21 Boxes will be mounted onto retained trees following manufacturer's specifications, out of direct sunlight on aspects of the tree that provide some cover from surrounding vegetation to offer shelter to birds but with a clear flight line to/from the entrance (uncluttered).
- 3.22 The enhancements to the hedgerow network through the new management regime will ensure the hedgerows are denser and suitable for refuge by birds.

Bats

- 3.23 Bat boxes will be installed within the woodland and on retained mature trees within the site to increase roosting opportunities.
- 3.24 A total of 16 bat boxes will be installed within the woodland and on retained trees within the green link landscape components and hedgerows. The number and model of bat boxes was specified within the Ecology ES Chapter and comprised:
- Woodland – 4 x Schwegler 2F, 4 x Schwegler 2FN; and
 - Hedgerows – 4 x Schwegler 2F, 4 x Schwegler 2FN, or similar approved by the County Ecologist.
- 3.25 The above box types were chosen as the species recorded during bat activity surveys conducted on site (by Wardell Armstrong) was predominantly common pipistrelle (*Pipistrellus pipistrellus*) with some soprano pipistrelle (*P. pygmaeus*), noctule (*Nyctalus noctula*) and *Myotis* sp. activity, all of which are common crevice dwelling species. Boxes will be mounted onto retained trees following manufacturer's specifications, on all

aspects of the trees to provide a variety of roosting conditions suitable to year-round roosting.

- 3.26 The provision of new hedgerows will provide further foraging and commuting opportunities for bats within the site and the management of existing hedgerows to increase their density and species richness will provide further opportunities.

Badgers

- 3.27 The provision of meadow grassland will provide opportunities for badger foraging. The green corridors throughout the site will also ensure connectivity for badger commuting between habitats. The additional woodland planting will provide further opportunities for badger sett creation in the long term.

Hedgehogs

- 3.28 The management regime of the hedgerows will increase the density of the hedgerows and their suitability to support hedgehog foraging, commuting and refuge. The creation of new hedgerows will further enhance these opportunities.

Amphibians

- 3.29 The new pond and swales will create opportunities for amphibian refuge and breeding. The pond is to be planted with an aquatic planting mix. The grassland surrounding the pond will be unmanaged to allow opportunities for amphibian dispersal. The swales are to be designed to be wildlife friendly with sloping sides and permanently wet areas. The management regime of the hedgerows will strengthen commuting corridors and provide refuge opportunities.
- 3.30 The creation of the meadow grassland will increase invertebrate diversity and provide opportunities for amphibian foraging.
- 3.31 In addition, two hibernacula will be created: one within the Salt Way buffer, within an area of grassland/woodland creation; and a second on the south side of the detention basin. The design of the hibernacula will broadly follow that provided in the Design Manual for Roads and Bridges⁵ (extract shown in **Figure EDP 3.1**) and the Reptile Habitat Management Handbook⁶.

Reptiles

- 3.32 The provision of the pond, swales and meadow grassland will provide opportunities for reptile foraging. The management of the hedgerows to increase density will provide further opportunities for reptile refuge and commuting.

⁵ Highways Agency (May 2005) Design Manual for Roads and Bridges: Nature Conservation Advice in Relation to Reptiles and Roads: Annex D: Hibernacula Design. The Stationary Office Ltd, London

⁶ Edgar, P., Foster, J. and Baker, J. (2010) Reptile Habitat Management Handbook: Chapter 9, section 9.2: Hibernation Sites and Basking Banks, pg. 45-46. Amphibian and Reptile Conservation, Bournemouth

- 3.33 The hibernaculum that are to be created, as described previously, will provide opportunities for reptile refuge and breeding.

Hibernaculum on impermeable ground

Where ground conditions are impermeable, then an 'above-ground' or mounded design should be utilised in order to prevent the hibernaculum from flooding. This design should also be used if it is not possible to excavate a pit for any other reason.

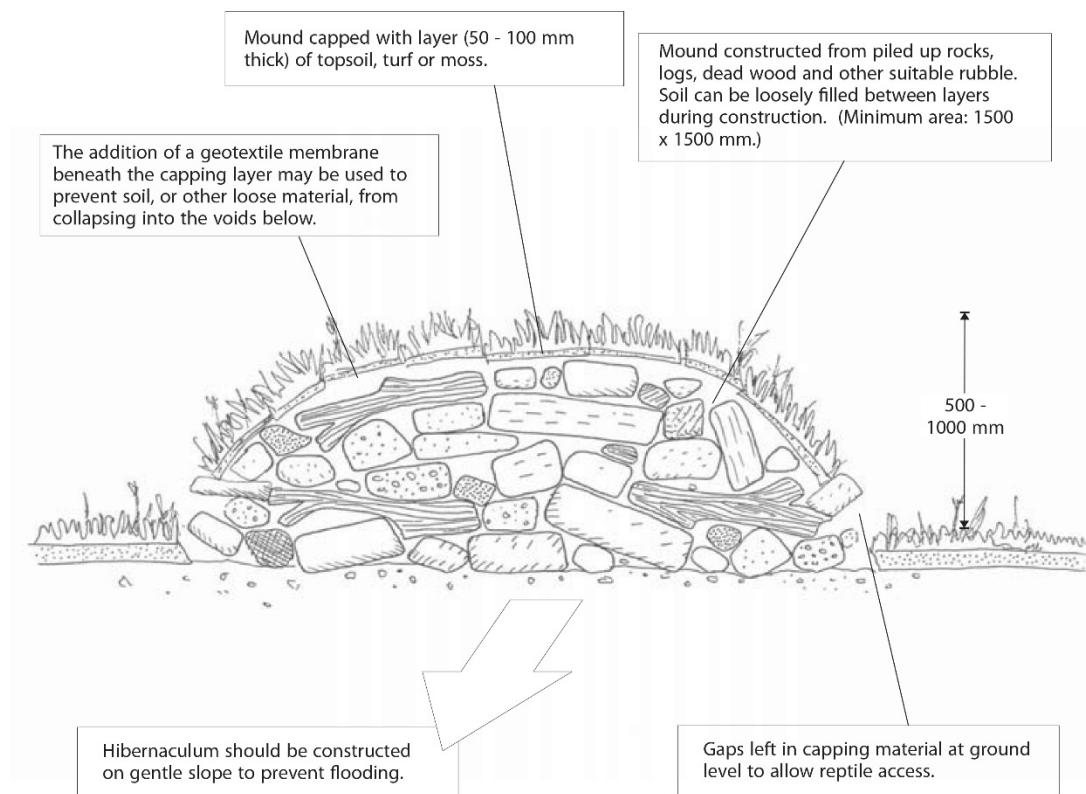


Figure EDP 3.1: Suggested Reptile Hibernaculum Design.

Invertebrates

- 3.34 The site is to be enhanced for white-letter hairstreak through the inclusion of elm in gap planting within the existing hedgerows. This will provide opportunities for breeding.
- 3.35 Further enhancements for invertebrates include the creation of the meadow grassland which will be managed to allow the growth of wildflowers and provide opportunities for invertebrate foraging.
- 3.36 The management of the woodland, which will include the cutting down of diseased and weak trees, will ensure a diverse age structure. The management will also ensure that there is dead wood left within the woodland areas which is suitable for invertebrate foraging and breeding.

Wellbeing and Environmental Education Features

Interpretation Boards and Footpaths

- 3.37 In line with growing evidence that access to nature promotes human health and wellbeing, the site provides opportunities to promote environmental education and wellbeing through recreation and education.
- 3.38 Information/interpretation boards will be installed within POS areas, near to the detention basin and on the approach to the Salt Way. The information/interpretation board near the SuDS will provide information about their role and function in terms of drainage, hydrology and ecological value, and highlight the nature conservation interest present. The information/interpretation board near to the Salt Way will explain the history of the feature as well as the species it may support. The boards will also identify how visitors can reduce impacts on sensitive areas, such as keeping to footpaths and disposing of any dog waste in the bins provided.
- 3.39 A variety of footpaths and bridleways will be created within the site, providing access to nature and outdoor recreation through a choice of route and habitat types.

Section 4

Management Objectives and Maintenance Operations, Years 1-5

- 4.1 Management objectives and maintenance operations are set out in **Table EDP 4.1** overleaf corresponding to each landscape element. These should be read in conjunction with **Appendix EDP 2** and **Plan EDP 1**.

Trends and Constraints that Influence Management

Tree Diseases

- 4.2 Diseases such as ash dieback (*Hymenoscyphus fraxineus*) have the potential to weaken the POS assets on site.
- 4.3 Regular tree inspections will detect any signs of tree disease at an early stage. Should evidence of any such disease be found, the Arboricultural Association (AA) approved contractor will determine the course of action and The Forestry Commission will need to be notified. Action for immature trees will likely be removal, however actions for diseased mature trees will be provided by the arborist and implemented by the management company.
- 4.4 The additional tree planting on the site will ensure the longevity of the POS by providing extra trees to 'buffer' against potential loss.

Invasive Non-native Species

- 4.5 The close proximity of gardens to the development increases the potential risk of non-native species becoming established on the site.
- 4.6 Regular monitoring of the site will also include a walkover of the site to look for evidence of invasive non-native species. Should any such evidence be found, then the ecologist responsible for the survey will determine the course of action required, to be implemented by the management company.

Desire Lines

- 4.7 Within POS, there is the potential for residents to want to access areas not serviced by footpaths and potentially trample ecologically sensitive habitat. Continued use in this way may create 'desire lines' which will then exacerbate the issue by encouraging further use.
- 4.8 This issue is difficult to manage, however, development of desire lines will be monitored yearly. Where a desire line is forming, the apparent destination for this line (such as a newly formed hedge gap to make a short cut) will be blocked to discourage use. This will likely require new planting with thorny species to 'stop up' any gaps in existing features.

4.9 Footpaths will be well maintained and signposted to encourage maximum use.

Table EDP 4.1: Management objectives and maintenance operations for Years 1-5.

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
Existing Hedgerows and Trees – Objectives 1, 2 and 3			
<p>Hedgerows H9, G12, H20, H30, H32, H33, H46, G21/G24: Retained hedgerows are to be managed to ensure they continue to contribute to landscape structure, amenity, ecological habitat and biodiversity, taking into account their current states. Preserve existing elm trees for the benefit of white-letter hairstreak butterflies. The species diversity and density of hedgerows should be increased.</p> <p>The management of retained hedgerows will ensure that a minimum of one standard tree every 50m is planted or allowed to grow out (where suitable specimens are present within retained hedgerows). Disease-resistant varieties of elm will be included, to benefit white-letter hairstreak butterflies.</p>	<p>Cutting/Trimming: To be completed between October and March inclusive to avoid bird nesting season. Cut 10cm higher each year until hedge reaches a height of between 3 and 4m. At this stage, a hedge may become leggy or gappy requiring rejuvenation by laying or coppicing. Lengths of hedgerow longer than 100m should be divided up into sections and each section cut/trimmed on a three-year rotation to allow the plants in some sections to flower and set fruit. Retained trees as shown on Tree Protection Plan (Appendix EDP 2) to be inspected and managed as recommended by an AA approved arboricultural contractor or professional arborist.</p>	<p>Manage existing hedgerows using best practice principles, allowing the hedgerow to go through a full life cycle before being encouraged to regenerate through laying and/or coppicing. More information can be found at http://www.hedgelinek.org.uk/index.php.</p> <p>A minimum of one standard tree every 50m will be planted or allowed to grow out (where suitable specimens are present within retained hedgerows). Gap planting with native species of local provenance where required.</p>	<p>Cut hedgerows on a three-year rotation, ensuring only a third of the total length around the site is cut in any one year and protecting standard trees.</p>

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
<p>Hedgerows G37 and G38: This boundary is a combination of a semi-mature tree line planted on the eastern edge and a hedgerow on the western edge. There are signs that the hedgerow has been laid in the past. Lay hedge to rejuvenate and allow one standard tree every 50m to develop. Increase the species diversity and density of the hedgerow.</p>	<p>Laying: Laying involves partially cutting through each stem and laying them over and weaving them together, creating a thick barrier and regrowth from the base. This should be undertaken by a skilled hedge layer. Retained trees as shown on Tree Protection Plan (Appendix EDP 2) to be inspected and managed as recommended by an AA approved arboricultural contractor or professional arborist.</p>	<p>A minimum of one standard tree every 50m will be planted or allowed to grow out (where suitable specimens are present within retained hedgerows). Gap planting with native species of local provenance where required.</p>	<p>When laid and managed correctly, a hedge should maintain its integrity for up to fifty years.</p>
<p>Hedgerow H34 along the Salt Way: This hedgerow has been allowed to grow out and comprises a line of trees and scrub. Maintenance to include light trimming of the southern side to prevent scrub encroaching into the grassland and degrading it. Gaps should be allowed to grow over naturally. Increase the species diversity and density of the hedgerow.</p>	<p>Gapping Up: Large gaps in hedges should be closed by hedgerow laying where possible or replanting with native species whips where the gaps are too large. This will create a dense hedge. Disease-resistant varieties of elm will be included, to benefit white-letter hairstreak butterflies. Whips should be protected for the first three years with spiral guards and be protected from grazing animals. New gapping up to be watered to field capacity, and in dry weather during the first growing season. Retained trees as shown on Tree Protection Plan (Appendix EDP 2) to be inspected and managed as recommended by an AA approved arboricultural contractor or professional arborist.</p> <p>Coppicing: In areas where the hedge is outgrown but not able to be laid, this should instead be coppiced.</p>	<p>This technique is often used in conjunction with coppicing.</p>	<p>Once established, whips should be maintained in line with three-year rotational trimming process.</p>

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
	<p>Deadwood: Deadwood within hedgerows to be left <i>in situ</i>, provided it does not pose a risk to people using POS.</p>		
Green Link/Swale/Leisure Route Aquatic and Emergent Planting – Objectives 1-4			
<p>Within the green links proposed as part of the landscape design there are three primary practical requirements for the management of vegetation, hard surfaces and street furniture/features to be able to contribute positively to the overall management objectives set out in this report. These areas are to be managed to ensure their drainage function is maintained, their ecological benefit is maximised and they remain usable and beneficial to local residents and visitors who can access these spaces walking, cycling and riding.</p>	<p>Compacted gravel footpaths, street furniture, amenity grass, and wetland meadow grass to be managed in accordance with the general provisions set out in this table, taking into account the areas of each of these typologies within the green links are smaller and have gradient changes.</p> <p>The following elements require bespoke management within the green link areas:</p> <ul style="list-style-type: none"> • Stands of native shrub planting is to be managed to a height no greater than 1.5m so as to preserve visibility along the routes. The areas of shrub planting are to be maintained in their current locations and rough sizes through trimming and removal of spreading/suckering plants which threaten to encroach onto adjacent areas. All trimming and shrub removal is to take place outside the bird nesting season and within the winter period when the plants are dormant. 		

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
<p>The following landscape typologies are present within the green links:</p> <ul style="list-style-type: none"> • Compacted gravel footpaths, benches and litter bins, mown amenity grass, wetland meadow grass, native shrub planting as stands and as more formal hedgerow and aquatic and marginal planting. 	<p>Native hedgerows to swale edges are to be managed in a more formal manner than native hedgerows elsewhere on the site due to the particular constraints within the green links. They are to be maintained to a height of 1.5m to ensure adjacent properties have relatively unobstructed views of the routes. The hedgerows are to be pruned to a rough A shape as they establish in order to ensure they grow strongly from the base, but their width is not allowed to exceed 1m. All pruning and trimming to height is to take place outside of the bird nesting season during the dormant winter period.</p>	<p>All arisings from trimming/cutting to be removed from site.</p>	<p>Stands of native shrubs – as set out in the relevant section of this table.</p>
			<p>Native hedgerows to swale edges – to be trimmed annually outside of the bird nesting season in the dormant winter period each year.</p>

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
	<p>Aquatic and marginal plants are to be managed to ensure they do not block the drainage capacity of the swales within which they are planted, maintain species diversity without one or two species taking over to the detriment of the rest and to ensure they contribute maximum ecological benefit. Maintenance activities are to include cutting, hand pulling and removal of vegetation as required (from the base/low-flow channel of the swale only). Any vegetation which blocks the drainage function of the swales is to be removed. Vegetation along the side of the swale which does not block the drainage function should not be removed in order to retain vegetation cover and suitable habitat for amphibians.</p>	<p>Any vegetation removed to be left undisturbed for at least a day beside the swales/waterbody to allow invertebrates and other aquatic life to move from this cut material back into the waterbody. Following this period, the cut vegetation can be removed from the site.</p> <p>No removal of vegetation is to occur within the newt breeding season (approx. March-July) to prevent risk of damage or harm to eggs, egg laying sites and amphibians, including great crested newts.</p> <p>No vegetation to be removed within areas where an active nest or breeding birds are present.</p>	<p>As required to maintain drainage function, or control spread of invasive/aggressive species.</p>
Aquatic and Emergent Species Planting – Objective 3 and 4			
<p>The main management objective for the new wildlife pond within the larger attenuation basin is to provide an additional water body to the pre-existing network of ponds already present within the local landscape. Whilst the pond will provide some visual amenity, its key role is to provide wildlife benefits, with an emphasis on supporting the local population of great crested newts.</p>	<p>Monitoring: Undertake an assessment of the planted marginal and aquatic vegetation to ensure that it has established. Plant failures should be replaced as necessary to ensure a diverse vegetation structure. The pond should also be monitored to check vegetation succession, presence/absence of invasive aquatic plant species, bank stability and water depth.</p>		<p>Once a year.</p>

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
	<p>Vegetation Control: Marginal and emergent vegetation is to be maintained around at least half of the pond's edge. If necessary, marginals are to be prevented from encroaching across water's surface by hand removal. At least 40% of water surface to be kept free from floating macrophytes. Any vegetation removed from the water body should be piled on the bankside for 24 hours prior to removal for composting.</p>	<p>No removal of vegetation is to occur within the newt breeding season (approx. March-July) to prevent risk of damage or harm to eggs, egg laying sites and amphibians, including great crested newts.</p> <p>No vegetation to be removed within areas where an active nest or breeding birds are present.</p>	<p>Once a year.</p>
Meadow Grass Planting and Wet Meadow Grass Planting – Objectives 2 and 3			
<p>To maintain and enhance existing areas of meadow grass and to increase species diversity. To establish and maintain new meadow grassland areas in a healthy condition, maintain species diversity and provide habitat for invertebrates.</p>	<p>First Year Management: Meadow grassland areas to be seeded with Emorsgate EM1 Basic General Purpose Meadow Mixture and wetland meadow areas with Emorsgate EG8 Meadow Grass Mixture for Wet Soils. Mow newly sown meadows regularly throughout the first year of establishment to a height of 40-60mm, removing cuttings if dense.</p>	<p>Regular cuts during the first year allows the sward to develop whilst knocking back weeds.</p>	<p>Monthly, as required to prevent weeds taking over the sward.</p>
<p>Three SuDS basins and several swales will be created. The SuDS and swales will include native aquatic and emergent species planting and be buffered by adjacent grassland, tree and shrub structure planting. Management of these features will be aimed at maintaining their drainage functions as well as creating new wetland habitats within the site.</p>	<p>Autumn Sown Sward Cutting: First cut March (cut to 40-70mm if there is sufficient material or weeds have colonised to a height of 300mm), then May (cut to 40-70mm in early May) and September (cut to 40mm after flowering).</p>		<p>Three times per year in March, May and September.</p>
	<p>Spring Sown Sward Cutting: Cut six weeks after sowing (cut to 40-70mm if there is sufficient material), then May (provided sward has grown to 100mm or above, cut to 40-70mm) and September/October (cut to 40mm after flowering and remove clippings).</p>		<p>Three times per year, at six weeks after spring sowing, May and September.</p>

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
<p>In order to provide suitable great crested newt habitat, the meadow grassland immediately surrounding the pond will not be cut.</p>	<p>Arisings: Leave to shed seed for one to seven days prior to collection and removal from site.</p>		
	<p>Watering: Apply to field capacity (15 litres per m²) approximately weekly, but more frequently if dry and not at all if wet, until fully established. Once established, water during any spell of continuous hot, dry weather lasting more than 14 days during the maintenance period.</p>	<p>Do not fertilise areas seeded with wildflower.</p>	<p>As required, typically fortnightly, but more often if dry and not at all if wet.</p>
	<p>Weeding: Control undesirable plant growth within sward if necessary (i.e. dock, thistle, nettles and ragwort) by hand excavation/pulling or spot herbicide treatment. Control suckering species adjacent to retained native hedgerows to reduce encroachment and maintain the existing hedge lines.</p>		<p>Monthly.</p>
	<p>Access Control: During the establishment period for seeded areas (three to six months) prevent access and trampling.</p>		<p>From sowing until fully established.</p>
	<p>Control of Re-growth Following Final Late Summer Cut: Mow or graze the re-growth through to late autumn/winter to around 50mm, and again in early spring if required.</p>	<p>Rate of grass growth in autumn, winter and early spring will be dependent on weather conditions and temperature.</p>	<p>Following last cut in late summer through to early spring.</p>

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
Existing Broad-leaved Semi-natural Woodland Located Adjacent to the Eastern Parkland Landscape Area – Objectives 2, 3 and 4			
<p>The main objectives are to retain existing woodland in good condition and take steps to improve its structure and diversity over time where possible.</p> <p>A glade will be created to provide structural diversity, with a woodland glade species mix sown.</p> <p>Woodland provides landscape structure, visual amenity and habitat and biodiversity value to the Development and should be managed so it continues to do so into the future. All trees should also have their condition regularly assessed for safety reasons.</p>	<p>First Year Management: Creation of woodland glade in consultation with ecologist and arborist. Sow with woodland glade species mix in autumn or early spring.</p>		
	<p>Monitoring: Woodland should be monitored annually by a qualified arborist to assess tree conditions for safety reasons and to ascertain whether any maintenance operations are required to achieve and continue to adhere to the management objectives.</p>		Once a year.
	<p>Thinning: Thinning of trees should be undertaken if, following assessment by a qualified arborist, this would improve the structure, diversity, and/or habitat and biodiversity value.</p>	Logs arising from arboricultural work should be left within the woodland and allowed to rot down naturally to increase habitats for invertebrates.	Regular checks should be made to ensure that the trees remain in a safe condition.
	<p>Pruning: Pruning should be carried out to any excess growth encroaching onto glade.</p>		Once a year, or as required if causing a problem.
Amenity Grass Planting: Germinal seeds A18 Road Verge and Embankments – Objectives 2, 3 and 4			
<p>Amenity grass is to be managed to ensure a thick sward is established and maintained at a suitable height to facilitate recreation such as ball games, etc., and also to retain a smart formal appearance.</p>	<p>Watering: Apply to field capacity (15 litres per m²). Once established, water during any spell of continuous hot, dry weather lasting more than 14 days during the maintenance period.</p>	<p>Provide protection, keep watered and weed-free and apply ameliorants as necessary to promote successful germination/establishment.</p> <p>Failed seeded areas resulting from lack of watering shall be re-seeded including any preparation required, at the landscape contractor's own expense.</p>	<p>As required, but approximately weekly during the growing season. More often if dry and not at all if wet. Continue watering pattern until fully established.</p>
	<p>Irrigation: New turf/seeded areas to be irrigated until the sward is established. Any area of poor establishment shall be re-turfed/seeded as soon as is practicable.</p>		<p>Constantly for the first eight weeks, or until fully established (depending on weather conditions).</p>

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
	<p>Cutting: Keep grass length between 25-75mm until end of growing season in autumn. Remove all stones, litter, etc., and cut to 30mm. Edges to be left neat and well defined. Neatly trim or strim grass where it abuts fences, walls and around other objects, but no closer than 1m from tree trunks and plant stems.</p>	<p>All non-grass areas are to be kept free of arisings created by any grass cutting operations. Please refer to the CDC's Contract for the Provision of Landscape Maintenance Services for more information on grass cutting methods.</p>	<p>As required, but typically every 14 days. Allow flexibility – reduce cutting regularity during dry periods, increasing the cutting height to 75mm. Conversely cut weekly in persistent damp and warm weather where grass is growing rapidly.</p>
	<p>The first cut of new amenity grassland areas should be undertaken when the sward reaches 50mm.</p>	<p>Grass to be left in a neat and even finish without surface rutting, compaction or damage to grass.</p>	
	<p>Bulbs/Corms: Areas containing bulbs/corms to be identified and left unmown in early spring. Following bulb/corm flowering, foliage should be left to die down over a period of at least six weeks before the area is cut back down to match the surrounding sward, and then managed as per the rest of the sward until the following spring.</p>	<p>Prior to the first cut in the spring, inspect grass areas for the presence of emerging bulbs.</p>	<p>Early spring prior to first cut.</p>
	<p>Arisings: Preferably, cutting will be undertaken with equipment fitted with mulching blades to minimise the need to collect arisings. Excess arisings left on the surface of the sward will be removed and placed in designated compost heaps or removed from the site.</p>	<p>Should composting be selected as a method of dealing with excess arisings, the opportunity should be taken to promote the use of the compost to the allotment users, and compost heaps should be located with this use in mind.</p>	
	<p>Weed Control: Treat with a suitable selective herbicide as required to remove weeds.</p>		<p>During growing season every year.</p>

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
	<p>Access Control: During the establishment period for seeded areas (three to six months) and newly laid turf (approx. eight weeks), prevent access and trampling.</p>		
Bulb Planting – Objectives 2, 3 and 4			
<p>Bulb planting will provide seasonal colour and variation to the landscape scheme, as well as adding to biodiversity. Bulb planting requires careful management of mowing regimes to ensure they are allowed to come up within grassed areas, flower, and grow on and take up nutrients to support the next year’s flowering.</p> <p>Bulb mixes are to include the following species: daffodil (<i>Narcissus</i> sp.); crocus sp.; snowdrop (<i>Galunthus nivalis</i>); bluebell (<i>Hyacinthoides non-scripta</i>); and pignut (<i>Conopodium majus</i>).</p>	<p>Establishment and Early Growth: Bulb planting areas should be identified in early spring as the new shoots begin to emerge and marked so that early shoots are not chopped off by mowing.</p>		Once a year at the beginning of the growing season.
	<p>Watering: Watering to be consistent in the first growing season, ensuring there are sufficient volumes of water to soak down into the root zones of the soil.</p>	Care needs to be taken with watering volumes as over watering will lead to bulb rot within shallow-planted bulbs.	Weekly during first planting season within spring and summer.
	<p>Removal of Dead Foliage: Areas of bulb planting should be left unmown whilst flowering, and for a period of time after until the base leaves yellow and die back, to ensure the plants are able to complete their annual growth cycle.</p>	Once foliage has died back, the area can be mown and returned to the grass mowing regime.	Once a year following die back of foliage.
	<p>Bulbs in Planting Beds: Mulch to a depth of 75mm unless specified otherwise. Where possible match composition of existing mulch or top up with medium grade pulverised, composted bark mulch (0-30mm particle size). Sweep up and replace mulch spilling onto adjacent areas and, if not contaminated by weeds or rubbish, return to planted area. Remove weeds growing on or in mulch by hand weeding or herbicide. Finished level of mulch to be kept below finished level of adjacent hard surfacing and grass areas.</p>		Annually.

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
New Native Structure Planting – Objectives 1, 2 and 3			
<p>Newly planted trees should be managed to ensure they survive and grow into maturity, with good form, and are healthy. Disease-resistant varieties of elm will be included throughout the site, particularly within the Salt Way buffer, to benefit white-letter hairstreak butterflies. Tree planting should also provide provision for foraging bats, with a preference for oak (<i>Quercus</i>), willow (<i>Salix</i>), birch (<i>Betula</i>), beech (<i>Fagus</i>), and elm⁷. Newly planted trees are envisaged to grow up to provide visual amenity, biodiversity and habitat value, and are envisaged to become a lasting legacy of the landscape scheme into the future. All trees should also have their condition regularly assessed for safety reasons.</p>	<p>Monitoring and Replacement of Failures: Monitor and record trees during the rectification period and replace at once any that fail or do not gain full foliage during this period (including trees damaged during maintenance operations). These shall be replaced at the landscape contractor’s expense (including any works necessary to enable planting to be properly carried out, i.e. removal and disposal of dead material) within the first planting season. As trees grow and mature, their condition should also be monitored for safety reasons.</p>	<p>Check stakes and replace or re-fix as necessary.</p> <p>Adjust, re-fix or replace loose or defective ties as necessary, allowing for growth since planting and to prevent chafing. Where chafing has occurred, reposition or replace ties to prevent further chafing.</p> <p>Remove stakes and ties during spring once trees can maintain an upright, unsupported growth, generally 18 months to 3 years after planting.</p>	<p>Monthly Inspection: Maintenance operations to be carried out as required during those visits, ensuring any required pruning or cutting is carried out outside of the bird nesting period.</p>
	<p>Maintenance During Establishment Period (1-5 years): Maintain a weed-free area around each tree, minimum diameter of 1m around stem, for the first three growing seasons, using spats, bark mulch or herbicide.</p>	<p>Hand weed areas proximal to the tree trunk to ensure no damage to specimen.</p>	<p>Twice annually.</p>
	<p>Tree Guards: Inspect and adjust, re-fix or replace loose or defective guards to original specification and to prevent chafing. Remove guards and ties after two years.</p>		<p>Monthly.</p>
	<p>Tree Shelters: Adjust/re-fix/replace loose/defective shelters on smaller trees/whips to original specification to prevent chafing.</p>	<p>Tree shelters should be removed when the main stem has reached 6-8cm girth or allowed to photo degrade if a degradable shelter has been used.</p>	<p>Every six months.</p>

⁷ Bat Conservation Trust, Landscape and urban design for bats and biodiversity, 2012).

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
	<p>Trees that Become Loose in the Ground: Re-firm plants loosened by frost heave, wind rock or vandalism by treading around the base. 'Collars' at the base of tree stems created by tree movement to be broken up by fork, avoiding damage to roots, backfilled with topsoil as necessary, and re-firmed.</p>		As required.
	<p>Watering: Water newly planted trees to field capacity as required during dry periods. Be careful not to over water. Soil around the base of the tree should be damp, but not waterlogged. Signs of water lack in trees include wilted or curling leaves at the ends of branches, a sparse off-colour canopy, leaf scorch or yellowing leaves.</p>	Regular monitoring is key. Should watering be required, this should be carried out little and often.	As required.
POS Paths – Objective 4			
POS paths should be maintained in good condition to enable safe use and to uphold good visual amenity for the scheme.	<p>Inspection and Repair: POS paths should be inspected for damage. Any damage or excessive wear found should be repaired to ensure the whole length of the path performs as intended.</p>	Any repairs should use the same or similar materials so as not to detract from the wider scheme.	Monthly.
	<p>Winter Leaf Clearance: Winter leaf fall should be cleared from paths and composted or removed from site.</p>		Weekly from October to December.
	<p>Litter Removal: Any litter dropped on the path or in surrounding areas should be collected and disposed of.</p>		Weekly.

Objectives	Maintenance Requirements, Years 1-5	Notes	Frequency
Street Furniture – Objective 4			
Street furniture including benches, litter bins, dog waste bins and cycle stands are to be maintained in good working condition for the life of the scheme. Litter bins and dog waste bins require regular emptying.	Inspection and Replacement: Fencing and gates should be inspected for damage and corrosion. Any parts that are damaged or excessively corroded should be replaced.		Monthly.
	Emptying Bins: Litter bins and dog waste bins should be emptied, and any plastic liners replaced.		Weekly.
Fencing and Gates – Objective 4			
Fencing and gates are to be maintained in good working condition for the life of the scheme.	Inspection and Replacement: Fencing and gates should be inspected for damage and corrosion. Any parts that are damaged or excessively corroded should be replaced.		Monthly.
Bird and Bat Boxes and Reptile Hibernacula – Objectives 1, 2 and 3			
<p>Bird and bat boxes should be maintained in good condition and replaced at the end of their useful life subject to monitoring and review of their use by an ecologist.</p> <p>Reptile hibernacula will be constructed during creation of the Salt Way buffer and maintained to provide shelter and hibernation opportunities.</p>	Inspection and Replacement: Boxes will be checked annually and repaired/replaced where necessary. Hibernacula will be checked annually to ensure they are present and in good condition, with repairs made as necessary.		Once per year.

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Section 5

Long Term Management (Years 6-15)

- 5.1 The following section sets out broad management and maintenance tasks for the long term care and protection of ecological and landscape features on site. Given the dynamic nature of habitats and their ability to change over time, it is both inappropriate and impractical to set out a fixed and prescriptive set of management tasks to be implemented 'regardless of progress'. A key element of the plan is flexibility.
- 5.2 It is therefore considered that this plan should be reviewed after five years with any necessary changes to management documented within an updated LEMP. However, the recommendations for management discussed below should be broadly adopted during the management regime of years 6 to 15 and included within an updated LEMP as required.

Habitat-Specific Management Measures

Trees and Hedgerows

- 5.3 To ensure the long-term viability of all retained trees on site, and all newly planted trees and shrubs, regular inspections should be undertaken, with all recommended tree surgery works implemented in full within three months of the inspection. From year 5 after planting, or once plants are established, all tree stakes, ties, supports and shelters can be removed and disposed of off-site.
- 5.4 Hedgerows throughout the site will be managed to create tall, bushy structures with a broad base of 3-6m, and minimum 3m height to provide sheltered commuting routes for bats (particularly lesser and greater horseshoe bats (*Rhinolophus hipposideros*) and (*Rhinolophos ferrumequinum*)). Hedgerows are to be managed on rotation with no more than one third, or one side, of a hedgerow cut in any one year. Cutting should ideally be undertaken in January or February, but certainly between September to February to avoid the main bird breeding season.

Meadows and Other Grassland

- 5.5 Areas of meadows and other grassland within the site are to be managed via a cutting regime based around a traditional summer hay cut with spring/autumn cutting as required.

Bat Roosting Provision

- 5.6 Bat boxes installed within the site should be checked after five years of being installed, and repaired/replaced where necessary. Five year replacement checks should continue long term.

Bird Boxes

- 5.7 Bird nesting boxes installed within the site should be checked after five years of being installed, and repaired/replaced where necessary. Five year replacement checks should continue long term and could coincide with five year inspections of bat boxes as above

Section 6

Monitoring and Timetable of Works

Monitoring and Review

- 6.1 The aim of monitoring activities carried out post-development is to address any issues relating to biophysical changes to habitats as a result of the occupation of the new development. Monitoring will also evaluate the effectiveness of any specific mitigation measures (such as bird and bat boxes), as well as the management and function of retained and newly created habitats as identified in this LEMP.
- 6.2 Detailed timings for the delivery of management prescriptions in the long term (years 6 onwards) have not been provided as this information is required to be informed by a five year review of the management plan. Broad management recommendations as given in **Section 5** should be incorporated into long term timings for the delivery of the site's management.
- 6.3 It is anticipated that monitoring visits by suitably experienced operatives will be carried out, with input from a suitably experienced/licenced/accredited ecologist and arborist as required, as per **Table EDP 6.1**. Further monitoring requirements may be required as part of protected species licences (badgers).

Table EDP 6.1: Summary Table of Monitoring Actions

Feature	Monitoring Actions	Frequency
Drainage swales and SuDS.	Check species composition, condition, suitability of management activities, presence of invasive, non-native species, pollution or litter and damage caused by recreational activity.	Annually from year 2 following establishment.
Footpaths, fencing and signage.	Effectiveness and condition.	Annually after installation.
Meadows and other grassland planting.	Check species composition, suitability of management activities, presence of invasive, non-native species, litter and damage caused by recreational activity.	Annually from year 2 following establishment.
Woodland, trees, hedgerows and native structure planting.	Species composition, suitability of management activities, presence of littering, erosion or damage, presence of disease or pests and damage caused by recreational activity	Annually from year 2 following establishment.
Bird and bat boxes, reptile hibernacula.	Presence and condition of boxes and hibernacula.	Annually after installation.
	Completion of remedial activities following monitoring.	As recommended following monitoring visits.

Feature	Monitoring Actions	Frequency
	Results of monitoring surveys and confirmation of completed remedial activities. Monitoring report submitted to Council.	Annually, once all monitoring actions for the year are complete.
	Review of this LEMP.	At the end of year 5 of first development phase then at five yearly intervals.

- 6.4 Following completion of monitoring activities, an annual monitoring report will be produced and submitted to the Council with any necessary changes incorporated into a revised LEMP.
- 6.5 Any remedial measures identified during monitoring would need to be implemented within the recommended timeframe following completion of the monitoring visit, to be advised by the ecologist, arborist or other relevant professional carrying out the monitoring.

Section 7

Summary and Conclusions

- 7.1 It is considered by EDP that the protection, maintenance and management measures outlined within this LEMP are sufficient in protecting and conserving the ecological and landscape interest of the site. Existing and retained features have been enhanced through the provision of new habitats designed to promote connectivity across the site and maintain permeability to species movements throughout the operational period of the development.
- 7.2 This LEMP includes planting of new woodland, trees, hedgerows, aquatic habitats, meadows and other grassland, to provide a measurable net gain in new habitats. A total of 27 bird boxes, 16 bat boxes and 2 reptile hibernacula will also be installed.
- 7.3 It is considered by EDP that the range of new habitats provided, combined with their appropriate management secured via adoption of this LEMP, will result in significant net gains to biodiversity in accordance with national planning policy.

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Appendix EDP 1
Habitat Descriptions, Phase 1 Habitat Plan and Target Notes

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Outline Planning Application

Reptiles

- 9.4.23 TVERC holds six records for grass snake *Natrix natrix* located within 2km of the Site. The closest record is situated approximately 0.8km to the south-east of the Site.

Water vole

- 9.4.24 TVERC holds two historic records (from 1988) of water vole within 2km of the Site. The closest of which is located approximately 1.1km to the south of the Site.

White-clawed crayfish (*Austropotamobius pallipes*)

- 9.4.25 TVERC holds one historic record (from 1979) for white-clawed crayfish within 2km of the Site. The record is located approximately 1.2km to the south of the Site.

Other Species

- 9.4.26 TVERC holds two records for polecat *Mustela putorius*, a UKBAP species, within 2km of the Site. The closest record is situated approximately 0.9km to the south-west of the Site.

Results of Extended Phase 1 Habitat Survey**Description of Habitats***Arable fields*

- 9.4.27 The Site mainly comprises arable fields which at the time of the surveys in 2012 and 2014 were under arable crop. The field margins vary from virtually non-existent to narrow (around 0.25m to around 1.5m wide). The majority of the margins are dominated by common nettle *Urtica dioica* with hedge bindweed *Catystegia sepium* and yellow oat grass *Trisetum flavescens*.

Hedgerows

- 9.4.28 The Site contains eleven hedgerows ranging from defunct species poor hedgerows to intact species rich hedgerows. The species composition of each hedgerow varies and a description of each hedgerow is provided in the target notes attached in Appendix 9.1. Species generally present in most hedgerows within the Site include hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa* and elder *Sambucus nigra*. Half of the hedgerows contained five or more woody species along their length.

Outline Planning Application

9.4.29 Bramble *Rubus fruticosus* agg. and dog-rose *Rosa canina* are frequently found within the hedgerows and common nettle and ground ivy *Glechoma hederacea* are frequently found within the ground flora. Other species commonly noted in the ground flora were hogweed *Heracleum sphondylium*, ivy *Hedera helix*, cleavers *Galium aparine* and lords and ladies *Arum maculatum*.

9.4.30 Six hedgerows are considered to have the potential to be deemed 'important' under the wildlife and landscape criteria of the Hedgerow Regulations 1997. Appendix 9.3 details the results of the application of the criteria to determine the potential for 'important' hedgerows. The six hedgerows are target noted as H1, H2, H4, H12, H15 and H16 on the habitat plan (Drawing CA10769-9.1).

Mature/Semi mature trees

9.4.31 Numerous hedgerows have semi-mature or mature trees associated with them, which have been described in the target notes (Appendix 9.1). Hedgerow H1 along the northern boundary includes a number of mature trees as does Hedgerow H12 along the western boundary of the Site. Species include ash *Fraxinus excelsior*, pedunculate oak *Quercus robur*, sycamore *Acer psuedoplatanus* and lime *Tilia x europea*. Due to the large number of mature trees they have not been mapped separately on the habitat plan, but are fully referenced within the Arboricultural Assessment.

Broad-leaved Woodland / Mixed Plantation

9.4.32 A small area of semi-natural mixed woodland is located in the north-western corner of the Site. Additionally, a narrow strip of mixed woodland plantation is located along the southern boundary of the Site. A small stand of Douglas Fir *Picea abies* is located to the east of the track leading to Wykham Park Farm Cottage (Target note 1).

9.4.33 A narrow strip of young mixed woodland plantation is also located along the footpath and bridleway leading to Wykham Farm Cottage (Target note 2). The majority of these trees comprise stems of less than 20cm in diameter. A ditch and bank are located along the centre of the plantation between the bridleway and footpath. Species present within the plantation include frequent hawthorn and field maple *Acer campestre* with occasionally occurring silver birch *Betula pendula*, rose species *Rosa* sp., blackthorn and Scots pine *Pinus sylvestris*.

Outline Planning Application

Ponds / Watercourse

- 9.4.34 At the time of the Extended Phase 1 Habitat survey and update survey, there were no waterbodies present on Site and the watercourse shown on OS maps to be located along the southern boundary of the Site was dry. No aquatic species were present to indicate that the ditch had recently held water.
- 9.4.35 From a review of a 1:10,000 OS map in 2012, six waterbodies were identified within 500m of the Site (referred to as Ponds P1 – P6). The Site boundary of the Proposed Development, by virtue of its eastern extent, brings a reservoir (P7) within 500m of the Site boundary, but beyond 500m of the any proposed built footprint. The locations of these ponds are shown on Drawing Number CA10769/9.10 in Appendix 9.12.

Protected Species*Flora*

Protected/Notable Species

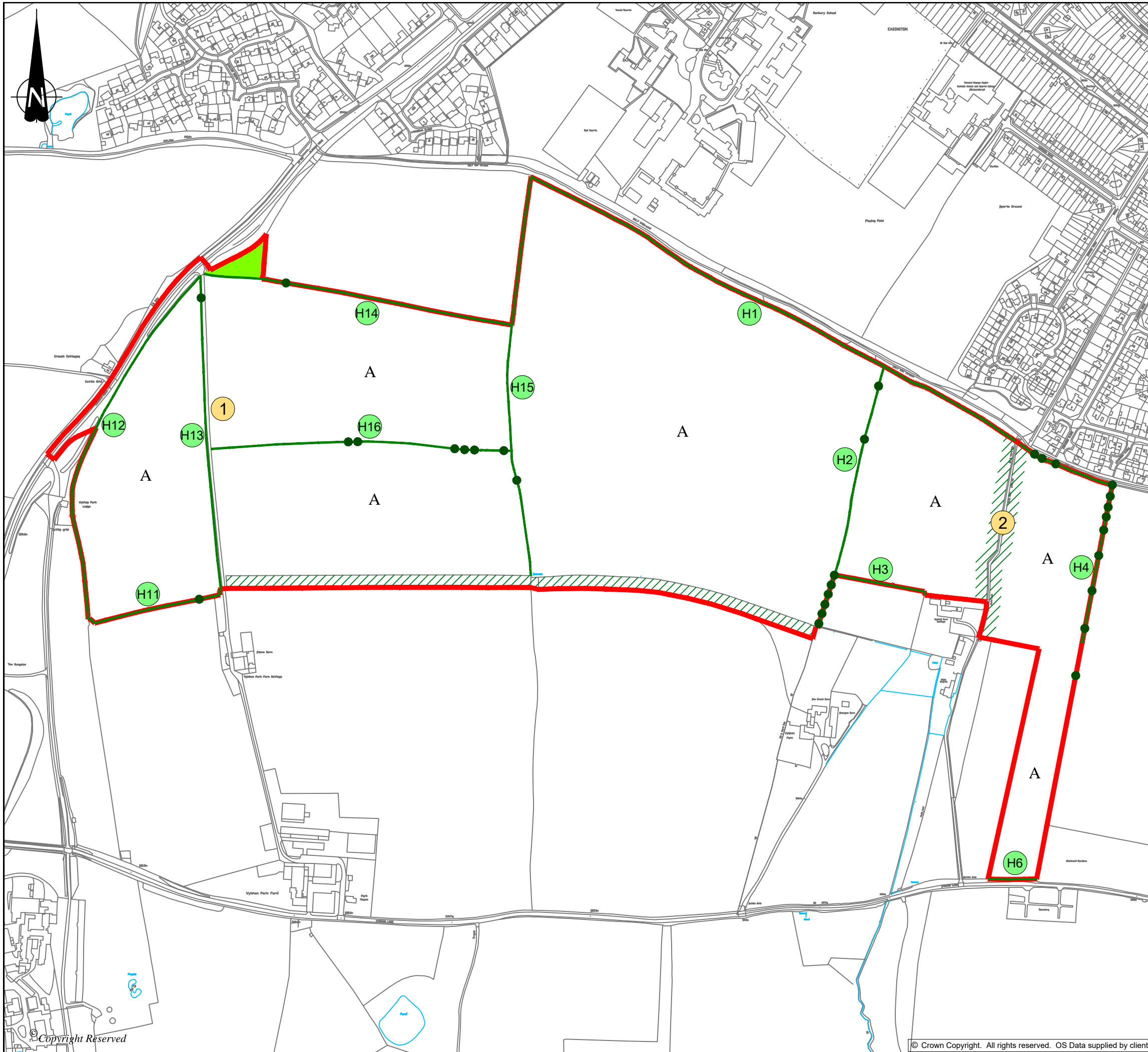
- 9.4.36 The initial survey undertaken by Halcrow reported no findings of legally protected rare or scarce flora species on Site. Halcrow did not identify any vascular plant species recorded in the habitats within the survey area which are Red Data book species (British Red Data Book 1: Vascular Plants, Wigginton, 1999⁸) or nationally scarce species (Scarce Plants in Britain, Stewart et al, 1994⁹). During the Extended Phase 1 Habitat Survey and update surveys undertaken by Wardell Armstrong LLP, no legally protected rare or scarce flora species were observed.

Invasive Species

- 9.4.37 The initial survey undertaken by Halcrow did not report any invasive species, as listed in the Wildlife and Countryside Act 1981 (as amended) Schedule 9, Section 14 i.e. Japanese knotweed *Fallopia japonica* or Indian balsam *Impatiens glandulifera* within the Site. No invasive species were observed during the Extended Phase 1

⁸ Wigginton, (1999). *British Red Data Book 1: Vascular Plants*. Joint Nature Conservation Committee, Peterborough.

⁹ Stewart, A. Pearman, D.A. & Preston, C.D. (eds). (1994). *Scarce Plants in Britain*. Joint Nature Conservation Committee, Peterborough.



DO NOT SCALE FROM THIS DRAWING

REFERENCE

- Site Boundary ---
- Arable --- A
- Hedgerow ---
- Mixed Plantation ---
- Semi-natural Broad-leaved woodland ---
- Mature Tree ---
- Target Note --- 2
- Hedgerow Target Note --- H15

A	First Issue	16/10/14	RJH	AC	JLH
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REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D
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CLIENT
GALLAGHER ESTATES

PROJECT
WYKHAM PARK FARM

DRAWING TITLE
HABITAT PLAN & TARGET NOTES

DRG No. CA10769-9.1	SCALE 1:5000 @ A3	DATE 18/08/14
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DRAWN BY RJH	CHECKED BY AC	APPROVED BY JLH
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- | | | | |
|--|-------------------|---|-------------------|
| <input type="checkbox"/> STOKE-ON-TRENT
(HEAD OFFICE) | TEL 0845 111 7777 | <input checked="" type="checkbox"/> CARDIFF | TEL 029 2072 9191 |
| <input type="checkbox"/> NEWCASTLE UPON TYNE | TEL 0191 232 0943 | <input type="checkbox"/> LEIGH | TEL 01942 280101 |
| <input type="checkbox"/> WEST BROMWICH | TEL 0121 580 0909 | <input type="checkbox"/> SHEFFIELD | TEL 0114 245 6244 |
| <input type="checkbox"/> LONDON | TEL 020 7287 2872 | <input type="checkbox"/> EDINBURGH | TEL 0131 555 3311 |
| | | <input type="checkbox"/> LIVERPOOL | TEL 0151 494 5431 |



Appendix 9.1 – Target Notes

The target notes are shown on the Phase 1 Habitat Plan (CA10769-9.1). The abundance of species is given using the DAFOR scale (in brackets), outlined in the table below:

Abundance	Approximate Percentage Cover
Dominant	>50%
Abundant	30-50%
Frequent	Many individuals
Occasional	Few individuals
Rare	Isolated individuals
Local	Distinct populations

1. A small copse of Douglas Fir planted within a shallow hole in the ground. The copse is approximately 20m by 10m in size and has a steep bank.

Species	Abundance	Species	Abundance
Trees / Shrubs			
Hawthorn	O	Elder	O
Dog Rose	O	Douglas Fir	A
Forbs			
Bindweed, hedge	O	Pineappleweed	R
Buttercup, creeping	O	Common nettles	O
Dock, broad-leaved	O	Thistle species	O
Dead-nettle, white	O		
Grasses / Sedges / Ferns / Reeds / Rushes / Horsetails			
Cock's foot	O	Yorkshire fog	O

2. A narrow strip of young mixed woodland plantation is located along the footpath and bridleway leading to Wykham Farm Cottage. The majority of trees comprised stems of less than 20cm in diameter. A ditch and bank are located along the centre of the plantation between the bridleway and footpath. The ditch is dry and approximately 0.5m deep and 1m wide. On the bank are some older specimens that show signs of being laid and may indicate that a hedgerow used to be present but a substantial time ago.

Species	Abundance	Species	Abundance
Trees / Shrubs			
Hawthorn	F	Blackthorn	O
Dog rose	O	Silver birch	O

Field maple	F	Scot's pine	O
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Hedgerow Target Notes

H1. This hedgerow can be split into 2 distinct sections.

The eastern end of hedgerow is intact, stock proof and shows signs of being clipped. The hedgerow is approximately 2m tall and 1.5m wide at its eastern end. Hawthorn is the most abundant hedgerow species. There are three hedgerow trees, two elder and one ash, within this section. The 1m wide field margin is mostly yellow oat-grass (A) and hedge bindweed (A).

The western section of hedgerow is not stockproof and is leggy with a dense canopy. There are signs of some parts being laid in the past. It is approximately 3.5m tall and 1m wide with a tree line behind. There is a small dry ditch on its northern side approximately 0.5m deep and 1.5m wide. There is also approximately 10m of post, rail and wire fencing associated with the eastern edge of this hedgerow. Blackthorn is the most abundant hedgerow species. The hedgerow is situated on an earth bank approximately 0.5m higher than the field. The field margin is narrow (<0.25m) and is mostly common nettles (A) and bindweed (A).

Species	Abundance	Species	Abundance
Trees / Shrubs			
Hawthorn	F	Wych Elm	O
Bramble	O	Blackthorn	A
Dog Rose	O	Ash	O
Field maple	F	Hazel	R
Elder	O	Sycamore	O
Pedunculate Oak	O		
Forbs			
Hedge bindweed	F-A	Ivy	A
Ground ivy	O	Perforate St John's Wort	R
Vetch sp.	R	Lesser Burdock	O
Mullein	O	Common nettles	A
Common cleavers	O	Creeping thistle	O
Hogweed	O	Russian comfrey	R
Umbellifer sp.	O		
Grasses / Sedges / Ferns / Reeds / Rushes / Horsetails			
Perennial rye grass	O	Yellow oat-grass	F

Cock's foot	O		
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Figure 1: Left shows well maintained eastern section of H1, RHS shows unmaintained eastern end.

H2. This hedgerow is not stock proof due to a number of gaps along its length but is dense in other sections. There are a number of mature trees along its length. For most of its length the hedgerow is 1.5m tall and 1.5m wide with signs of flailing and signs of being laid in the past. The hedgerow is situated on a wide shallow bank (approximately 0.75m tall and 2.5m wide). One section, approximately 10m long is protected by a double section of post and rail fencing. However the southern part has not been managed and is approximately 4m tall and is dominated by elder and sycamore trees. On both sides there is a wide field margin (approximately 1.5m) dominated by common nettles.

Species	Abundance	Species	Abundance
Trees / Shrubs			
Elder	D	Sycamore	O
Dog rose	O	Blackthorn	O
Hawthorn	A	Ash	R
Forbs			
Ivy	F	Umbellifer sp.	F
Common Cleavers	A	Hedge bindweed	A
Lords & Ladies	R	Cut leaved crane's bill	R
Hogweed	O	Lesser burdock	R
Colt's foot	O		
Grasses / Sedges / Ferns / Reeds / Rushes / Horsetails			
Perennial rye grass	O	Yellow oat grass	F



Figure 2: Hedgerow H2

H3. This hedgerow is not stockproof with many gaps. However the canopy is dense suggesting the hedgerow has been clipped in the past. A 1m tall post and barbed wire fence is associated with this hedgerow. The hedgerow itself is varied in height but is, on average 3m tall and 1.5m wide. There are a number of mature shrubs and mature trees along its length. The small field margin (<0.25m wide) is dominated by nettles.

Species	Abundance	Species	Abundance
Trees / Shrubs			
Sycamore	A	Hawthorn	O
Elder	D	Bramble	O
Ash	O		
Forbs			
Common nettles	D	Ground elder	O
Common cleavers	A		



Figure 3: Hedgerow H3

H4. The hedgerow is not intact along its whole length but gaps have filled with dense bramble and nettle scrub. The hedgerow is dense and shows signs of being clipped. There are a number of semi-mature trees along its length. The hedgerow is approximately 2m tall and 1m wide. The hedgerow is situated on an earth bank approximately 0.5m in height. The field margins are narrow (<1m wide) with abundant nettles and hedge bindweed.

Species	Abundance	Species	Abundance
<i>Trees / Shrubs</i>			
Hawthorn	A	Dog rose	O
Elder	A	Ash	O
Wych Elm	O	Beech	R
Bramble	F	Wild Cherry	O
Blackthorn	O	Pedunculate oak	R
Field maple	R		
<i>Forbs</i>			
Common nettles	A	Common cleavers	O
Hedge bindweed	A	Poppy	R
Umbellifers	O	White campion	R
<i>Grasses / Sedges / Ferns / Reeds / Rushes / Horsetails</i>			
Soft brome	F	Perennial Rye Grass	F



Figure 4: Hedgerow H4

H5. This hedgerow is approximately 2.5m tall and 1m wide. It is stockproof and shows signs of being clipped. On the western edge is an associated post and rail fence approximately 0.6m tall. The field margin is approximately 1m wide and dominated by common nettles.

Species	Abundance	Species	Abundance
Trees / Shrubs			
Hawthorn	D	Field maple	O
Spindle	O	Wayfaring tree	L A
Forbs			
Creeping thistle	F	Field Forget-me-not	R
Common nettles	D		
Grasses / Sedges / Ferns / Reeds / Rushes / Horsetails			
False oat grass	F	False brome	O



Figure 5: Hedgerow H5

H6. This hedgerow is situated along the southernmost boundary of the site adjacent to Wykham Lane. The hedgerow is approximately 2m high and 1.5m wide and is defunct and gappy. An approximately 5m wide field margin comprising bare earth is located at the base of the hedgerow with an approximately 0.5-1m wide vegetation strip.

Species	Abundance	Species	Abundance
Trees / Shrubs			
Blackthorn	R	Field maple	R
Elder	D	Hazel	R
Elm sp.	R	Sycamore	LF
Forbs			
Common cleavers	O	Common nettle	A - D
White campion	O	Fumitory sp.	O
Creeping thistle	O	Red campion	O



Figure 6: Hedgerow H6

H11. This hedgerow is situated in a 3m corridor between two post and wire fences. The hedgerow is 1.5m tall and approximately 1m wide. It is dense and stockproof and there are no obvious signs of a bank, ditch or old management techniques.

Species	Abundance	Species	Abundance
Trees / Shrubs			
Pedunculate Oak	R	Ash	O
Elder	A	Hawthorn	A
Forbs			
Black nightshade	R	Common nettle	F
White dead nettle	A	Poppy	R
Sow thistle	O	White campion	O
Woody nightshade	R	Mullein	O
Hawkbeard sp.	O	Common cleavers	A
Colt's foot	O	Field speedwell	O
Grasses / Sedges / Ferns / Reeds / Rushes / Horsetails			
Perennial rye grass	O	Yellow oat grass	O
Cock's foot	O		



Figure 6: Hedgerow H11

H12. This hedgerow is situated on the western boundary of the site adjacent to the road. There is a 2m wide verge adjacent to the road, a 1m wide ditch and then a bank up to the hedgerow with a post, rail and wire fence on the side adjacent to the field. The verge is dominated by perennial rye grass and ribwort plantain. The dry, 1m deep ditch is dominated by willowherb species. The bank is mostly bramble scrub. The hedgerow itself is approximately 3m tall and 1.5m wide, it is leggy but with a dense canopy and no signs of recent management. Much of this field boundary comprises semi-mature and mature trees.

Species	Abundance	Species	Abundance
Trees / Shrubs			
Hawthorn	F	Ash	O
Pedunculate Oak	O	Horse chestnut	R
Lime	A	Sycamore	O
Blackthorn	O	Bramble	F
Forbs			
Ivy	F	Sow thistle	O
Common Nettles	F	Lesser burdock	O
Colt's foot	O	White clover	O
Spear thistle	O	Water forget-me-not	O
Creeping buttercup	O	Mullein	O
Hawkbeard	O	Hogweed	O
White dead nettle	O	Woody nightshade	R

Field speedwell	O	Rosebay willowherb	A
Great willowherb	A		
Grasses / Sedges / Ferns / Reeds / Rushes / Horsetails			
Cock's foot	F	Yorkshire Fog	F
Perennial Rye Grass	D		



Figure 7: Hedgerow H12

H13. This hedgerow shows signs of regular maintenance by clipping/ flailing. It is dense and stockproof. There are no mature trees or a fence along its length. It is 2-2.5m tall and approximately 2m wide. The hedgerow is on a small bank (<0.5m tall) which slopes towards the field to the west.

Species	Abundance	Species	Abundance
Trees / Shrubs			
Hawthorn	D	Ash	F
Blackthorn	O	Bramble	O
Forbs			
Woody nightshade	R	Mullein	O
Lords & Ladies	R	Hogweed	O
Broad leaved dock	O	Ivy	F
Hawksbeard	O	White dead nettle	O
Cat's ear	O	Lesser burdock	O
Common nettle	F		
Grasses / Sedges / Ferns / Reeds / Rushes / Horsetails			
Perennial rye grass	F	Annual meadow grass	O

Cock's foot	F	Yorkshire Fog	O
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Figure 8: Hedgerow H13

H14. This hedgerow is approximately 2m tall and 2m wide. There is one mature pedunculate oak along its length. The hedgerow has a dense canopy and is slightly leggy. There are signs of the hedgerow having been cut in the past but not recently. There is virtually no field margin either side of this hedgerow and no ditch, bank or fence associated with this hedgerow.

Species	Abundance	Species	Abundance
Trees / Shrubs			
Elder	D	English Elm	O
Blackthorn	F		
Forbs			
Common nettles	D	Ground ivy	O
Umbellifers	O	Ivy	F
Nipplewort	R	Herb Robert	R
Grasses / Sedges / Ferns / Reeds / Rushes / Horsetails			
Perennial Rye Grass	R	Yellow Oat grass	R

H15. This field boundary is a combination of a semi-mature tree line planted on the eastern edge and a hedgerow on the western edge. The trees are situated approximately every 3m and are approximately 6m tall. The hedgerow is approximately 2m tall and 1m wide. It is not stockproof and is slightly leggy with

a dense canopy. There are signs that the hedgerow has been laid in the past. There is a 1m wide field margin either side of the hedgerow. Along some parts of the hedgerow on its western edge is a shallow dry ditch (<0.25m).

Species	Abundance	Species	Abundance
Trees / Shrubs			
Field maple	O	Elder	F
Bramble	O	Blackthorn	F
Dog rose	O	English Elm	O
Forbs			
Common nettles	F	Hogweed	O
Common cleavers	F	Lords & Ladies	R
Umbellifer sp.	O	White dead nettle	O
Ivy	F		
Grasses / Sedges / Ferns / Reeds / Rushes / Horsetails			
Yellow oat grass	O	Soft brome	R



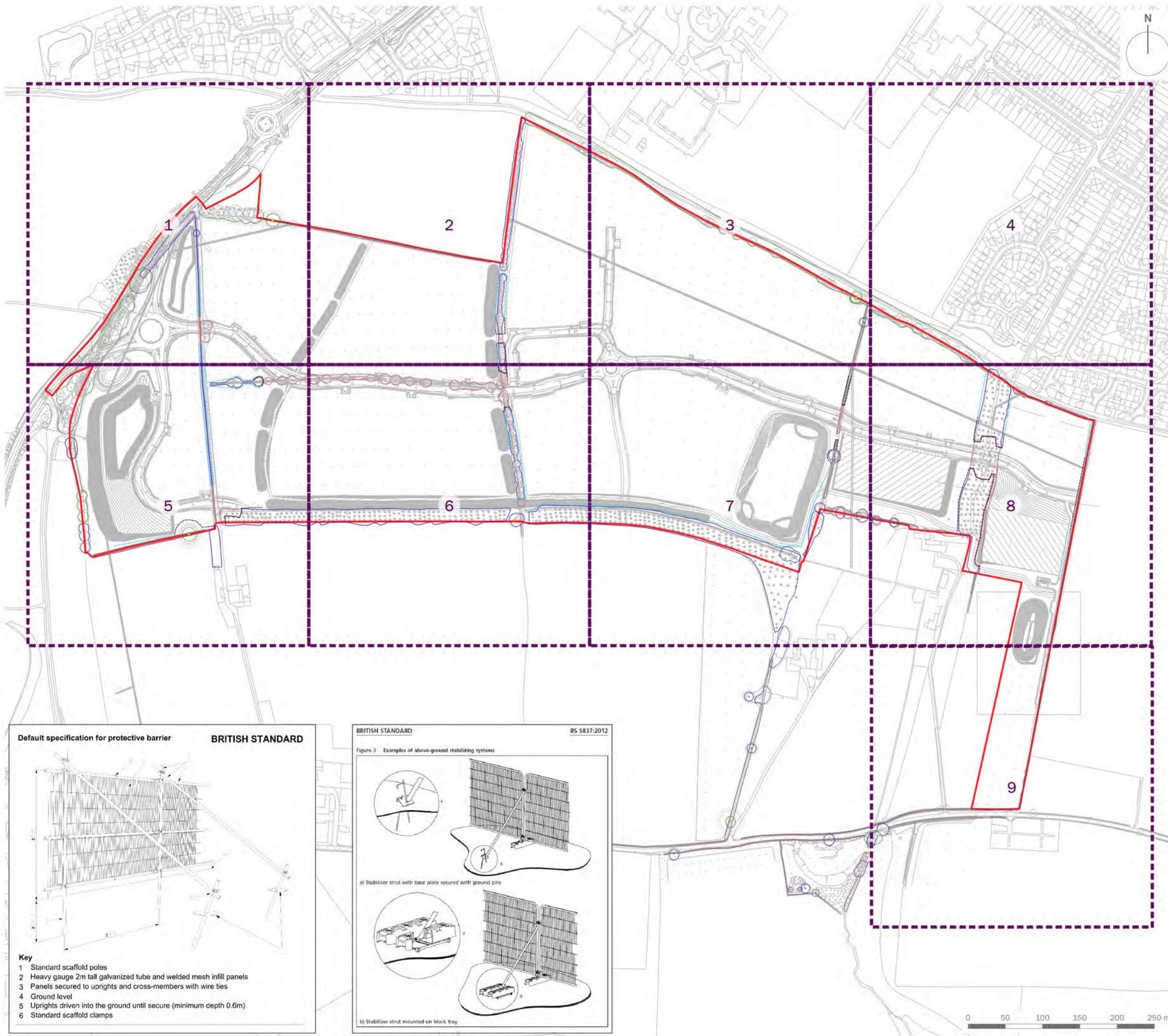
Figure 9: Hedgerow H15

H16. This hedgerow is very leggy and has many gaps in it. There are no signs of recent management but there are signs of the hedgerow being laid in the past. The hedgerow is 2.5m tall and 0.5m wide. The field margins are approximately 0.5m wide either side of the hedgerow. There is not a ditch or fence associated with this hedgerow. There is a very small half bank sloping down approximately 0.25m to the southern field. From approximately half way along the western end the hedgerow is more like a tree line.

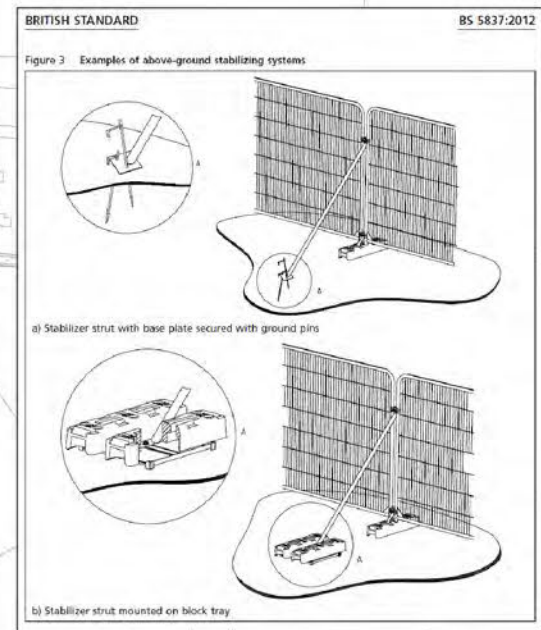
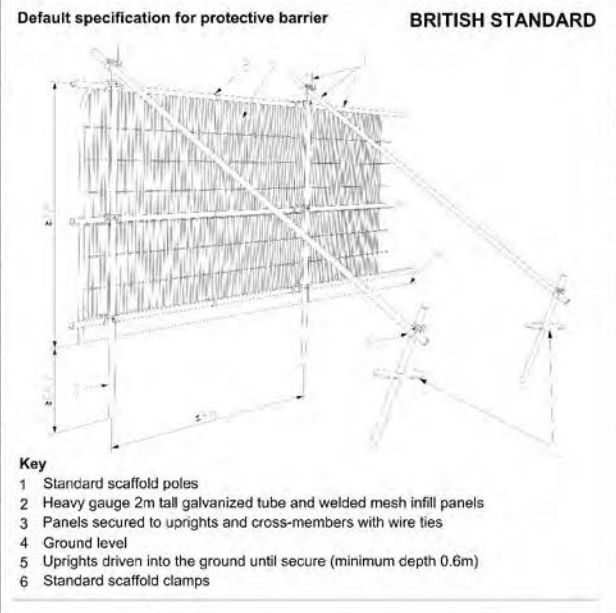
Species	Abundance	Species	Abundance
<i>Trees / Shrubs</i>			
Pedunculate oak	O	Blackthorn	O
Hawthorn	O	Field maple	F
Elder	O	Wych Elm	O
Dog rose	O		
<i>Forbs</i>			
Common nettle	A	Common cleavers	A
Cut-leaved crane's bill	O	Umbellifer sp.	O
Creeping thistle	O	Ground ivy	O
Ivy	F	Hogweed	O
Hedge bindweed	R	Lesser Burdock	R
<i>Grasses / Sedges / Ferns / Reeds / Rushes / Horsetails</i>			
Yellow oat grass	O		

Appendix EDP 2
Tree Protection Plan
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- Site Boundary
- T1 Tree/Group Number
- Tree/Group Canopy
- Tree Stem
- Root Protection Area
- Category A: Trees of high quality and value
- Category B: Trees of moderate quality and value
- Category C: Trees of low quality and value
- Category U: Trees of poor quality and value
- Trees to be Removed
- Veteran Tree
- Veteran Tree Buffer
- Protective Fencing in accordance with BS 5837:2012
- Low Impact Protective Fencing in accordance with BS 5837:2012

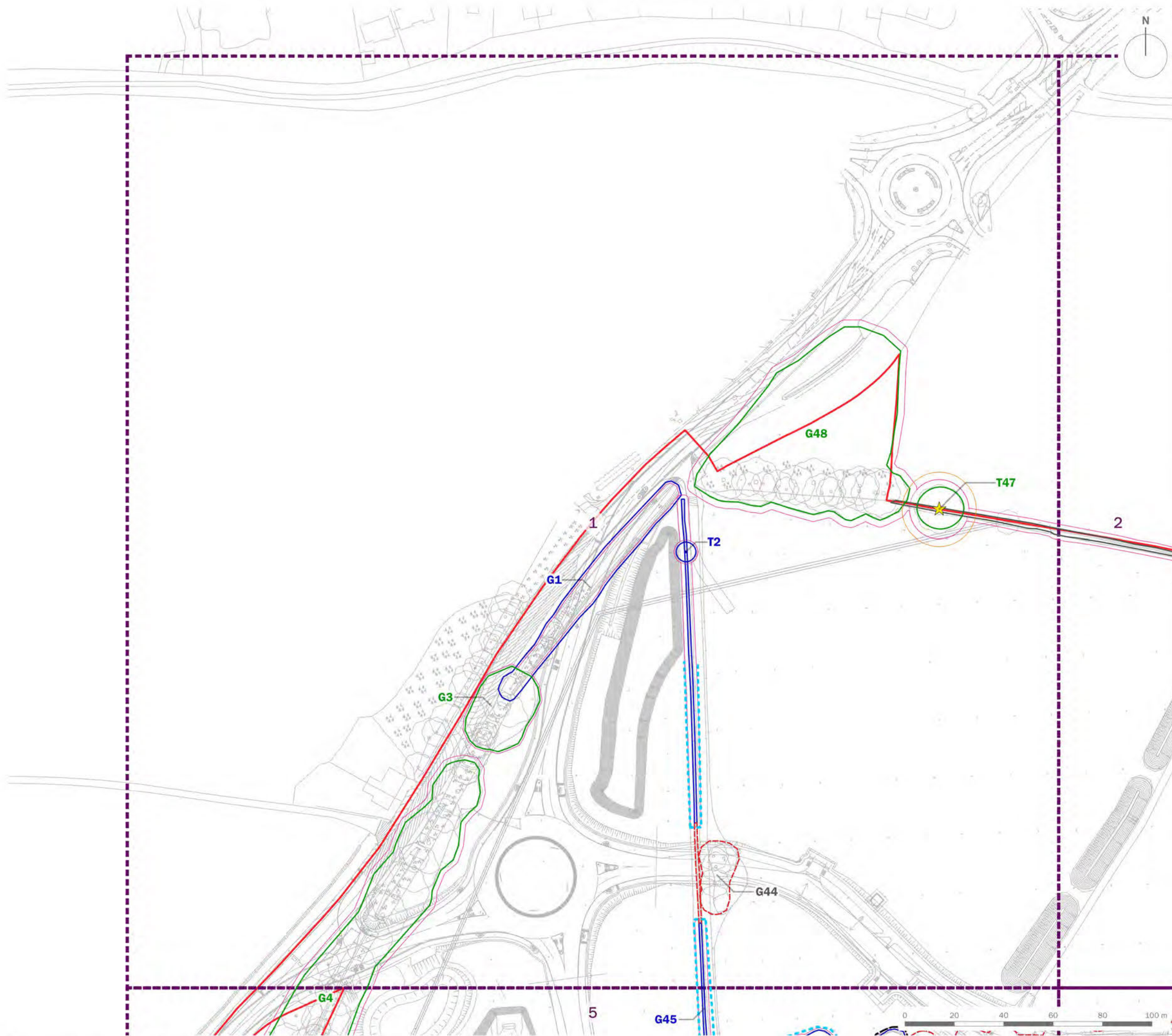


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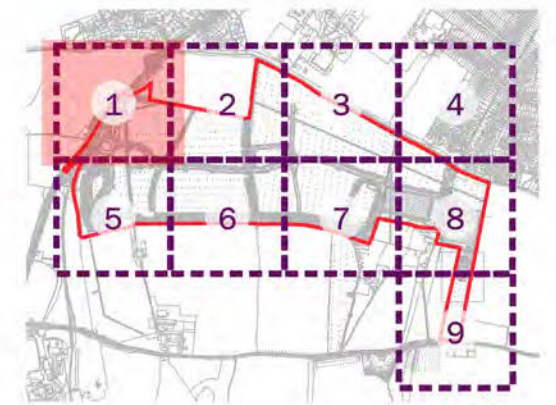
project title
Wykham Park Farm, Spine Road & Ancillary Road Application

drawing title
Plan EDP 1: Tree Protection Plan Overview

date 26 OCTOBER 2021 drawn by TC
drawing number edp5378_d014d checked LT
scale 1:5,000 @ A3 QA GY



- Site Boundary
- T1 Tree/Group Number
- Tree/Group Canopy
- Tree Stem
- Root Protection Area
- Category A: Trees of high quality and value
- Category B: Trees of moderate quality and value
- Category C: Trees of low quality and value
- Category U: Trees of poor quality and value
- Trees to be Removed
- ★ Veteran Tree
- Veteran Tree Buffer
- Protective Fencing in accordance with BS 5837:2012
- Low Impact Protective Fencing in accordance with BS 5837:2012



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project title
Wykham Park Farm, Spine Road & Ancillary Road Application

drawing title
Plan EDP 1: Tree Protection Plan (Sheet 1 of 9)

date	26 OCTOBER 2021	drawn by	TC
drawing number	edp5378_d014d	checked	LT
scale	1:1,500 @ A3	QA	GY



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- Site Boundary
- T1 Tree/Group Number
- Tree/Group Canopy
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- Root Protection Area
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project title
Wykham Park Farm, Spine Road & Ancillary Road Application

drawing title
Plan EDP 1: Tree Protection Plan (Sheet 2 of 9)

date	26 OCTOBER 2021	drawn by	TC
drawing number	edp5378_d014d	checked	LT
scale	1:1,500 @ A3	QA	GY

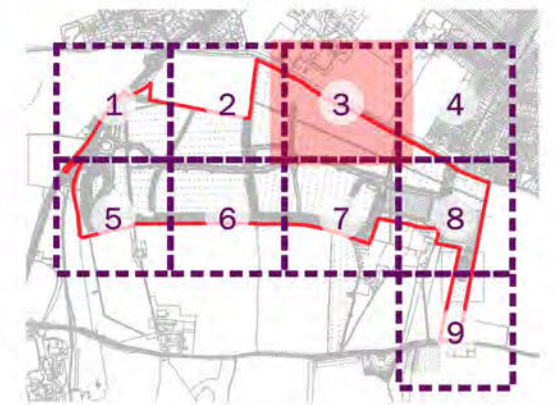


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- Site Boundary
- T1 Tree/Group Number
- Tree/Group Canopy
- Tree Stem
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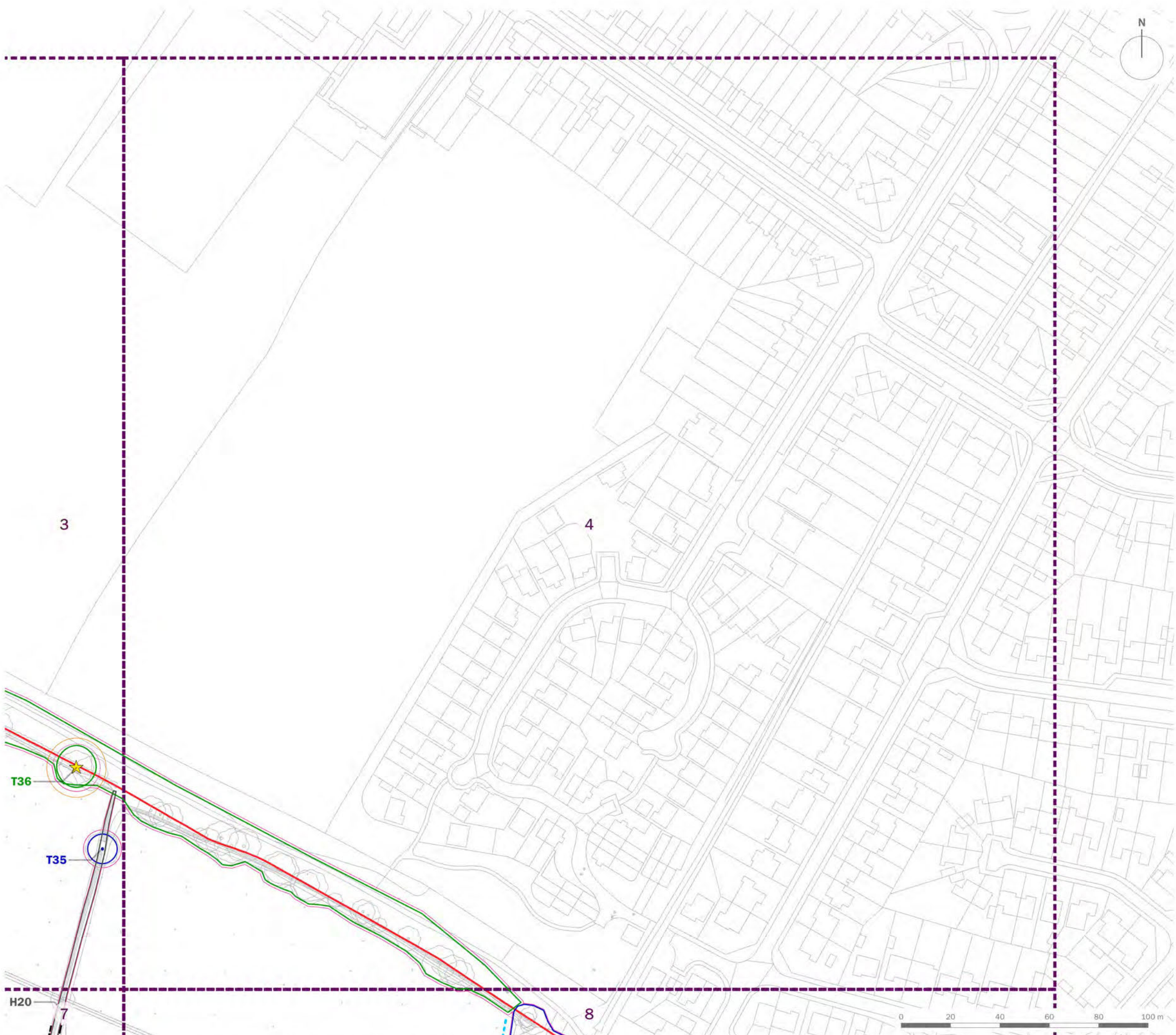
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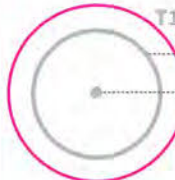









project title
Wykham Park Farm, Spine Road & Ancillary Road Application

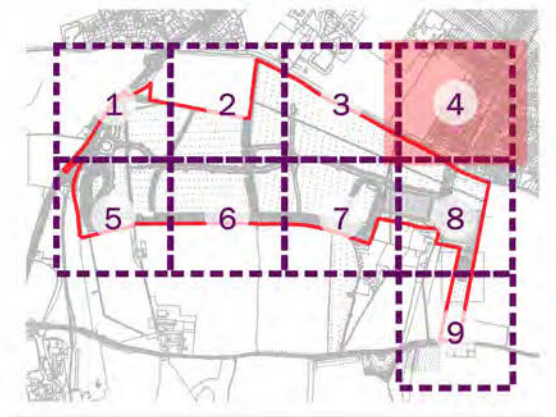
drawing title
Plan EDP 1: Tree Protection Plan (Sheet 3 of 9)

date	26 OCTOBER 2021	drawn by	TC
drawing number	edp5378_d014d	checked	LT
scale	1:1,500 @ A3	QA	GY

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-  Site Boundary
-  T1 Tree/Group Number
Tree/Group Canopy
Tree Stem
Root Protection Area
-  Category A: Trees of high quality and value
-  Category B: Trees of moderate quality and value
-  Category C: Trees of low quality and value
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-  Trees to be Removed
-  Veteran Tree
-  Veteran Tree Buffer
-  Protective Fencing in accordance with BS 5837:2012
-  Low Impact Protective Fencing in accordance with BS 5837:2012



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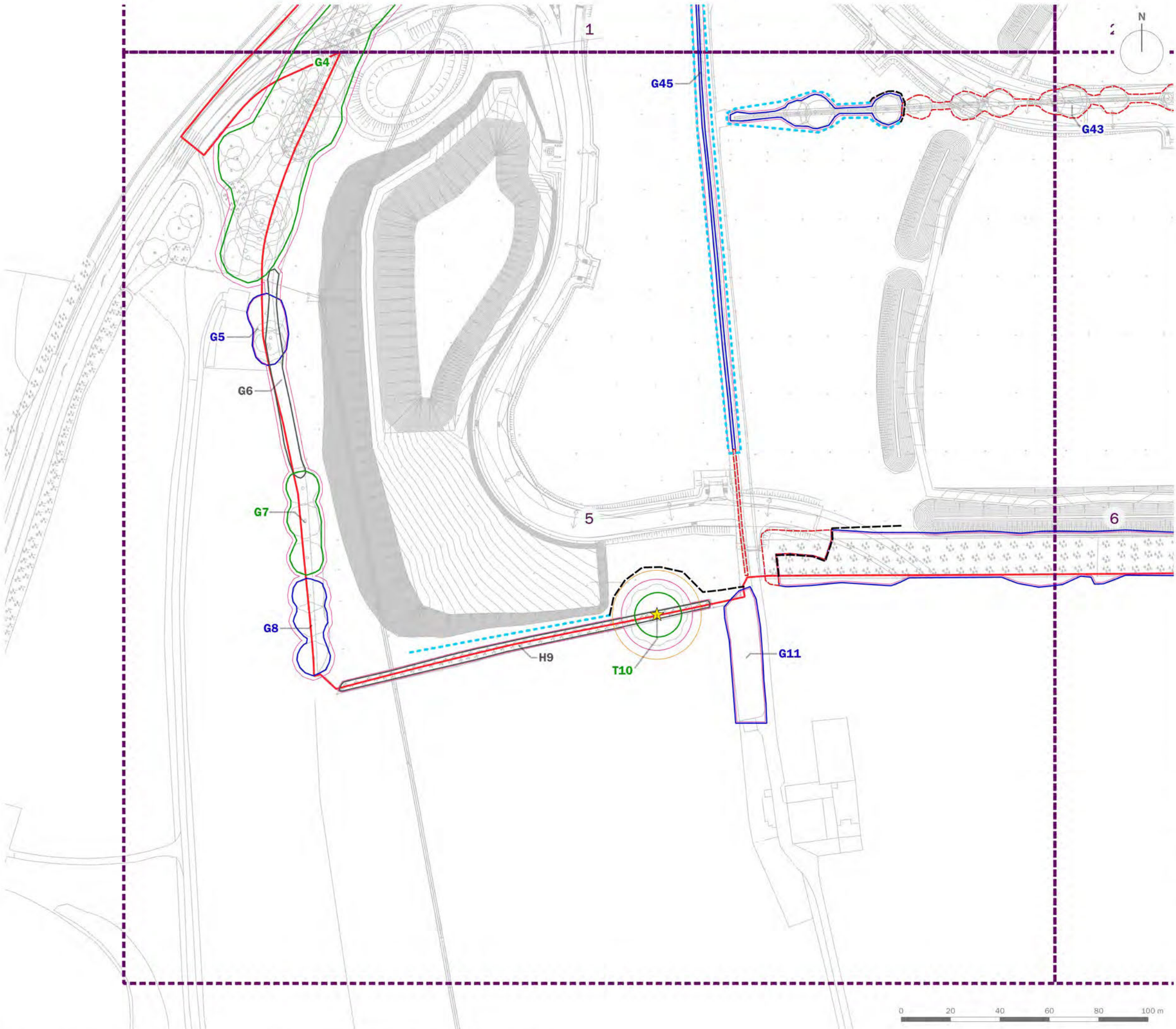
project title
Wykham Park Farm, Spine Road & Ancillary Road Application

drawing title
Plan EDP 1: Tree Protection Plan (Sheet 4 of 9)

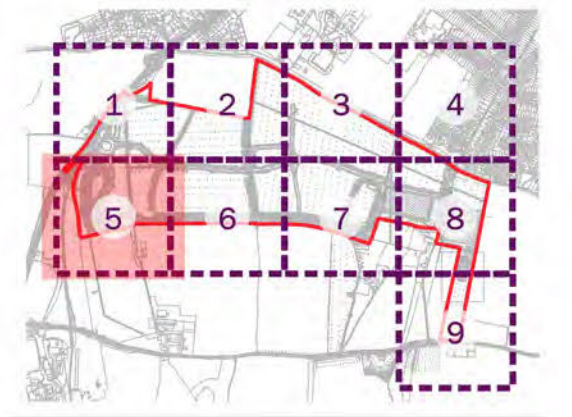
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drawing number	edp5378_d014d	checked	LT
scale	1:1,500 @ A3	QA	GY



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- Site Boundary
- T1 Tree/Group Number
- Tree/Group Canopy
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- Low Impact Protective Fencing in accordance with BS 5837:2012



client
L&Q Estates Ltd

project title
Wykham Park Farm, Spine Road & Ancillary Road Application

drawing title
Plan EDP 1: Tree Protection Plan (Sheet 5 of 9)


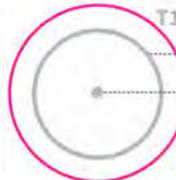









date	26 OCTOBER 2021	drawn by	TC
drawing number	edp5378_d014d	checked	LT
scale	1:1,500 @ A3	QA	GY



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-  Site Boundary
-  T1 Tree/Group Number
Tree/Group Canopy
Tree Stem
Root Protection Area
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project title
Wykham Park Farm, Spine Road & Ancillary Road Application

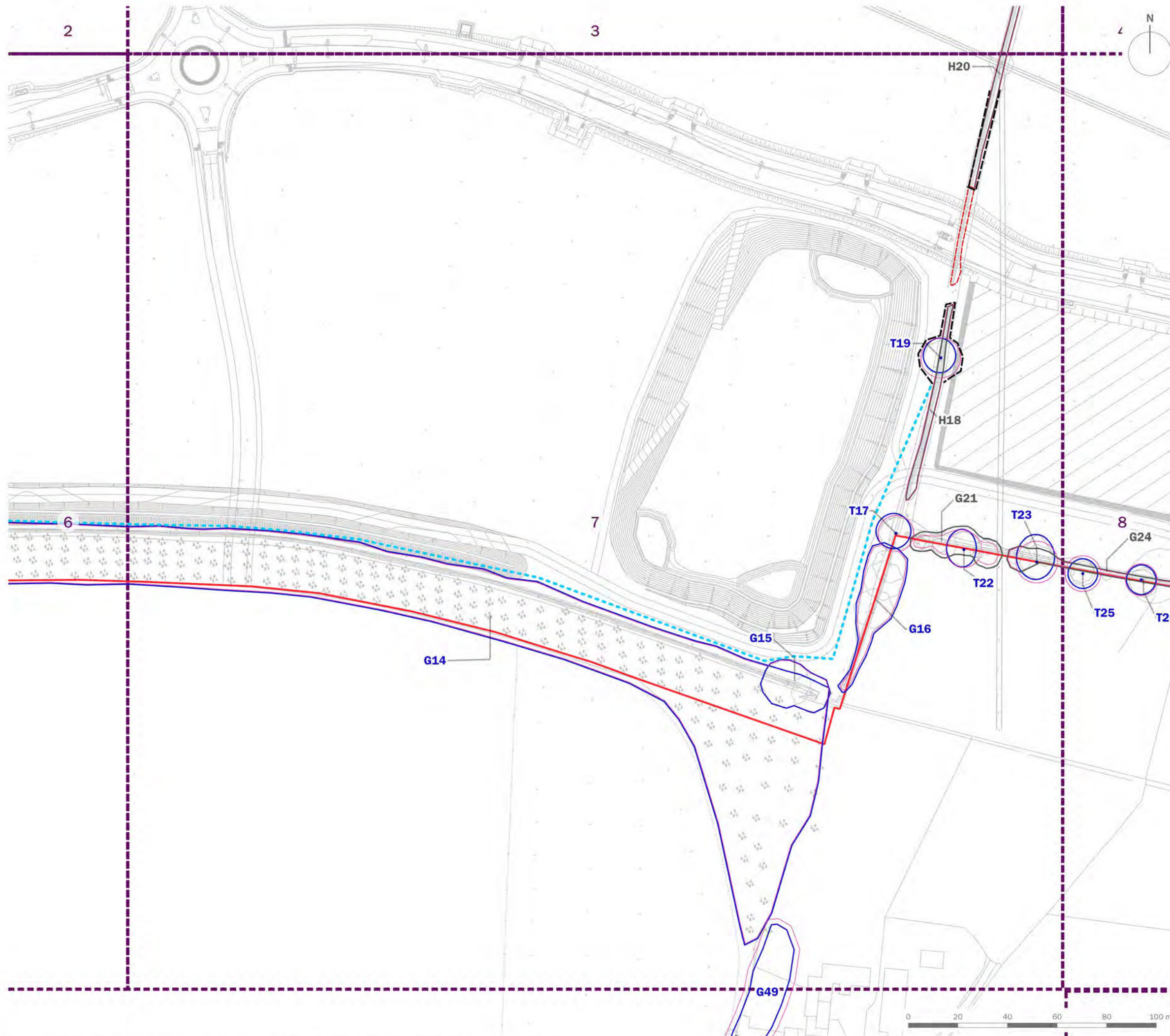
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Plan EDP 1: Tree Protection Plan (Sheet 6 of 9)


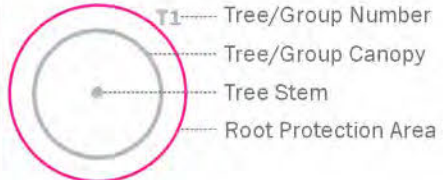









date	26 OCTOBER 2021	drawn by	TC
drawing number	edp5378_d014d	checked	LT
scale	1:1,500 @ A3	QA	GY

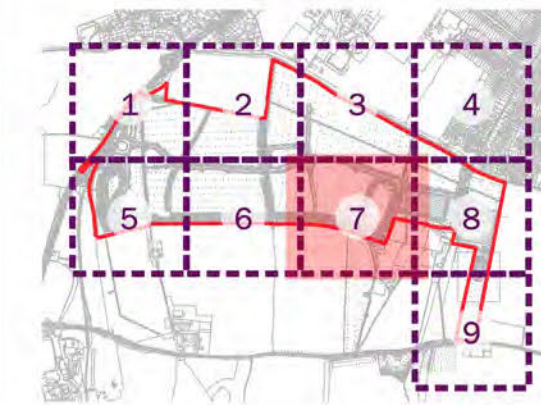


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-  Site Boundary
- 
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 - Tree/Group Canopy
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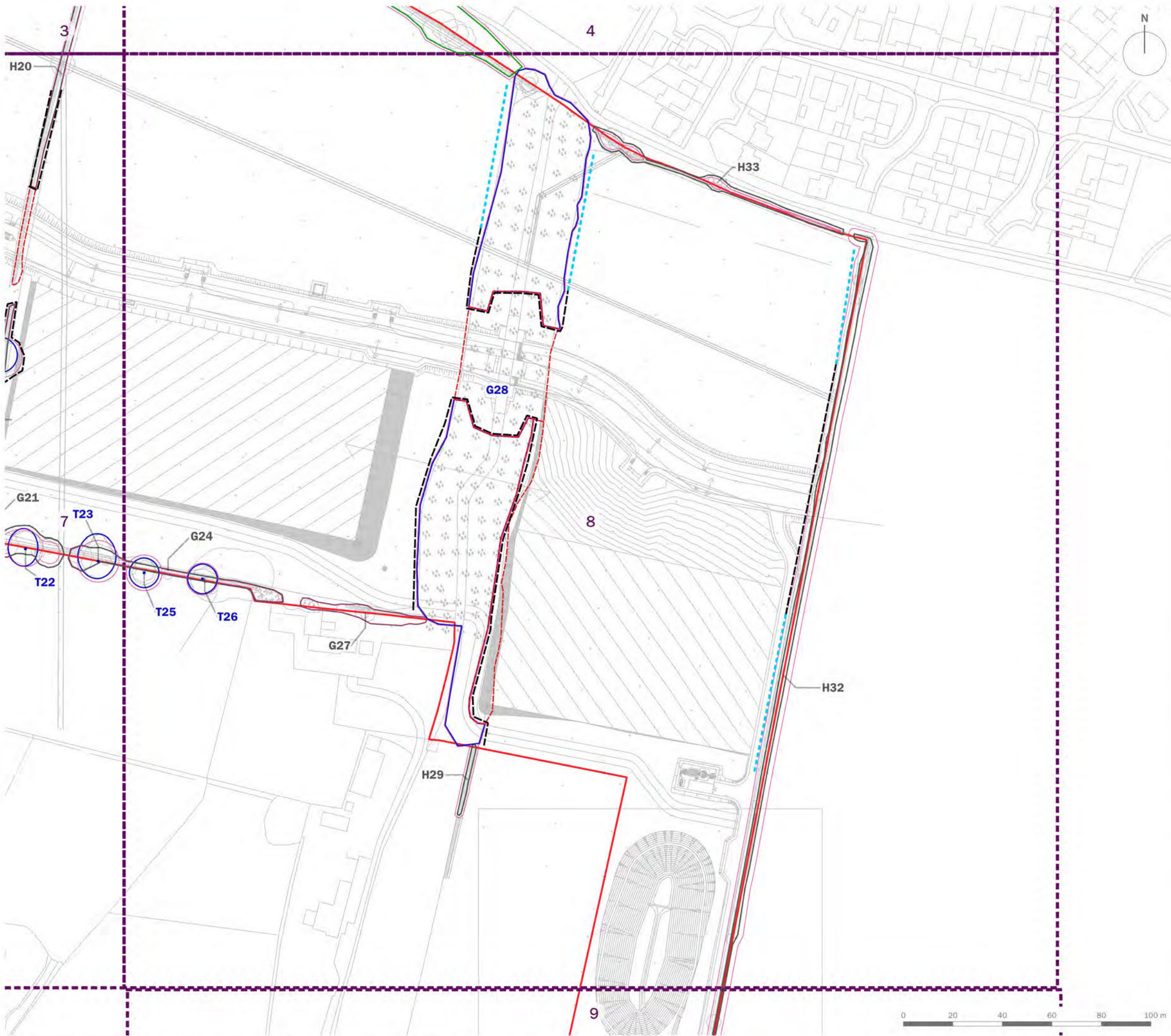
project title
Wykham Park Farm, Spine Road & Ancillary Road Application


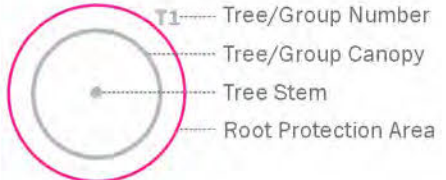









drawing title
Plan EDP 1: Tree Protection Plan (Sheet 7 of 9)

date	26 OCTOBER 2021	drawn by	TC
drawing number	edp5378_d014d	checked	LT
scale	1:1,500 @ A3	QA	GY



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-  Site Boundary
- 
-  Category A: Trees of high quality and value
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L&Q Estates Ltd

project title
Wykham Park Farm, Spine Road & Ancillary Road Application

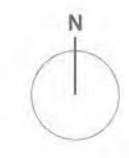
drawing title
Plan EDP 1: Tree Protection Plan (Sheet 8 of 9)


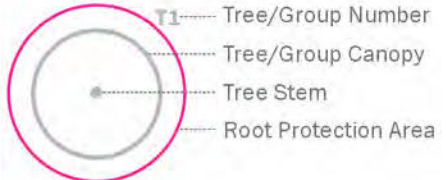









date	26 OCTOBER 2021	drawn by	TC
drawing number	edp5378_d014d	checked	LT
scale	1:1,500 @ A3	QA	GY

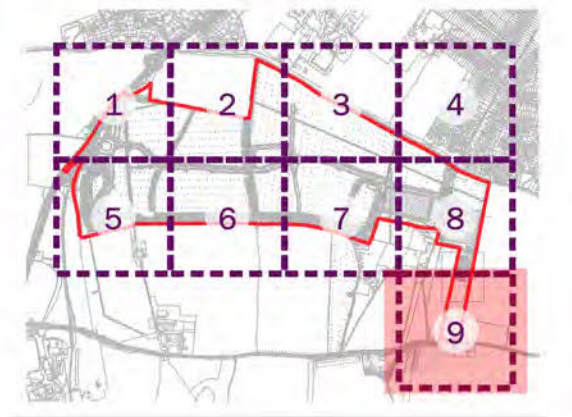


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-  Site Boundary
- 
-  Category A: Trees of high quality and value
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client
L&Q Estates Ltd

project title
Wykham Park Farm, Spine Road & Ancillary Road Application

drawing title
Plan EDP 1: Tree Protection Plan (Sheet 9 of 9)

date	26 OCTOBER 2021	drawn by	TC
drawing number	edp5378_d014d	checked	LT
scale	1:1,500 @ A3	QA	GY



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Plan

Plan EDP 1

Landscape Strategy Plan
(edp5378_d017e 05 October 2021 MA/PW)

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-  Site Boundary
-  Land Excluded from LEMP (Condition C17)
-  Existing/Proposed Woodland
-  Scrub Planting
-  Specimen Trees
-  Ornamental Trees
-  Large Feature Trees
-  Amenity Grass
-  Meadow Grass
-  Swale
-  Play Area
-  Footpath
-  Bridleway
-  Road

client

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project title

Wykham Park Farm

drawing title

Plan EDP 1: Landscape Strategy Plan

date	05 OCTOBER 2021	drawn by	MA
drawing number	edp5378_d017e	checked	PW
scale	Not to Scale @ A2	QA	RB



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