

Notes

Do not scale off dwg - refer to tree survey data schedule for crown spreads etc

Tree / woodland group outlines follow the topo survey or aerial imagery, as applicable

All tree positions are indicative unless a topo survey has been provided to FLAC

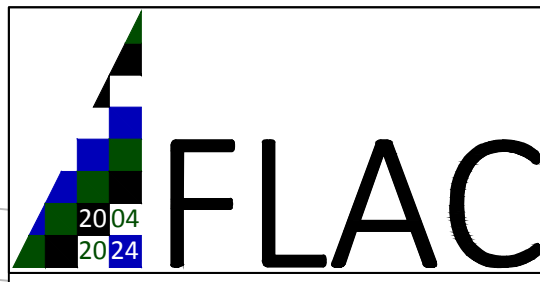
Any trees omitted from topo survey are located indicatively

RPA for hedges or hedgerows to be taken as 3m from the centreline, half the height or width + 2m each side, whichever is the greater

Notes on potential habitat features are for guidance only; ecological assessment is recommended

Drawn to N unless otherwise indicated

10m 20m 30m 40m 50m



Client
University of Reading

Instruction
Loddon Garden Village

Instruction ref.
45-1011

Dwg title
Tree Protection Plan (Outline)

Dwg no.
45-1011.04

Date
23.06.25

Scale
Overview plan NTS
Detail sheets 1:1000 @ A0

Quality & value grades:

Category A ● High

Category B ● Moderate

Category C ● Low

Category U ● Unretainable

 Retained trees

 3047 **FLAC ref. for Very High Quality Trees inc. Framework veterans**

 Notional tree root protection area - RPA

 Veteran tree buffer per Natural England Standing Advice 15x stem dia.

 Veteran tree crown hatch (NPPF definition)

 Areas of ancient woodland (MAGIC data)

 15m offset ancient woodland buffer zone

 FLAC Type 1 tree protection fencing (TPF), see Inset sketch 1

 FLAC Type 2 tree protection fencing (TPF), see Inset sketch 2

 FLAC Type 3 tree protection fencing (TPF), see Inset sketch 3

 New permanent hard surfacing constructed to no-dig principles

 Relocated monoxyle to Sylvan detail (3no) positions indicative

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ARBORICULTURAL METHOD STATEMENT

A) PRELIMINARY MATTERS

1. Prior to any ground modelling, demolition or construction work on site, the approved tree works (see FLAC dwg. no. 45-1011.03 or as superseded by full planning consent) shall be undertaken by tree contractors (not unskilled personnel)
2. No plant access is permitted for tree work operations within the root protection areas (RPAs) of retention trees, including areas identified for temporary ground protection
3. All approved tree removals shall be undertaken by tree contractors. Each tree shall be cut down to a low stump
4. Trees for removal within the RPA of retention trees shall have their stumps ground out (also by tree contractors)
5. Stumps from felled trees outside of RPAs of retained trees can be grubbed out

B) INSTALLATION OF PHYSICAL TREE PROTECTION MEASURES

6. Following completion of enabling tree works, each phase shall have its full system of physical tree protection measures (barriers and ground protection) installed (i.e. not in piecemeal) in line with the provisions of BS5837:2012. These measures comprise:
 - Tree Protection Fencing (TPF) to BS5837:2012 Figure 2 (see FLAC Type 1 at Inset Sketch 1) fitted with all-weather warning signs (see elsewhere on plan)
 - FLAC Type 2 TPF (see Inset Sketch 2), on secondary alignments to provide access for a) works behind the primary alignment but within the RPAs and b) where proximity to site boundary does not allow on-site space for Type 1 scaffold framework supports
 - FLAC Type 3 TPF (see Inset Sketch 3) comprising double height Type 1 TPF for enhanced protection of confirmed veteran trees in proximity to significant construction operations. Type 3 TPF to exclude construction access from Veteran Tree Buffers (VTBs)
7. The TPF to be installed on the primary alignment (as per the dwg key) prior to any demolition, ground works and construction operations. It is to be left in situ throughout the redevelopment process. Site secure fencing may take the place of tree protection fencing if it is a) suitably robust and b) provides no less protection for above and below ground tree constraints with the exception of Type 3 TPF, which will be installed wherever specified

C) PROHIBITIONS & PRECAUTIONS

8. The fencing, ground protection and any existing hard surfaces within the root protection areas comprise the Construction Exclusion Zone. Within this zone, the following activities are strictly prohibited during primary demolition (other than as described below):
 - Excavation / lowering of levels into rootable soil: removal of surface organic matter using hand tools is acceptable; scraping or reduction in depth of topsoil is not
 - Existing ditches within either RPAs or VTBs that are to be used for proposal drainage must not be cleaned, improved, re-graded or re-profiled
 - Removal of existing hard surfaces (= 'secondary demolition'; see below)
 - Grubbing out of redundant buried structures (see below)

- Operation, transit or storage of plant, and storage of materials, including demolition arisings, other than on ground protection
 - Storage or handling of any chemical substance injurious to trees, including fuels, oils, lubricants and cement washings
 - No services/drainage to be aligned through RPAs except by trenchless methods
 - No level changes within RPAs
 - Boundary features to avoid continuous excavations or trenching within RPAs
9. The Construction Exclusion Zone shall be established site-wide as set out above, and shall remain in place throughout the redevelopment process. No elements of the physical tree protection shall be removed or altered without prior written consent from the local planning authority.
 10. Demolition of superstructures within 3m of tree canopies and / or the construction exclusion zone is an operation with a high potential to damage retention trees ('high-risk operation'), and requires on-site arboricultural supervision by FLAC
 11. Within the Construction Exclusion Zone, break-out and replacement of existing hard surfaces and decommissioning of redundant services, including drainage structures, are also high-risk operations and shall be undertaken under site supervision by FLAC

D) METHODS FOR TREE FRIENDLY WORKING

12. Redundant buried structures are preferably disconnected / backfilled and retained in situ; further advice should be sought from FLAC before consideration is given to grubbing them out. Existing hard surfaces within the Construction Exclusion Zone are to be retained and not demolished / removed until completion of primary construction (see Phasing Schedule)

BS5837:2012 6.2.4.1
Planning of site operations should take sufficient account of wide loads, tall loads and plant with booms, jibs and counterweights (including drilling rigs), in order that they can operate without coming into contact with retained trees. Such contact can result in serious damage to the trees and might make their safe retention impossible. Consequently, any transit or traverse of plant in proximity to trees should be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is maintained at all times. Access facilitation pruning should be undertaken where necessary to maintain this clearance

Note In some instances local planning authority consent for pruning might be required

E) ARBORICULTURAL SUPERVISION & REPORTING

14. All high risk operations (i.e. intra-RPA) require arboricultural supervision. Additionally ongoing inspection of the tree protection measures shall be provided whilst works are in progress. A schedule of supervision is provided elsewhere on this drawing.

A WRITTEN & PHOTOGRAPHIC REPORT WILL BE PROVIDED WITHIN 5 WORKING DAYS OF EACH MONITORING VISIT

TREE PROTECTION PHASING SCHEDULE

The following phasing schedule shall be strictly adhered to:

1. Pre-start site meeting (refer to Arboricultural Method Statement)
2. Implementation of physical tree protection (= establishment of Construction Exclusion Zone)
3. Audit of adjustments to/ installation of secondary tree protection measures by FLAC
4. Primary construction
7. Secondary construction including hard landscaping
8. ARB OVERWATCH BY FLAC FOR ANY OPERATIONS WITHIN CONSTRUCTION EXCLUSION ZONE (see Arboricultural Supervision Schedule)
9. Removal of physical tree protection measures
10. Soft landscaping
11. Post-completion tree condition check by FLAC

ARBORICULTURAL SUPERVISION SCHEDULE

- General**
- Pre-start meeting with contractors
 - Audit of enabling tree works & tree protection system, fencing and ground protection
 - 2x weekly visits
 - 2x fortnightly visits
 - 3x monthly visits
 - Quarterly visits until completion, inc. of soft landscaping
 - Adjustments of TPF from primary to secondary alignments
 - All/any works within the root protection areas (RPAs) (see specific tasks below) including excavations for retaining wall north of access

NO-DIG FOOTWAY/CYCLEWAY CONSTRUCTION USING THREE-DIMENSIONAL CELLULAR CONFINEMENT SYSTEM

In the position shown on this plan by the orange hatching, construction shall be undertaken over the existing ground **without excavation** using a proprietary three-dimensional cellular confinement system such as Geosyntheticcellweb.

- The system shall comprise:
- A porous geotextile membrane laid over the ground
 - A three-dimensional cellular confinement system opened out and fixed in place over the membrane
 - Edge constraints such as timber sleepers or pinned kerb stones placed on the existing surface
 - Crushed, angular stone (20-40mm) with no-fines filled into the cells
 - Permeable resin-bonded gravel or other permeable wearing course over the aggregate to allow gaseous exchange and water infiltration

NOTES: There shall be **no construction access** over unprotected ground in the locations shown.

The work shall be undertaken during the landscaping phase (see separate box relating to landscaping) after all other construction has been completed

A DETAILED SITE-SPECIFIC CONSTRUCTION DESIGN SHALL BE PREPARED BY AN ENGINEER OR PRODUCT MANUFACTURER PRIOR TO INSTALLATION

LANDSCAPING WITHIN RPAs

After primary construction has been completed the Tree Protection Fencing shall be removed to allow landscaping to take place.

Prior to landscaping commencing the project arboriculturist shall meet the landscape contractors to discuss what is proposed and precautions required.

The following principles shall be followed within the RPA of retained trees:

- No machinery shall pass over the ground unless protected by existing hard surface or temporary ground protection
- If excavation is required, this shall be localised and undertaken carefully by hand tools only ensuring that roots are preserved
- There shall be no changes in levels, unless agreed by the project arboriculturist

OUTLINE ARBORICULTURAL MANAGEMENT PLAN (HEADS OF TERMS)

Objectives

- The tree stock site wide shall require management in the interests of both trees and users of the surrounding land both on and off site. The overarching objectives are as follows:
- a. Discharge duty of care obligations owed to residents, visitors and neighbours imposed by both common law and Owners and Occupiers Liability Act
 - b. Preserve and enhance arboricultural attributes within the constraints of best practice and relevant Legislation (e.g. legislation relating to protected species and statutory tree protection as applicable at time of works)

The second bullet at (b) captures all trees within the site but this necessarily includes a subset of veteran trees that shall require specific considerations (see sub-heading *Veteran tree management* below)

Tree risk and other management

- It is acknowledged at (a) above that reasonable measures must be taken to minimize the risk of tree failures resulting in harm or damage. This shall be achieved by cyclical (e.g. triennial) tree inspections to provide:
- c. A risk-assessed and prioritized schedule of tree works recommendations as deemed necessary to achieve an acceptable level of risk
 - d. A schedule of ancillary works if considered advisable in the interests of sound arboricultural management

Veteran tree management

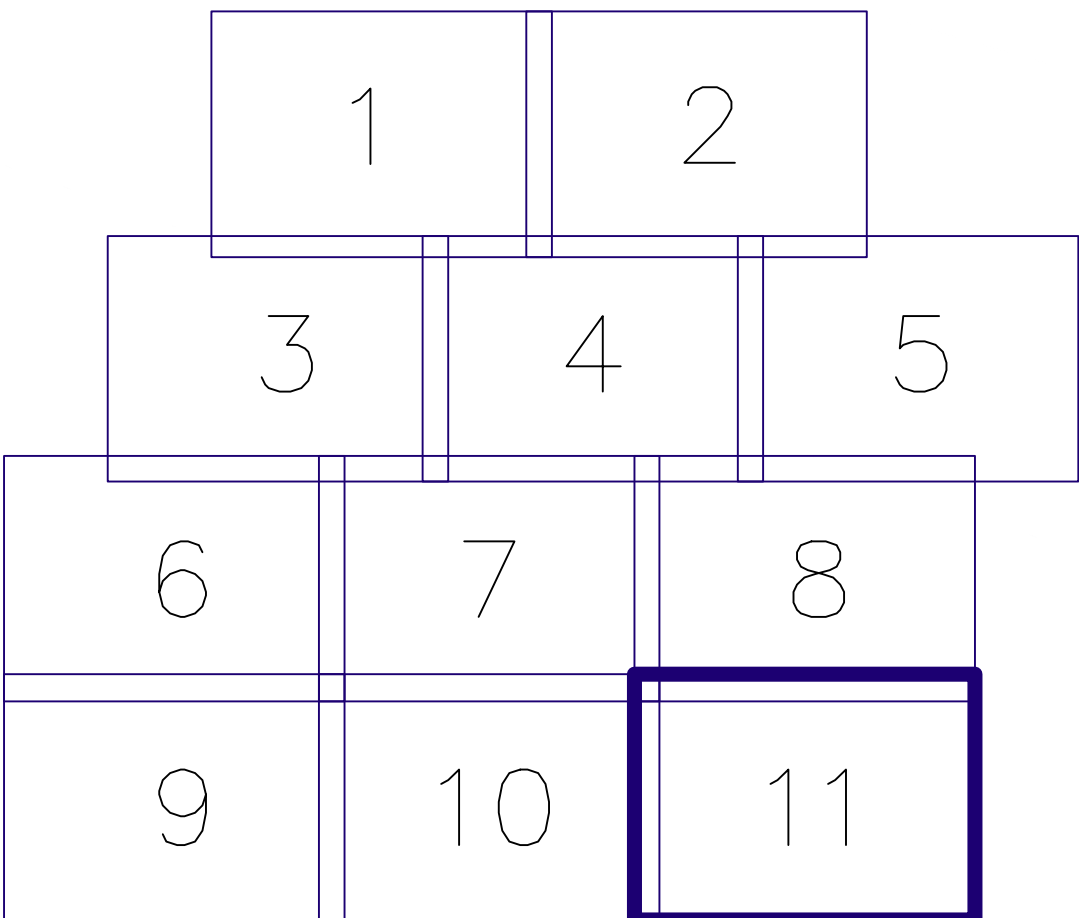
The cohort of veteran trees by virtue of their age, size and condition confer attributes of exceptional biodiversity, cultural or heritage value. Maintaining these attributes is a primary objective of the management plan

Heads of terms for management of veteran trees

- e. Condition and maintenance of veteran tree crown radius
- f. Knee-rail
- g. Maintenance of land within veteran tree buffers
- h. Arboricultural risk-facing inspection and preparation of works schedule
- i. Assessment of veteran attributes (i.e. structural and conditional features of ecological potential - please refer to RAVEN) including works advisable in the interests of optimizing habitat
- j. Assessment of works advisable in the interests of preservation, for example to prevent major mechanical failures and preserving the oldest parts of veteran trees

Inspection cycles, qualifications and review

- k. The first inspection shall take place immediately prior to first occupancy
- l. The period between inspections as described above shall be every two years
- m. Inspections shall be undertaken by suitably qualified, trained and experienced arboriculturists (i.e. ideally qualified to level 6) with reference to suitable ecologists as appropriate. At each inspection a detailed works specification shall be prepared as required
- n. Tree work shall be undertaken by qualified and experienced arboricultural contractors and they shall be briefed by the project arboriculturist prior to commencing works
- o. Tree work shall be undertaken in accordance with BS3998:2010 Tree work - recommendations. Care shall be taken to ensure that nesting birds and bats are not disturbed, and that bat roosts are not damaged during tree work. Pre-work surveys for bats shall be undertaken in accordance with BS8596:2015 Surveying for bats in trees and woodland - Guide
- p. Cycles of inspection provide an opportunity to review the management plan particularly in light of tree condition and emerging information relating to tree management.



INTENDED TO BE READ IN COLOUR



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