

Protection and Retention of Existing Vegetation

The Contractor shall exercise extreme care when performing operations beneath the canopy of existing mature trees and vegetation and within the specified Root Protection Areas designated for protection and avoid at all times damage to the roots, trunk and branches.

All excavations, cultivation and grading beneath the canopy of existing mature trees and within the specified Root Protection Areas of the existing trees and vegetation shall be carried out using hand tools, taking care not to damage or disturb any existing tree roots. No general trenching shall occur within the Root Protection Area. No roots shall be severed greater than 25mm thickness within the Root Protection Area without specialist advice.

All trees to be retained on site shall be protected with fencing erected around the area of mature vegetation in accordance with *BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. The fencing shall be installed, protected and maintained during the main works by the Contractor who shall be responsible for protecting any area beneath the canopy of the existing trees and within the specified Root Protection Areas.

The installed protective fencing shall be 2.0 metres minimum height 'Heras' Welded Wire Mesh Fencing positioned to the outside edge of the existing tree Root Protection Areas specified. All tree protection to be in accordance with *BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. The fencing should be strained, and fixed to fences, walls, knee rails to provide a complete protected area.

Day-glo ribbons shall be maintained during the main works by the Main Contractor attached to the top of the fencing to ensure that the fencing is clearly visible during the works. Fencing shall be used to enclose the full canopy spread of any tree in accordance with the specified Root Protection Areas.

All such fencing shall be maintained for the full contract period. All necessary excavations, earthworks and cultivation beneath the canopy spread of any existing tree; shrub or hedge shall be undertaken by hand. Repositioning of the protective fencing during the course of the contract as the contract works progress shall need to be agreed with the Landscape Architect.

At the end of the contract period the Contractor shall remove protective fencing from the site. All retained vegetation shall be healthy and thriving at the handover date.

Within the protected area the following activities must not take place;

- No vehicles are to be used in the fenced off areas;
- No materials are to be stockpiled or stored;
- No chemicals are to be stored;
- No excavation or increase in the soil level shall occur;
- No fires shall be lit on site.

Tree Protective Measures - Operation Zone During Construction and Manual Excavation Area

Whilst construction work is underway in close proximity to tree proposed for retention, the existing levels of unmade ground within the RPA of existing trees are to be protected with an appropriate ground protection system for the duration of the construction period in accordance with *BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'* and as detailed within the *LLD1154-ARB-TRPP - Tree Retention and Protection Plan*.

For pedestrian access only, protection should consist of a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane; for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane should be used. The ground protection should be in place for the duration of the construction period in accordance with *BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. When construction work is completed the ground protection can be removed.

Where small areas of new hard surfaces are proposed within the RPAs of trees to widen the highway access, and where the construction of the proposed single-storey building to the south slightly impinges upon tree RPAs, a manual excavation method shall be employed in order to avoid damage to existing tree roots. All excavation shall be undertaken by hand using specialist hand tools only. No roots over 25mm or occurring in clumps are to be severed without consultation with the arboriculturalist.

All exposed roots should be immediately wrapped in dry Hessian to avoid drying. On completion of the excavation and at the earliest opportunity the wrapping should be removed, and the roots surrounded and protected with a loose granular fill (clean washed sharp sand or topsoil free of contaminants or matter injurious to rooting systems) prior to backfilling the excavation to the desired levels.

Tree Protective Fencing

All Tree Protection and Tree Protective Fencing to be in accordance with *BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. Tree Protective Fencing - to be 2.0 metres height 'Heras' Welded Wire Mesh Fencing secured to a scaffolding framework, set into the existing ground, and positioned to the outside edge of the existing Tree Root Protection Area, or as specified.

Removal of Existing Vegetation

All existing trees to be designated for removal are to be removed in accordance with the Tree Protection and Retention Drawing. All tree work and removal shall be carried out in accordance with *BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. Trees designated for removal and felling shall be marked on site with white paint. Prior to the removal and felling of trees, the required work and tree positions shall be agreed on site with the Landscape Architect. Trees shall be felled prior to the erection of the tree protective fencing. Care should be taken to avoid damage to trees, which are designated to be retained.

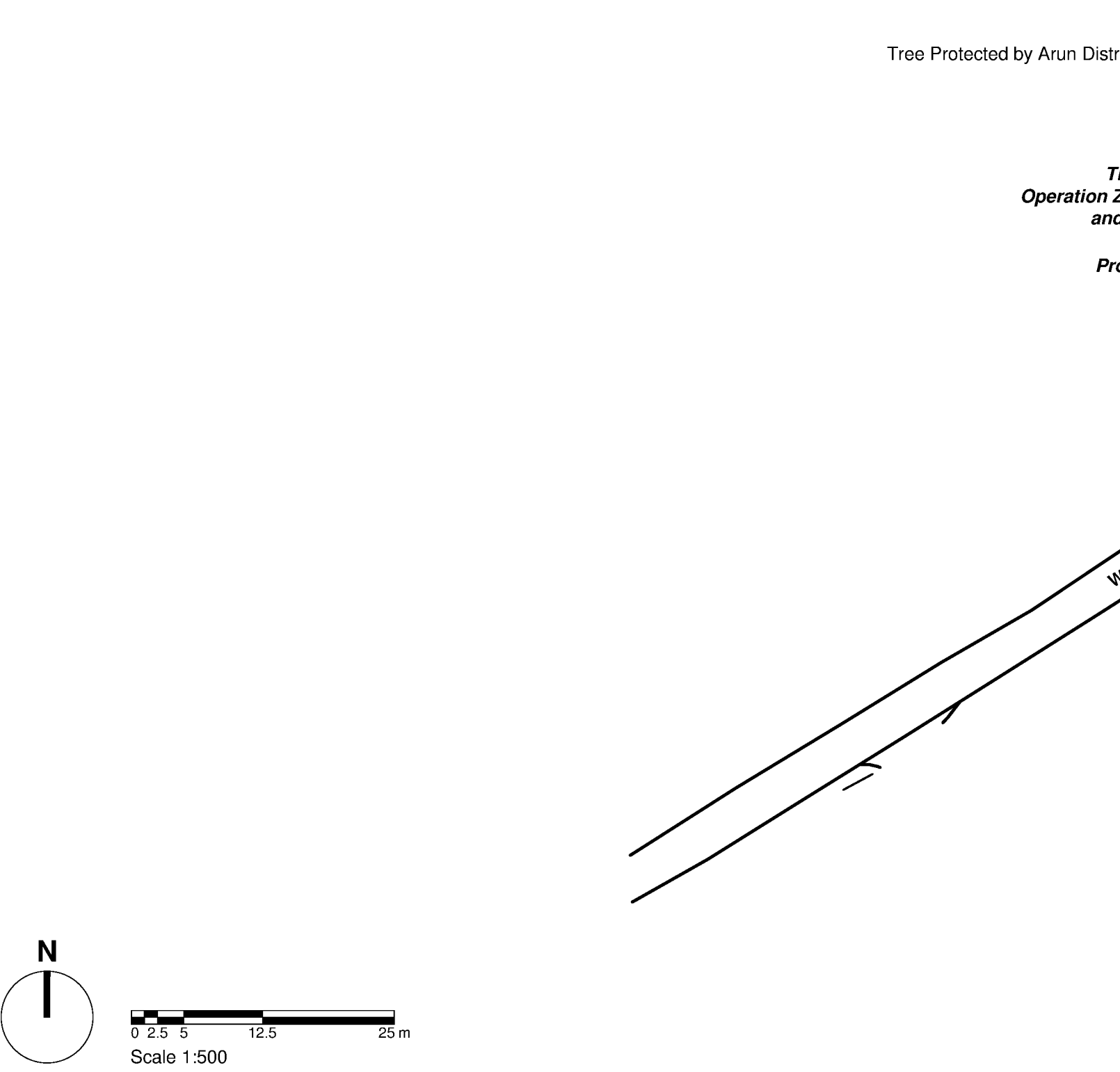
Stumps shall be removed and cut away so that the top of the stump shall be at least 450 mm below the final topsoil level in order that the site can be leveled and grassed over. Stumps are to be treated with an approved herbicide to be agreed with the Landscape Architect. Where the depth is greater than 450 mm the areas shall be backfilled with topsoil to the required level.

Tree Surgery

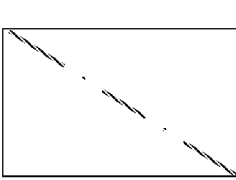
Any significant defects found in the trees during the course of the scheduled work shall be reported to the Landscape Architect. All work shall be undertaken by an approved and qualified tree surgeon in accordance with *BS 3998:2010 'Tree Work: Recommendations'*. Care should be taken to avoid damage to neighbouring trees to be retained. Branches in confined spaces shall be removed and taken down in sections. All arisings shall be transported and disposed of away from site to the Contractor's tip.

Nesting Birds

Vegetation clearance to site boundaries should take place outside the bird nesting season (nesting season: March-August inclusive) or alternatively under a watching brief from a suitability qualified ecologist.



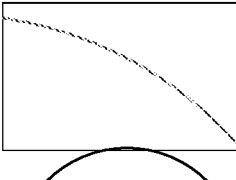
Legend



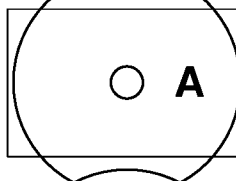
Site Survey Boundary.



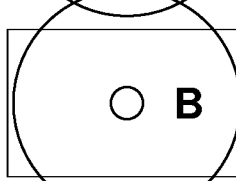
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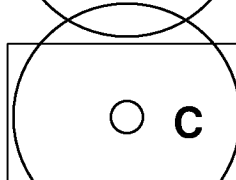
Tree Root Protection Areas
Tree Root Protection Areas calculated and specified in accordance with *BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction'*.



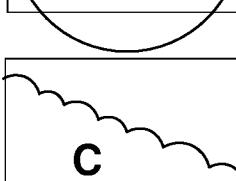
Category A Trees
Trees of High Quality and Value.



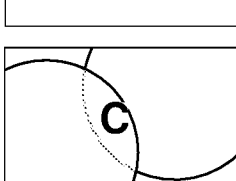
Category B Trees
Trees of Moderate Quality and Value.



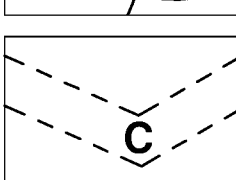
Category C Trees
Trees of Low Quality and Value.



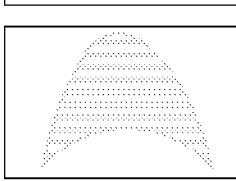
Category C Tree Lines
Tree Lines of Low Quality and Value.



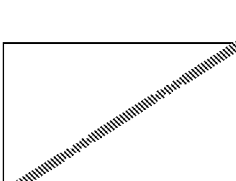
Category C Tree Groups
Tree Groups of Low Quality and Value.



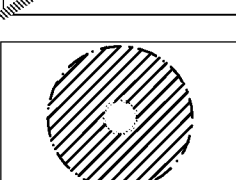
Category C Hedgerows
Hedgerows of Low Quality and Value.



Proposed Tree Surgery Works
Existing trees to have crown reduction prior to protection measures being implemented. Tree Surgery operations to be in accordance with *BS3998:2010 - 'Tree Works - Recommendations'*.



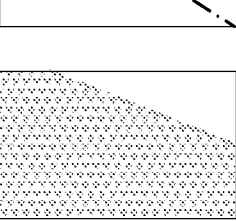
Tree Protective Fencing
All Tree Protection and Tree Protective Fencing to be in accordance with *BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'*.



Existing Trees to be Removed
Trees and Shrubs Recommended for Removal from Site Prior to Tree Protection Works / Measures.



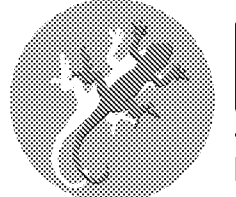
Proposed Route of Foul Drainage Pipeline.



Tree Protective Measures - Operation Zone During Construction and Manual Excavation Area

Notes:
1. Drawing to be viewed in colour
(Refer to LLD1154/SCH01 - Existing Tree Schedule and LLD1154-ARB-A1A - Arboricultural Impact Assessment and Method Statement)

PLANNING ISSUE			
Rev	Description	Date	Initials
01	Planning Issue	07.02.18	GS
00	Draft Preliminary Issue	16.01.18	GS



LIZARD
Landscape Design and Ecology

Project Title and Location

Wandleys Farm, Wandleys Lane, Walberton

Client

Mr and Mrs Lillywhite

Drawing Title

Tree Retention and Protection Plan

Scale

1:500@A1

Drawn

GS

Approved

JJ

Date

16.01.2018

Drawing No

LLD1154 / 02

CAD Filename

LLD1154/CAD

Revision

01

Tree Retention and Protection Plan
Wandleys Farm, Wandleys Lane, Walberton