



**PRE-DEVELOPMENT
ARBORICULTURAL SURVEY,
IMPACT ASSESSMENT AND METHOD STATEMENT**

At:

**22 SOUTHERN ROAD, WEST END,
HAMPSHIRE**

For

APPLECORE ARCHITECTS

This report was compiled by
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This report is the responsibility of Arbor-Eco Consultancy
It should be noted that whilst every effort is made to meet the client's brief,
no site investigation can ensure complete assessment
or prediction of the natural environment.

Report Number: MB220509-01

July 2022

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1. INTRODUCTION

1.1 Project Brief

Arbor-Eco Consultancy were commissioned by Mr C Hamlet on behalf of Applecore Architects to produce an Arboricultural Method Statement and Tree Protection Plan following a tree survey and compiling a Pre-development Arboricultural Survey Report for the proposed construction of infill extensions to the existing property for the enjoyment of the family at 22 Southern Road, West End, Southampton, Hampshire within the administrative boundary of Eastleigh Borough Council.

The purpose of this report is to support a Planning Application for the proposed development and to provide information to the Eastleigh Borough Council Arboricultural Manager (Mr C Stringer) to show that the adjacent trees will be protected throughout the development.

Furthermore, this report is compiled to meet with the duty of care for works within the Root Protection Area (RPA) of a tree that is the subject of a Tree Preservation Order.

It is noteworthy to mention at this early stage that the proposed development has been developed outside of any RPA and both the landowner and Architect should be recognised for making such arrangements that the trees will not be harmed.

1.2 Site Description

The site is located towards the south-eastern fringes of the settlement of West End to the east of the city of Southampton. The site is accessed off Southern Road, minor trunk road.

The site was bound to the north by Eastern Road, minor trunk road. The eastern boundary was demarcated by Southern Road, minor trunk road. The western boundary was delineated by further properties off Eastern Road, minor trunk road. The south of the site abuts a property off Southern Road, minor trunk road.

The trees surveyed were growing predominantly to the periphery of the site with one tree located within an off-site location. The site is centred at Ordnance Survey Grid Reference SU 46958 13950.

The location of the trees surveyed is shown on Tree Protection Plan, Drawing Number MB220509-01-01, Section 6.

1.3 Limitations and Constraints

Tree number 3 was growing within an off-site location with restricted access and therefore the health and safety of this tree can not be verified at the time of writing the report.

2. METHODOLOGY

2.1 Desk Study

A desk study was undertaken to identify if any of the trees present within or in close proximity to the site are covered by Tree Preservation Orders (TPOs) or if the site is situated within a Conservation Area. This involved consultation with the Local Planning Authority.

2.2 Condition Status

To determine the status of the trees within the site a full arboricultural survey has been undertaken, assessing the species and status of all trees present. This survey has been carried out in accordance with British Standard 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.

All trees have been assigned a unique reference number. Individual trees above 75 mm in diameter (at 1.5 m above ground level) have had their position plotted to a survey drawing. The trees were visually assessed and a schedule prepared listing: tree number, species, trunk diameter at 1.5 m above ground level (or in accordance with Annex C of BS5837:2012), tree height, crown spread (cardinal points), crown clearance (cardinal points), height of first branch and growth direction, age class and estimated remaining life expectancy in years. Measurements for tree height, first branch height, crown clearance and crown spread were taken to an accuracy of 0.5 m. Stem diameter measurements were recorded to the nearest 10 mm. Any specific observations or recommendations with regard to management were also noted. All these observations and measurements are summarised in Section 3.3.

Each tree was assessed and assigned to one of the following categories:

- Category A: Those trees of high quality and value with an estimated remaining life expectancy of at least 40 years.
- Category B: Those trees of moderate quality and value with an estimated remaining life expectancy of at least 20 years.
- Category C: Those trees of low quality and value with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150 mm.
- Category U: Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

Categories A, B and C have further sub-categories with regards to the reasons for tree retention:

- 1: Mainly arboricultural qualities.
- 2: Mainly landscape qualities.
- 3: Mainly cultural values, including conservation.

2.3 Root Protection Area (RPA)

In order to avoid damage to the roots or rooting environment of retained trees, the RPA has been calculated for each of the Category A, B and C trees. This is a minimum area around a tree which is deemed to contain sufficient roots and rooting volume to maintain the tree's viability. Protection of the roots and soil structure in this area should be treated as a priority.

These figures have been calculated utilising the formulas within Section 4.6 and Annex D of British Standard 5837:2012.

3. RESULTS

3.1 Desk Study

Examination of Eastleigh Borough Council (2022) Interactive Mapping

(<https://emaps.eastleigh.gov.uk/webmaps>) accessed on 29th June 2022, confirmed that all trees growing within the curtilage of the property are the subject of a Tree Preservation Order. In addition, the two Beech trees are also covered by a separate Order.

It is strongly recommended that the hardcopy Orders for the property are requested from their solicitor or Local Authority. The TPOs are out of date and should be updated to reflect the trees across the site. TPO EH333-E and 60-H apply.

The Town and Country Planning (Tree Preservation) (England) Regulations 2012, Part 4 – Applications for Consent under Tree Preservation Orders states that an application for consent to the cutting down, topping, lopping or uprooting of any tree in respect of which an order is for the time being in force shall be made in writing to the authority on a form published by the Secretary of State for the purpose of proceedings under these Regulations.

Until such time as the application has been granted no works must be undertaken on the trees identified as being subject to TPOs that contravene the order. Works include pruning, topping, lopping, uprooting or wilfully damaging these trees. Any proposed pruning works will need to be fully specified and agreed within any planning application. If works are not included within the planning application, a separate TPO application will be required to be submitted to the Local Authority for permission to undertake any works (approximately an 8-week process).

Apart from [limited exceptions](#), permission must be sought from the local planning authority by submitting a standard application form. The form is available from the Local Authority [Planning Portal](#). It is important that the information on the form makes clear what the proposed work is and provides adequate information to support the case.

The authority's consent is not required for carrying out work on trees subject to an Order so far as such work is necessary to implement a full planning permission. For example, the Order is overridden if a tree has to be removed to make way for a new building for which full planning permission has been granted. Conditions or information attached to the permission may clarify what work is exempt.

Further examination of Eastleigh Borough Council (2022) Interactive Mapping

(<https://emaps.eastleigh.gov.uk/webmaps>) accessed on 27th June 2022, confirmed that the site is not situated within a Conservation Area.

3.2 Weather Conditions and Personnel

The survey was completed on 29th June 2022 by Marco Bartolini, Arboricultural Consultant. The weather conditions at the time of the survey are shown in Table 3.1.

Conditions	Result
Temperature (°C)	17
Cloud Cover (%)	65
Precipitation (%)	15
Wind Speed (Beaufort)	F2-3

Table 3.1: Weather Conditions at Time of Survey

3.3 Species Recorded

Tree species recorded during the survey are listed in Table 3.2.

Common Name	Scientific Name
Beech	<i>Fagus sylvatica</i>
Silver Birch	<i>Betula pendula</i>

Table 3.2: Tree Species Recorded During Survey

The full results of the Arboricultural Assessment are detailed in Table 3.3.

Tree No.	Species	No. Stems	Diam (mm)	H't (m)	H't 1st Branch (m)	Branch Spread (m)				Crown Clearance (m)				Age	Struc Cond	Phys Cond	Est. Remain Contrib (Years)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W	N	E	S	W							
1	Beech	1	560	24.0	5.0 N	7.0	7.0	5.5	<u>5.0</u>	3.0	2.0	2.0	2.0	M	G	G	20+	B1,2	- Exposed surface roots – erosion. - Artificial structures within RPA. - Woodpecker damage to stem. - Growing upon embankment.	-
2	Beech	1	820	26.0	4.0 S	8.5	9.5	8.0	<u>8.0</u>	7.0	4.0	5.0	6.0	M	G	G	20+	B1,2	- Exposed surface roots – erosion. - Artificial structures within RPA. - Major deadwood in crown. - Growing upon embankment.	Crown clean deadwood.
3	Beech	1	<u>750</u>	23.0	6.0 N	<u>7.0</u>	<u>7.5</u>	<u>7.5</u>	<u>6.0</u>	4.0	4.0	4.0	4.0	M	G	G	20+	B1,2 Int	- Off-site tree. - Restricted access prevents detailed assessment. - Branches whip building. - Artificial structures within RPA. - Unable to verify health and safety.	Crown lift away from building by 2.0 m to avoid damage to structure.
4	Silver Birch	1	420	22.0	4.0 S	6.0	6.0	6.0	6.0	2.0	2.0	2.0	2.0	M	G	F	10+	C1	- Artificial structures within RPA. - Low canopy density. - Small leaf. - Drought of compaction stress - Apical dieback evident.	Ameliorate ground to improve oxygen and water content through soil.
Key <u>Age Class</u> Y: Young = tree within first third of average life expectancy EM: Early mature = tree within second third of average life expectancy M: Mature = tree within final third of average life expectancy OM: Over mature = tree beyond average life expectancy <u>Physiological Condition</u> G: Good = no health problems F: Fair = symptoms of ill health that may be remedied P: Poor = poor health <u>Structural Condition</u> G: Good = no structural defects F: Fair = remedial structural defects P: Poor = significant structural defects <u>000</u>: Estimated measurement due to access restrictions RPA: Root Protection Area Int: Interim category due to access restrictions Major deadwood: branches in excess of 50 mm diameter Minor deadwood: branches/twigs less than 50 mm diameter																				

Table 3.3: Results of Arboricultural Survey

3.4 Root Protection Area (RPA)

Table 3.4 provides details of the Root Protection Area (RPA) of all trees surveyed which were classified as Category A, B or C specimens. This table also gives an approximate root protection radius for these trees.

Tree No.	Species	Diameter (mm)	Approximate Root Protection Radius (m)	Root Protection Area (m ²)
1	Beech	560	6.9	150
2	Beech	820	9.9	308
3	Beech	750	9.0	255
4	Silver Birch	420	5.1	81

Table 3.4: RPA and Approximate Root Protection Radius of Trees Surveyed

4. IMPACT ASSESSMENT

4.1 Development Proposals

The proposed development includes the construction of infill extensions over existing hard surfacing.

4.2 Documentation Provided

This assessment is based upon the information provided by the client in addition to information collected by Arbor-Eco Consultancy during the site survey. The documents and drawings considered are detailed within Table 4.1.

Author	Document	Reference	Date
Applecore Architects	Tree Locations	01-PG.7083.22	May 2022
Applecore Architects	Existing Plans and Elevations	02-PG.7083.22	May 2022
Applecore Architects	Proposed Floor Plans and Elevations - OPTION 3 - REV A	03-PG.7083.22	Jun 2022

Table 4.1: Documentation Provided

4.3 Tree Retention / Removal

None of the trees surveyed are to be removed to achieve the proposed development. Consequently, it is not considered that the proposed development will have an impact upon the visual amenity offered by the vegetation present.

4.4 Tree Works

To reduce impact to the overhanging branches of T3 during the development it has been recognised that the tree would benefit from being crown lifted to at least 5 m above ground level where it overhangs the property of 22 Southern Road. The branches are whipping the buildings and therefore to prevent the potential damage to both tree and property it is proposed to carry out this work.

This report will form the Planning Application to carry out works to a tree that is the subject of a Tree Preservation Order and pending Full Permission, this work will be scheduled to be carried out prior to any construction works being carried out.

4.5 Impact of Enabling Works

Removal of Hard Surfaces

It can be seen from examination of the Arbor-Eco Consultancy Tree Protection Plan, Drawing Number MB220509-01-01, that no impacts are anticipated.

However, discussions have taken place and it is understood that the proposed development will utilise the existing foundations of the hard surfaces where possible and therefore any *potential* impact can be limited with the use of suitable foundations.

4.6 Impact of Construction Works

Works in RPAs

It can be seen from examination of the Arbor-Eco Consultancy Tree Protection Plan, Drawing Number MB220509-01-01, that no impacts are anticipated.

Construction work carried out within the RPAs of the retained trees will cause the greatest damage. Soil that

has been compacted will not provide suitable conditions for the survival and growth of vegetation, whether existing or new, and is a common cause of post-construction tree loss on development sites. Compacted soil will adversely affect drainage, gas exchange, nutrient uptake and organic content, and will seriously impede or restrict root growth. The risk of soil compaction is greatest in soils with a significant clay content and in wet conditions. It can result from temporary or short-term loadings, such as the passage of a single vehicle, or from longer-term construction activities, including materials storage.

The proposed development will not require major works to be undertaken within the RPA of any of the trees.

Works in Proximity to Tree Canopies

The works undertaken in close proximity to the canopy of the retained trees can be overcome by the pruning of the trees' branches as discussed above.

Site Access

The existing property entrance shall be used for all access and egress during construction.

Site Compound, Contractors Parking and Materials Storage

An existing area of hard standing at the front of the site has been identified, which can be accessed from Southern Road, and can be used for the establishment of a site compound and provision of materials storage. Some limited contractors parking may also be accommodated in this location. Where the demand for parking exceeds the area available additional parking will need to be provided outside of the site.

None of the activities related to the establishment of a site compound, storage of materials or car parking will occur within the RPA of any retained trees and therefore no impact to the trees is envisaged.

No additional parking shall occur on the verges, across neighbouring properties or on footways. All highway laws shall be respected.

4.7 Post Construction Conflicts

Ultimate Branch Spread

The canopy of the existing trees is not likely to increase in spread to such an extent that conflict with the completed development will occur. It was evident from previous pruning wounds that this can be managed through selective cyclical pruning and therefore the long-term health of the trees will not be adversely affected.

Shading

The existing trees will not cause any concerning shading of the development as this shading already exists over the whole property and no issues have been highlighted during the survey.

Leaf Litter, Sap Exudate

Consideration should be given to the leaf litter or fruit fall which is anticipated. As the mature tree (T3) is adjacent to the new development its' leaves, along with the fruit and fruit cases may require further maintenance regimes and should be discussed prior to construction.

5. METHOD STATEMENT

The following sections of this report detail the specific measures to be adopted to ensure the protection of retained trees during the proposed development.

The Site Manager and contractors must ensure that they read and understand all of the following sections prior to commencement of any onsite works and is responsible for informing all site staff and subcontractors of the significance of the tree protection measures to be incorporated. All trees are the subject of a Tree Preservation Order and as such can attract a fine or fines should the tree be damaged during construction, above and below ground (See Section 3 for more details).

5.1 Construction Exclusion Zone

The construction exclusion zone is the area considered necessary to ensure that the tree roots and canopy are protected from damage during the construction processes. The extent of the exclusion zone is based upon guidance within BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations' in particular the diameter of the stem of each tree (when measured at a height of 1.5m from ground level) in combination with the canopy spread of the tree is considered.

The exclusion zones are to be defined by the use of a existing hard surfacing and tree protection barriers as shown on the Tree Protection Plan, Drawing Number MB220509-01-01 within Section 6 of this report. The existing boundary features will also act as tree protection barriers.

No works that cause compaction of the soil or severance of tree roots, except where it is undertaken in accordance with the guidance provided within this document, will be undertaken within any exclusion zone.

5.2 Foundation Design

It can be seen from examination of the Arbor-Eco Consultancy Tree Protection Plan, Drawing Number MB220509-01-01, that no impacts are anticipated.

Assessing the rooting area of the tree to see how far it extends towards the foundations, and depending on the tolerance of the tree species, any proposed root loss may be acceptable. Each tree has been provided a root protection area (RPA) depicted as a default circle from the centre of the stem. This is the minimum required root mass for any tree to survive according to BS5837:2012.

As tree roots are normally only found in the top 600 mm to 1m of soil it may be that tree roots are located. Whilst outside of the defined RPA, it would be prudent to stop work and contact the retained Arboricultural Consultant for advice should they be in a mat or large quantities.

It is deemed that this proposed development is within the guidance of BS5837:2012 and no further action is necessary to protect the trees.

5.3 Protective Barriers and Ground Protection

The protective barriers shall be the existing boundary fences that exist around the periphery of the site and include a system of low-level barriers internally to the site so that the garden is not excluded to the family but out-of-bounds to contractor staff and their equipment. Signs will be installed at the entrance to the site and within the site on the fencing to inform site staff of responsibilities and these will include the headings listed in Appendix 1.

The variant Tree Protection Barriers at Appendix 2 are deemed suitable for this site so as not to cause any damage to the roots of nearby trees and that the ground to be protected is on an embankment.

Other than works detailed within this method statement or approved in writing by the Local Planning Authority no works, including storage or dumping of materials, shall take place within the Construction Exclusion Zone as defined by the RPA, no-dig solution, as shown on Tree Protection Plan, Drawing Number MB220509-01-01 within Section 6 of this report.

The Construction Contractor will inform the Project Arboriculturist when the tree protection has been installed and the Project Arboriculturist will attend site to confirm that it has been installed in accordance with the Tree Protection Plan and loading expectations. The Local Planning Authority will be notified in writing once this inspection has been undertaken.

5.4 On site Monitoring Regime & Contact details

All operations will be monitored by the main contractor. The main contractor will ensure that all works within this document are followed (this will be built into the contract specification) and important information relayed to the site staff and sub-contractors employed on site.

If any issues arise in relation to the retained trees the Project Arboriculturist will be contacted for advice. The Project Arboriculturist for the development is:

Name: Marco Bartolini
Position: Arboricultural Consultant
Company: Arbor-Eco Consultancy
Mobile: 07542093882

The Arboricultural Officer for the Local Planning Authority is:

Name: Mr C Stringer
Position: Arboricultural Manager
Company: Eastleigh Borough Council

Induction and Personnel Awareness

Details of tree protection and methods of working around trees will be included within site inductions to new members of site staff.

A copy of this document and the related Tree Protection Plan Drawing Number MB220509-01-01 (within Section 6) will be kept on site and made accessible to staff.

Monitoring/Audits

A pre-commencement site meeting will be arranged between the contractor, Project Arboriculturist and any other interested party. During this meeting, all outstanding items will be finalised and these will be communicated to the Local Planning Authority.

A single arboricultural audit is deemed suffice and will be completed at a time arranged with the landowner, Project Manager and Project Arboriculturist. It is recommended that an audit of tree protection measures is carried out during the project. The nature of the audit will be finalised during discussion at the pre-commencement meeting and confirmed with the Local Planning Authority Arboricultural Officer.

Following the audit of tree protection a written inspection report with photographs will be provided to the Local Planning Authority Arboricultural Officer.

5.5 Site Compound and Welfare

The location for a Site Compound has been identified as the driveway and hard surfacing to the front of the property with Southern Road.

The main contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any tree on site.

Safety from COVID-19 of all site staff is to be included within the site briefing and monitored accordingly and in keeping with current laws for England. Contractors from different disciplines should ideally be segregated. The client must also consider the safety of the family as a priority over the development.

5.6 Responsibilities

It will be the responsibility of the main contractor to ensure that any planning conditions attached to the planning consent are adhered to at all times and that a monitoring regime, supervision and audits in regards to tree protection and ground protection is adopted on site. The main contractor will be responsible for contacting the Local Planning Authority should any issues are raised related to the trees on site.

If additional pruning works are required to any tree other than T3 (which is applied for in this report), then permission must be sought from the Local Planning Authority through a Planning Application and then works are to be carried out in accordance with BS3998:2010 – 'Tree works - Recommendations'.

The main contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. The main contractor will ensure that the signs (clear to read) are maintained in position at all times and checked on a regular basis by a designated person on site. The Project Arboriculturist will re-inspect the trees and sign off the site with the Local Planning Authority Arboricultural Officer.

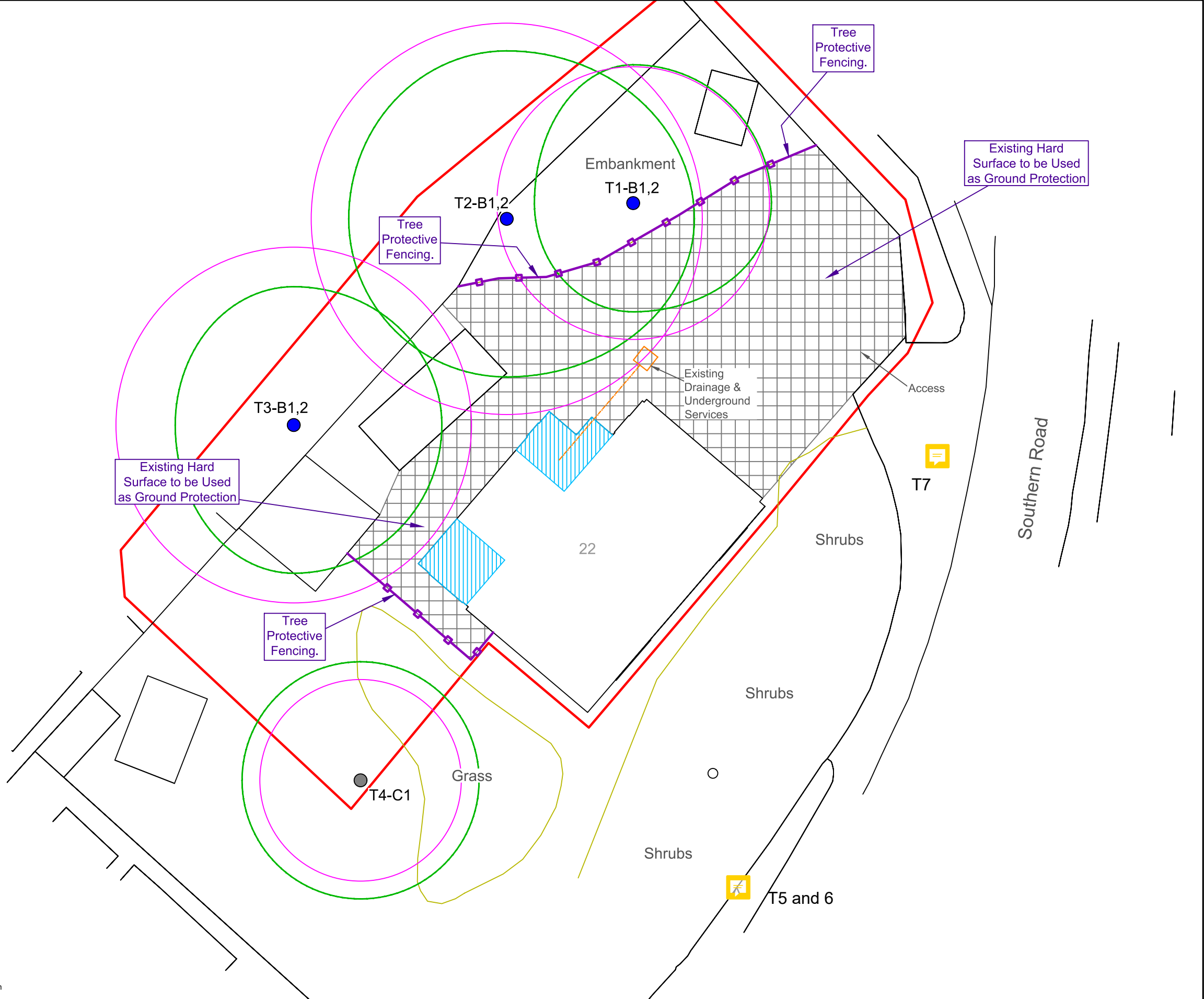
5.7 General Precautions

No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 m of the stem of any tree that is to be retained. No fires will be lit within 20 m of the stem of any tree that is to be retained.

6. DRAWINGS

Drawing MB220509-01-01 – Tree Protection Plan

General Notes
Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
Depictions of tree canopies are based on measurements taken to four cardinal compass points.
No liability of any kind is accepted for any omissions or inaccuracies in respect of this plan.
The original of this drawing was produced in colour; a monochrome copy should not be relied upon.
All rights reserved.



Key

Trees
Showing Canopy extents, category colour and tag number (with category).

Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

Category C
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.

Category U
Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.

BS 5837:2012 Root Protection Area

Tree Protective Fencing

Existing Hard Surface to be Used as Ground Protection

Proposed

Tree Survey Area Extents


Arbor-Eco Consultancy

2 Daisy Lane, Locks Heath,
Hants. SO31 6RA.
Email: arborecoconsultancy@gmail.com
Telephone: 07542 093882

Arboricultural Consultant
Marco Bartolini

Client
Applecore Architects

Project
22 Southern Road, West End.

Drawing Title
Tree Protection Plan

Scale	Date	DB	CB
1:200 - A3	30/06/2022	CS	MB

Drawing Number	Rev
MB220509-01-01	A

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APPENDICES

APPENDIX 1: Headings for Protective Barrier Notices and Example Protection Sign

APPENDIX 2: Tree Protection Barrier Example

Appendix 1

Headings for Protective Barrier Notices and Example Protection Sign

Root Protection Area (RPA) Model Notice

DON'T excavate within this area

DON'T use any form of mechanical plant with this area

DON'T store materials, plant or equipment within this area

DON'T move plant or vehicles within this area

DO contact the Local Authority Arboricultural Officer or owner of the tree if excavation within this area is unavoidable

DO protect any exposed roots uncovered within this area with dry sacking

DO backfill with a suitable inert granular and top soil material mix as soon as possible on completion of work

ANY WORK in this area requires a permit from the Local Authority Arboricultural Officer



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**TREE PROTECTION AREA
KEEP OUT !**

**(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION**

**ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL
PLANNING AUTHORITY**

Appendix 2

Tree Protection Barrier Example

Figure 3 Examples of above-ground stabilizing systems

