



ROAVR | GROUP

Project: 23_5837_04_37
Site: Land South Of The Green The Green Charlton Hampshire, SP10 4AZ
Client: Clive Ward



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Document Title:	Tree Survey & Arboricultural Impact Assessment
Document Author:	Peter Haine FDS Arb, MArborA
Project Title:	Land South Of The Green The Green Charlton Hampshire, SP10 4AZ

Revision History.

Date:	Version number:	Summary of changes:
16/05/2023	1.0	First Draft
16/05/2023	1.0	First Issue
19/06/2023	1.1	Revision to first issue following tree officer comments

Distribution.

Approved by:	Signature	Date:	Version:
Matt Harmsworth	MWH	19/06/2023	1.1
Clive Ward	CW	19/06/2023	1.1
			Reviewed before issue.

Re-Survey Date.

Survey Type:	Lifecycle:	Re-survey Date:
BS5837: 2012	Planning Only	n/a

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Summary:

This is a BS5837 compliant arboricultural assessment report providing detailed and sufficient information for the Local Planning Authority to be able to consider the effect of the proposed development on local character and amenity from a tree perspective.

Our brief has been to obtain details of the tree population on site with a view to assessing any arboricultural constraints.

This report was commissioned in relation to the proposed development at Land South Of The Green The Green Charlton Hampshire, SP10 4AZ.

The report details all trees over 75mm at 1.5m above ground level that are relevant to the siting of the proposed development. The position of the trees on the site is illustrated on the tree constraints plan and information about the tree stock and its current condition is given within the arboricultural data tables.

It will assist the planning process by discussing the impact that the proposals will have on the existing tree stock.

An Arboricultural Impact Assessment is included at Section 4 which details the constraints placed on the proposed development from the rooting area of the trees below ground and above ground by virtue of their size and position.

Report Author.

ROAVR (ROAVR Group) was formed in 2010 and since then has carried out arboricultural consultancy Nationwide with directly employed consultants. Our consultants are all individual members of the Arboricultural Association and the report author is listed in the document control sheet.

Validation Statement for the Local Planning Authority.

This report includes the following for LPA validation purposes:

- A **tree survey and tree constraints plan** showing the existing trees, their category rating and above and below ground constraints shown on an OS extract OR a topographical survey
- An **arboricultural impact assessment** which describes how the development will affect local character from a tree perspective
- An **arboricultural method statement** describing tree protection measures and implementation strategy
- An **appendices** highlighting tree related information including the **arboricultural data tables**

Customer Action Points.

- Reporting complete - send to your Local Planning Authority
- On planning award contact us with your decision notice
- Appoint a project arborist prior to commencement

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Tree Survey & Arboricultural Impact Assessment to BS 5837 2012 of trees at:

Land South Of The Green The Green Charlton Hampshire, SP10 4AZ.

1 Scope

- 1.1 We have recently been instructed to undertake an appraisal of mature tree cover at Land South Of The Green The Green Charlton Hampshire, SP10 4AZ.
- 1.2 The data was collected to the British Standard BS5837 'Trees in Relation to Design, Demolition and Construction - Recommendations' 2012.
- 1.3 The survey has been commissioned to offer guidance on the arboricultural constraints with a view to the proposals for a new beacon installation.
- 1.4 The trees were inspected on the 08/05/2023 following the guidance in the British Standard by ROAVR. The crowns and stems were inspected from the ground using the 'Visual Tree Assessment (VTA)' method; non invasive techniques were used at this stage. Although a sounding hammer was used to determine the presence of any decay.
- 1.5 The site was assessed and data was collected on all woody vegetation falling within the scope of the British Standard. Trees were grouped or designated woodlands as per the allowance in the British Standard when the area in question was uniform in terms of species, age or geography.

Photographic Plates.



Photographic plate showing proposed beacon location and adjacent gas building



Photographic plate showing proposed beacon location and trees T1 (left) & T2 (right)

2. Site Conditions & Site Surroundings

- 2.1 The site is situated in the village of Charlton in the Test Valley Council control area.
- 2.2 The site is an open green space in the village centre.
- 2.3 The wider locality is predominantly rural. The site is accessed via Hatherden Road.
- 2.4 Test Valley Council do not make their Tree Preservation Order or Conservation Area mapping available online, therefore no checks for statutory tree protection has been carried out.
- 2.5 All desktop assessment data was cross checked and validated on the 16/05/2023 using the web portal provided by the local planning authority.
- 2.6 Works to protected trees require consent from the local planning authority. In the case of TPO's an application must be made. In the case of conservation areas a notification must be made. TPO applications take up to eight weeks, conservation area notifications take six weeks.
- 2.7 Certain exemptions apply; for example the removal of deadwood. In the case of dangerous trees 5-days written notice should be given to the local authority (in the cases of immediate danger the work should proceed, but the local authority contacted as soon as possible afterwards) with the works evidenced by photographs and video where possible. You should also check to ensure the works are exempt from the requirements of a felling licence.

<https://www.legislation.gov.uk/ukxi/2012/605/regulation/14/made>

- 2.8 It should be noted that planning consent overrides protected trees, where the works or removal are necessary for development to proceed and have been highlighted in the tree survey documents.
- 2.9 Bats. Under current legislation it is an offence to 'intentionally or recklessly disturb a bat' or 'damage, destroy or block access to the resting place of any bat'. For further details consultation must be made with the Statutory Nature Conservancy Organisation. Where relevant any current ecological surveys for the site will take precedence in this matter. Trees provide numerous 'potential roosting features' for a wide range of bat species. It is therefore crucial that any trees proposed for removal are checked by an appropriately competent person before any felling or ivy stripping works commence.

<https://www.bats.org.uk/advice/bats-and-the-law>

2.10 Birds. It is an offence to kill, injure or take any wild bird; or take, damage or destroy the nest of any wild bird while it is in use or being built. Therefore work likely to disturb nesting birds must be avoided from late March to August. All birds, their nest and eggs are protected by law.

<https://www.rspb.org.uk/birds-and-wildlife/advice/wildlife-and-the-law/wildlife-and-countryside-act/>

3. Drawings

- 3.1 Appended to this report is a tree constraints plan, tree assessment plan, and a tree protection plan,
- 3.2 The tree constraints plan has been produced using an OS supplied .dwg (AutoCAD) base plan as no topographical survey was available. Tree positions and data have been applied using our survey handset as an onsite exercise with the constraints plan being produced as a PDF through AutoCAD.
- 3.3 An autoCAD .dwg file of the tree constraints is available on request for project stakeholders to utilise.
- 3.4 The *Tree Constraints Plan* shows the existing layout. For each tree the stem location is indicated and scaled according to its diameter, the canopy is indicated according to measurements taken along the four cardinal points of the compass. Root protection areas (RPAs) are indicated which are calculated according to the guidelines within BS 5837 (2012).
- 3.5 Where appropriate, the shapes of the RPAs have been amended to reflect actual site conditions or where trees have been heavily pruned. The 'original' RPAs are indicated as a dashed line whereas the amended RPAs are indicated as a solid line. Any variation to this approach will be highlighted on the appropriate plans.
- 3.6 The *Tree Assessment Plan / Arboricultural Impact Assessment* indicates the tree constraints with the proposals overlaid. Where applicable, this plan shows where works are proposed in Root Protection Areas and which trees are to be pruned or removed. This plan accompanies the Impact Assessment which is to be found in Section 4.
- 3.7 The *Tree Protection Plan (if applicable)* shows the protection measures that are to be installed during the construction phase. This plan accompanies the Method Statement which is appended to this tree survey and AIA.

4. Arboricultural Impact Assessment - Site Specific

Tree Quality Statement.

The tree cover at the site includes two significant mature Horse Chestnut trees with good amenity value, as well as some smaller trees and a mature hedgerow.

4.1 Description of The Proposed Development

The drawings listed in the table below were used by ROAVR to produce the Arboricultural drawings referenced in this report. If your plans change (either before or after planning submission), then the tree drawings will require updating. This report cannot be submitted in support of a scheme that varies from the drawing reference number shown in box one below as the Impact Assessment (Section 4) will not be valid.

Drawing Name / No.	Date Issued To ROAVR	ROAVR Drawings Issue Date:
Tree_Protection_Beacon_v2.1_(002).docx	04/04/2023	16/05/2023

4.1.1. It is proposed to install a jubilee beacon, which will have a round steel base 950 mm diameter. This base will be attached to a square in ground concrete plinth which will measure 1000 x 1000 mm and will be 600 mm deep.

4.1.2. The table below summarises the potential impact on trees due to various activities.

Trees Potentially Affected:

Tree or Tree Group	Impacts
Trees T1 & T2	Proposed beacon and plinth inside Root Protection Area. Excavation required. Tree Protection Fencing and ground protection boarding required.
Trees T3-T6	No direct or indirect impacts
Hedgerow H1	No direct or indirect impacts

4.1.3. The appended AMS specifies the measures proposed to minimise all possible potential risks of damage to the retained trees.

4.2 Impacts to Trees

The proposals require excavation for the concrete plinth within the Root Protection Areas of T1 and T3. This excavation must be dug by hand to avoid damage to tree roots, and the final position of the beacon must be determined by the position of any roots discovered during the excavation. Test Valley have stipulated that the excavation must be supervised by the project arborist.

The excavation must be lined with thick impermeable plastic sheeting before the concrete is poured to prevent leachate from the concrete entering the soil. Temporary protective measures will be required to ensure that the rooting areas of T1 and T2 are not compacted or otherwise damaged during the installation.

An Arboricultural Method Statement is appended to this report to detail the necessary actions to be taken to ensure that the retained trees are protected from damage during the construction works.

Appendix: BS 5837: 2012 – Guidance Notes

This Standard prescribes the principles to be applied to achieve a satisfactory juxtaposition of trees and structures. It sets out to assist those concerned with trees in relation to design, demolition and construction to form balanced judgements.

It acknowledges the positive contribution trees may offer to a site, as well as the negative aspects of retaining inappropriate trees. It addresses the negative impacts that construction activity may have upon trees and offers mitigation strategies to minimise these impacts.

The Standard suggests a three stage approach to ensure best practice is followed when developing close to trees:

Stage 1: Survey Details and Notes

A ground level visual survey was undertaken. No climbing inspections or specialist decay detection were undertaken. Only trees with a stem diameter over 75mm, which lie within the site boundary or relatively close to it, were included.

Where applicable, trees with significant defects have been highlighted and appropriate remedial works have been recommended. However, this report should not be seen as a substitute for a full Safety Survey or Management Plan which are specifically designed to minimise risk and liability associated with responsibility for trees.

Wherever practicable dimensions were obtained using diameter tapes, logger's tapes, distometers and clinometers. Where obstacles prevent accurate measurement, dimensions are estimated. Trees of privately owned third parties are surveyed from the best available vantage point and observations relating to the condition of these trees should be treated accordingly. All height measurements should be regarded as approximate.

Stage 2: Arboricultural Impact Assessment

After the initial survey and the production of the Tree Constraints Plan, arborists and designers are encouraged to work together to establish a design proposal with minimal impact on the high quality trees. An assessment should be made of all possible impacts including the impact that the trees may have upon the proposal.

The arborist may recommend mitigation strategies to minimise these impacts and help achieve a more harmonious juxtaposition between buildings and trees and will offer advice in relation to the best chances of success at planning.

Stage 3: Arboricultural Method Statement (Section 5 -10 where applicable and commissioned)

This type of report specifies the measures necessary to protect trees against damage from construction activity. The Method Statement should be written in a manner that it may be conditioned and enforced by the local authority upon granting of planning permission. Many trees get damaged on development sites due to the AMS being overly complicated or unreadable from the perspective of practical implementation.

The site manager must be familiar with all aspects of the Method Statement and should ensure that all persons working on the site are aware of those aspects which are relevant to their work. This includes service installation engineers and operators of plant machinery.

Appendix: Survey Methodology

Ground level visual surveys are carried out using the Visual Tree Assessment technique described by Mattheck and Broeler (1994) and endorsed by the Arboricultural Association (LANTRA Professional Tree Inspection course, 2007).

Structural condition is assessed by inspecting the stem and scaffold branches from all angles looking for weak branch junctions or symptoms of decay. Particular attention is paid to the stem- base. Cavities are explored using a metal probe in order to assess the extent of any decay. If this is not possible further inspection is recommended in the form of a climbing inspection or using specialist decay detection equipment.

The physiological condition is assessed by inspecting the stem, branches and foliage for symptoms of disease. The overall vigour of the tree is also taken into account.

Where significant defects are observed, recommendations are made according to a scale of priority in order to reduce the likelihood of structural failure. The position of the tree and its potential targets are taken into account.

Measurements are obtained using a diameter tape, clinometer, distometer and loggers tape.

Where this is not practical measurements are estimated.

Some trees are surveyed as groups, though this is usually avoided close to areas likely to be developed.

Document Title:	Arboricultural Method Statement
Document Author:	Peter Haine FDS Arb, MArborA
Customer Name:	Clive Ward
Project Title:	Land South Of The Green The Green Charlton Hampshire, SP10 4AZ

Revision History.

Date:	Version number:	Summary of changes:
16/05/2023	1.0	First Draft
16/05/2023	1.0	Final Issue
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Distribution.

Approved by:	Signature	Date:	Version:
Matt Harmsworth	MWH	19/06/2023	1.1
Clive Ward	CW	19/06/2023	1.1
			Peer reviewed Internally.

THIS DOCUMENT IS AN ARBORICULTURAL METHOD STATEMENT AND IS SUPPORTED BY A TREE PROTECTION PLAN. IT IS A WORKING DOCUMENT & MUST BE BRIEFED ON SITE TO THE SITE MANAGER BEFORE ANY WORKS COMMENCE. OFTEN AN AMS IS CONDITIONED ON PLANNING CONSENT AND BECOMES A LEGALLY BINDING DOCUMENT.

1. Method Statement [Introduction and Overview]
 - Restrictions on Activities – Specific Zones
 - Restrictions on Activities – Throughout the Site
2. Site Inspection
 - Example ACoW sheet.
3. Tree Works Schedule
 - Tree Works Specification
4. Tree Protection Barriers Detailed Specification
 - Tree Protection Fencing
5. Ground Protection Measures Detailed Specification
6. Limitations
 - Appendix 1 – Site Location
 - Appendix 2 – Arboricultural Data Tables
 - Appendix 3 – Arboricultural Plans

1. Method Statement [Introduction and Overview]

1.1. Definition of Terms

Some terms used within the Arboricultural Method Statement have very specific meanings. These are defined below:

Root Protection Area (RPA). This is a theoretical area of ground around a tree where the roots are likely to proliferate. Ground disturbance in this area should be minimised in order to avoid significant impact on tree health. RPAs are indicated on all plans accompanying this report as a red or pink line.

Construction Exclusion Zone (CEZ). These zones are created to protect roots and canopies from inadvertent damage by construction activity. They are usually fenced off by protective barriers throughout the entire construction phase. No works are permitted in these zones other than minor landscaping works which do not require a change in ground level. Where practicable the entire Root Protection Area and the area beneath the tree canopy shall be treated as a Construction Exclusion Zone. These zones are shown on the Tree Protection Plan.

Restricted Activity Zone (RAZ). It is not always possible to create a Construction Exclusion Zone over the entire RPA. This is because access may be required or some works may be proposed within the RPA. In such circumstances a Restricted Activity Zone is created where limitations are placed on construction activity. Ground protection measures may be specified or the Restricted Activity Zone may be fenced off throughout part of the construction phase. See the legend on the Tree Protection Plan to identify these zones.

1.2. Tree Protection Barriers - Overview

The Tree Protection Plan indicates the location of all proposed tree protection barriers.

The barriers shall be installed prior to the commencement of any localised construction activity including soil stripping and delivery of materials. A detailed specification of the barriers can be found in sections below.

The tree protection plan also indicates where ground protection measures shall be installed / maintained as specified in sections 1.7 onwards (Restricted Activity Zones).

1.3. Planning Status

Tree protection measures specified within this report should be agreed with the local authority so that they may be conditioned upon planning consent.

The site manager must be familiar with all aspects of this Method Statement and should liaise with the author of this report for clarification, or regarding any unforeseen issues where trees may be impacted upon.

A copy of this Method Statement shall be available on-site at all times. All personnel working on the site shall be made aware of any sections appertaining to their work. This includes short term contractors and persons responsible for deliveries and installation of services.

1.4. Overview of Protection Measures

Below is a list of potential arboricultural impacts and a summary of the proposed protection measures:

Tree no.	Protection Measures	Timeline
T1	Retain and protect with HERAS fencing and ground protection boarding	Pre-start
T2	Retain and protect with HERAS fencing and ground protection boarding	Pre-start

The above measures are described in more detail throughout the remainder of this section.

1.5. Timing of Operations

Activity within the site shall be phased according to the following chronology:

<i>Order Activity</i>	<i>Phase</i>	Phase Name	Works required
1st Phase		Pre-construction phase	Undertake a pre-start meeting with the builder, client and ACoW
2nd Phase		Protection phase	Install HERAS tree protection fencing and signage as highlighted on the TPP
3rd Phase		Ground Protection	Install any specified ground protection boarding as highlighted on the TPP
4th Phase		Construction phase	Construction works commence
5th Phase		Post Construction Phase	Remove tree protection measures

Restrictions on Activities – Specific Zones

1.6. Construction Exclusion Zones

Within Construction Exclusion Zones (shaded purple on the Tree Protection Plan) the following restrictions shall apply:

Tree Protection Barriers shall be erected and maintained throughout the entire project as indicated on the Tree Protection Plan and specified in Section 4 - Tree Protection Barriers.

No construction activity whatsoever shall occur.

No vehicles or plant machinery shall be driven or parked.

No tree works, other than those specified in this report shall be undertaken.

No alterations of ground levels or conditions.

No chemicals or cement washings permitted.

No excavation whatsoever shall occur.

No temporary structures.

No spoil shall be stored.

No fires shall be permitted.

All hazardous materials (including non-essential cement products) shall be forbidden.

1.7. Restricted Activity Zone

Within these zones (indicated on the Tree Protection Plan) tree roots are likely to be present. Access will be required to facilitate excavation, pouring of concrete foundation, and installation of beacon. The following restrictions shall apply:

A suitable load spreading surface shall be installed and/or maintained as specified in Section 5 – Ground Protection Measures. This shall remain in place throughout the entire construction phase.

Excavation in this zone shall be completed using hand tools only, and the excavation must be supervised by the project arborist.

Roots in excess of 25mm shall be retained wherever possible.

Roots in excess of 10mm shall be pruned with sharp secateurs.

The final position of the beacon shall be determined by the presence of tree roots, if roots over 25 mm are discovered when ground is broken then the position shall be altered to minimise impacts on the trees.

The excavation shall be lined with thick impermeable plastic sheeting prior to pouring concrete, to prevent cement leachate entering the soil.

Storage of materials shall be limited to that which is required for the task in hand. Heavy materials that require storage for more than two days shall be stored outside the Restricted Zone.

No spoil shall be stored.

No fires shall be permitted.

All hazardous materials (including non-essential cement products) shall be forbidden.

Restrictions on Activities – Throughout the Site

1.8. Canopy Protection

In order to protect tree canopies the following restrictions shall apply throughout the site:

No machinery shall pass beneath the crowns of trees without being carefully marshalled in order to ensure that no branches are damaged.

If materials require installation or delivery beneath tree canopies, this shall be done without the use of overhead cranes.

If materials are to be installed or delivered close to tree canopies (but not beneath them) and a crane is required, they shall be carefully marshalled in order to ensure that branches are not accidentally damaged.

1.9. Siting of Cabins and Storage of Materials

Cabins and heavy building materials may be located or stored anywhere outside of Construction Exclusion Zones and Restricted Activity Zones.

Any proposal to install cabins or materials within these zones shall be agreed in writing with the local authority prior to installation.

1.10. Hazardous Materials

Any mixing of cement based materials shall take place outside the Construction Exclusion Zones and Restricted Activity Zones. Where cement is to be mixed on sturdy plastic sheeting e.g 1200 gauge DPM considerable distances from trees and water run-off cannot enter Root Protection Areas.

All other chemicals hazardous to tree health, including petrol and diesel, shall be stored in suitable containers as specified by current COSHH Regulations, and kept away from Root Protection Areas.

1.11. Removal of Tree Protection Barriers

This will be done after all major construction work is complete. Vehicular access will not be permitted within the Construction Exclusion Zones.

The local authority tree officer shall be made aware that the fencing is to be removed.

2. Site Inspection

2.1. Inspection Schedule

In order to ensure that the trees are adequately protected it shall be necessary to periodically monitor the works. This will be done by the local authority tree officer or an appointed arborist (Arboricultural Clerk of Works) who will provide the tree officer with a copy of inspection details.

<i>Order Activity</i>	<i>Phase</i>	Phase Name	Works required
1st Phase		Pre-construction phase	Pre-start ACoW visit with all interested stakeholders
2nd Phase		Protection phase	ACoW visit to sign off tree protection measures
3rd Phase		Ground Protection	ACoW visit to sign off tree protection measures
4th Phase		Construction phase	ACoW visit to supervise excavation
5th Phase		Post Construction Phase	ACoW visit to supervise removal of protection measures and final site sign off.

Example ACoW sheet.



Woodland Solutions (Northern) Ltd t/a ROAVR Group
The Green House
Beechwood Business Park North
Inverness
IV2 3BL
www.roavr-group.co.uk
T: 01463 667302

SITE SUPERVISION FORM - ARBORICULTURAL
CLERK OF WORKS

DATE	
CLIENT	
TELEPHONE NUMBER	
E-MAIL	

TERMS AND CONDITIONS FOR THE PROVISION OF ARBORICULTURAL CONSULTANCY

Site:	
Inspected by:	
Site Manager:	
Date of Inspection:	

Tree Protection Fencing.

Comments/Actions:

Ground Protection.

Comments/Actions:

Additional Comments.

Remarks:

I am aware of the tree protection requirements for this site and understand no retained trees must be damaged.

Signed:	Dated:
Name:	Company:

3. Tree Works Schedule

Tree Works Specification

3.1.1. No tree works will be required prior to the commencement of construction activity.

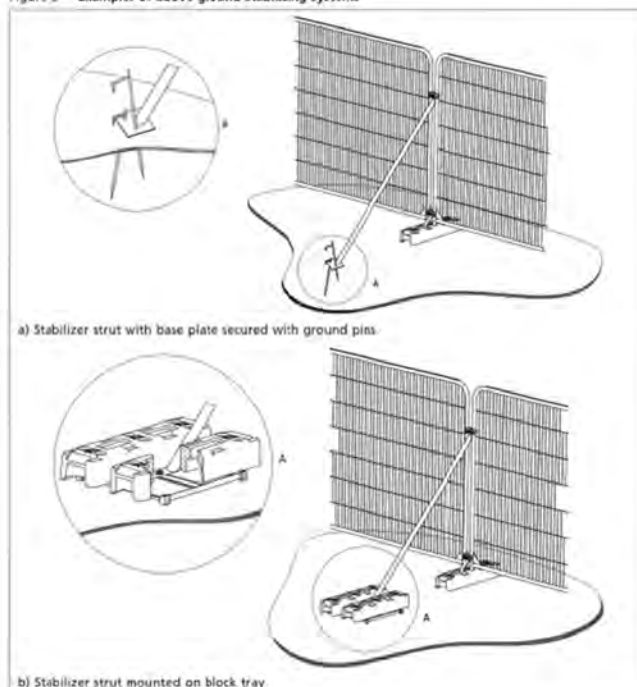
4. Tree Protection Barriers Detailed Specification

Tree Protection Fencing

The purpose of tree protection barriers is to keep construction activity away from Restricted Activity Zones or Construction Exclusion Zones. They should be appropriate to the nature and proximity of activity within the site. The barriers should be erected prior to the commencement of all activity including demolition, soil stripping and delivery of materials and demolition (except where existing structures require demolition to enable the barriers to be installed).

Barrier systems are specified below and should be installed according to the legend on the Tree Protection Plan.

Figure 3 Examples of above-ground stabilizing systems



Suitable weather-proof notices should be displayed to identify tree protection zones. They should state the purpose of the fencing and that it should not be moved, or traversed, other than by authorised personnel.



Example signage.

5. Ground Protection Measures Detailed Specification

Where the Restricted Activity Zone is indicated on the Tree Protection Plan (shaded in yellow), the soil may contain tree roots, and ground protection measures should be implemented.

Where Root Protection Areas are outside of the Construction Exclusion Zone, the soil may be subject to compaction due to general construction activity (including pedestrian activity and use of plant machinery).

In order to minimise compaction, it is proposed to ensure that a suitable load-spreading surface is in place at all times.

Any existing hard surfacing may be retained and reinforced (where Construction activity is applicable and adequate), otherwise suitable new ground protection fencing measures shall be installed. The ground protection will need to be able to adequately spread the load of construction traffic. Where existing hard surfacing is to be retained, it shall not be necessary to install additional ground protection measures. However, the hard surfacing must be firm enough to spread the load of any traffic passing overhead.

Only pedestrian traffic and wheelbarrows will be used, the ground protection measures will be:

Plywood boards a minimum 25 mm thick, or scaffold boards installed directly onto a geotextile fabric on the ground.

The ground protection measures shall be installed and approved before commencement of construction activity and before the arrival of plant, machinery or materials. They shall remain in place until all construction activity is complete.

Appendix: Further Information

Building Near Trees – General

National Joint Utilities Group publication # 10 (1995), Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees. Downloadable at www.njug.demon.co.uk/pdf/NJUG%20Publication10.pdf

NHBC Standards Chapter 4.2., Trees and Buildings.

Horticulture LINK project 212. (University of Cambridge, 2004), Controlling Water Use of Trees to Alleviate Subsidence Risk. Tree Planting and aftercare see www.trees.org.uk/leaflets.php# for downloadable leaflets on selecting a garden tree, planting, aftercare and veteran tree management.

British Standards BS 5837: 2012. Trees in Relation to Design, Demolition and Construction – Recommendations. Bs 3998: 2010.

Recommendations for Tree Work. BS 3936: 1992. Nursery Stock. Part 1: Specification for Trees and Shrubs. BS 3936: 1992. Nursery Stock. Part 10:

Specification for Ground Cover Plants. BS 4043: 1989. Transplanting Root-balled Trees. BS 8004: 1986. Foundations. BS 8103: 1995.

Structural design of Low-Rise Buildings. BS 8206: 1992. Lighting for Buildings.

BS 8545:2014. Trees: From nursery to independence in the landscape – Recommendations

BS 3882: 2007. Topsoil. BS 4428: 1989. General Landscaping Operations (excluding hard surfaces). Permission to do Works to Protected Trees / Tree Law Forestry Commission (Edinburgh, 2003), Tree Felling – Getting Permission. Country Services Division - Forestry Commission. Downloadable at [www.forestry.gov.uk/website/pdf.nsf/pdf/wgsfell.pdf/\\$FILE/wgsfell.pdf](http://www.forestry.gov.uk/website/pdf.nsf/pdf/wgsfell.pdf/$FILE/wgsfell.pdf)

Transport and the Regions (Department of the Environment, 2000), Tree Preservation Orders, A Guide to the Law and Good Practice. Downloadable at www.communities.gov.uk/publications/planningandbuilding/tposguide

C. Mynors, The Law of Trees, Forests and Hedgerows (Sweet and Maxwell, London, 2002)

Communities and Local Government website with numerous downloadable documents, from:

<http://www.communities.gov.uk/planningandbuilding/planning/treeshighhedges/Lighting Levels>

P.J. Littlefair, B.R.E. 209: Site layout planning for daylight and sunlight A guide to good practice. B.R.E. Bookshop, London.

British Standards Institution. Code of practice for daylighting. British Standard BS 8206: Part 2 (1992).

Chartered Institution of Building Services Engineers. Applications manual: Window Design (London, 1987).

NBA Tectonics. A study of passive solar housing estate layout. ETSU Report S-1126. Harwell, Energy Technology Support Unit (1988).

I.P. Duncan; D. Hawkes, Passive solar design in non-domestic buildings. ETSU Report S-1110. Harwell, Energy Technology. P. J. Littlefair, Measuring Daylight, BRE Information Paper 23/93 f3.50. (Advises on measuring daylight under the real sky or an artificial sky, allowing for the changing nature of sky light).

High Hedges Communities and Local Government website with numerous downloadable documents, from:

<http://www.communities.gov.uk/planningandbuilding/planning/treeshighhedges/Tree Specific>

Websites

www.trees.org.uk Arboricultural Association www.rfs.co.uk Royal Forestry Society of England, Wales and N. Ireland

www.treehelp.info The Tree Advice Trust

www.woodland-trust.org.uk The Woodland Trust www.treecouncil.org.uk The Tree Council

www.go-roavr.co.uk - portal for booking tree surveys UK wide.

6. Limitations

- 6.1 ROAVR has prepared this Report for the sole use of the above named Client/Agent in accordance with our terms of business, under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us.
- 6.2 This Report may not be relied upon by any other party without the prior and express written agreement of ROAVR. The assessments made assume that the land use will continue for their current purpose without significant change. ROAVR has not independently verified information obtained from third parties.
- 6.3 This report, video walkthrough, data tables and raw data remain the copyright of ROAVR until such time as any monies owed are settled in full and the report may be withdrawn at any time.
- 6.4 This report, site visit, plans and conclusions are proportional to the proposals and in some cases a simple plan based impact assessment may be all that is required.
- 6.5 Important - to ensure fair allocation of resources, we allow you ten working days to review the report and issue any feedback, beyond that changes are chargeable.

Should you require any further information, please do not hesitate to contact us at any time.

Mr. Peter Haine FDSc Arb
Consultant Arborist



ROAVR | GROUP

Prepared by: Peter Haine
Checked by: Matt Harmsworth

Appendix 1 – Site Location



Appendix 2 – Arboricultural Data Tables

Tree Number	Species	Age Class	DBH	Height (crown height)	N	E	S	W	Condition	Life Expectancy	Physical Description	Comments	Managment Recommendations	RPA offset from stem.	Category Rating
T1	<i>Aesculus hippocastanum</i> (Horse Chestnut)	M	1000	15	4	4	4	4	Fair	10+	Pollard. Cavity on stem. Mechanical Damage.	None	None	12	C1
T2	<i>Aesculus hippocastanum</i> (Horse Chestnut)	M	1100	15	4	4	4	4	Fair	10+	Pollard. Cavity on stem. Mechanical Damage.	None	None	13.2	C1
T3	<i>Quercus robur</i> (Common Oak)	Y	125	4	2.5	2.5	2.5	2.5	Fair	10+	None	None	None	1.5	C1
T4	<i>Crataegus monogyna</i> (Hawthorn)	Y	120	4	2	2	2	2	Poor	<10	Declining. Broken branches in crown.	None	None	1.44	U
T5	<i>Crataegus monogyna</i> (Hawthorn)	Y	134	3.5	2	2	2	2	Poor	<10	Declining. Broken branches in crown.	None	None	1.61	U
T6	<i>Crataegus monogyna</i> (Hawthorn)	Y	100	4	2	2	2	2	Fair	10+	Mechanical Damage.	None	None	1.2	C1
H1	<i>Corylus avellana</i> (Hazel), <i>Taxus baccata</i> (Yew), <i>Fagus sylvatica</i> (Beech)	SM	100	3	0.5	0.5	0.5	0.5	Fair	10+	None	None	None	1.2	C3

Arboricultural Data Tables Terms.

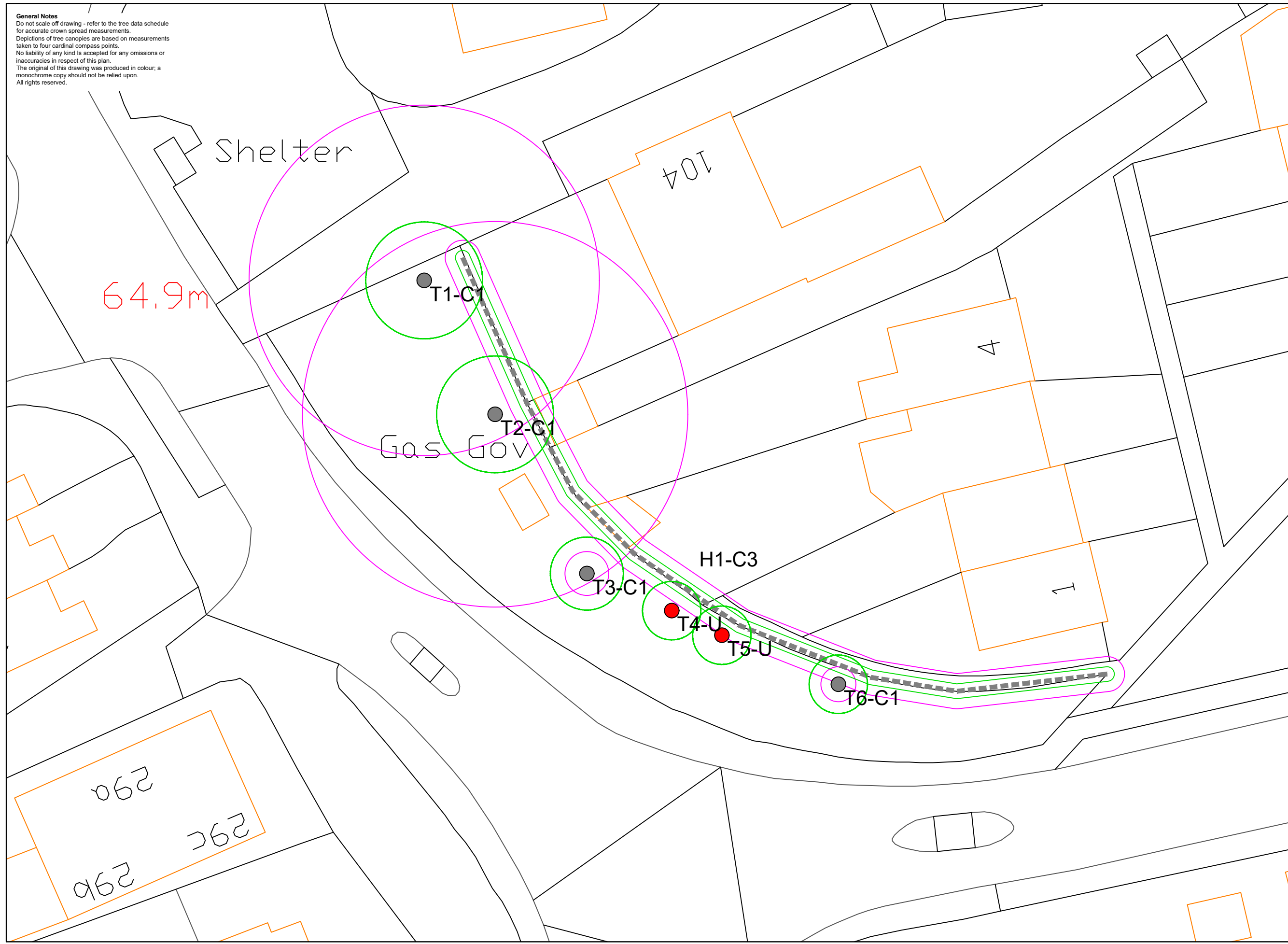
Tree ID	Reference no. T1, T2 etc. for trees; H for hedgerows; G for Groups and W for woodlands.
Tag Number	If the tree has been tagged with an 'arbo' tag then the physical tag number is listed in this column.
TPO Number	If the tree is subject to a TPO and it is known to us this will be recorded here.
In Conservation Area	Y/N - If the tree is located within a Conservation Area we may confirm that here.
Tree Type	Beech, Oak etc.
Common Name	Common Beech, Evergreen Oak etc.
Latin Name	Fagus sylvatica; Quercus robur - Latin names.
Maturity	The estimated age class of the tree (relative to species) o Y - Young o SM - Semi-mature o EM - Early-mature o M - Mature o OM - Over-mature or V - Veteran
Potential for Bat Habitat	Y/N - if the tree has cracks, cavities or suitable bat habitat it may require further ecological surveys and form a constraint on development.
Measurements Estimated (Y/N)	Y/N - if the tree is off site, covered with ivy, or some other restriction the British Standard allows for measurements to be estimated.
Height	Height of the tree in metres.
Height & Direction of 1st Significant Branch	Recorded to consider access.
Number of Stems	Number of clear stems.
Diameter at Breast Height	Diameter of stem (mm) at breast height (1.5 metres above ground).
Crown Spread	The maximum spread of the tree's canopy measured from the stem in four directions (North, East, South, West).
Canopy Height	The height between ground level and the lowest part of the canopy when considering access.
Crown / stem / Basal Condition	Good, Fair, Poor condition comments.
Category	Tree categorisation based on section 4.5 of BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations. Four categories are used (A, B, C, U) with categories A, B & C being assigned one of three separate sub categories (1, 2 or 3): A – Trees of high quality with an estimated remaining life expectancy of at least 40 years. B – Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. C – Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm
Life Expectancy	Estimated safe, usable life expectancy.

Sub-Category	Subcategories: 1: Mainly arboricultural & aesthetic qualities 2: Mainly landscape qualities 3: Mainly cultural values, including conservation 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
Physical Condition	Good, Fair, Poor condition considering the tree structure, form and vitality.
Management Recommendations	Recommendations (regardless of the development proposals if available) for removal, retention and/or remedial arboricultural works.
Comments	A brief description of the tree which refers to tree form, condition, health and significant defects. Comments regarding environmental conditions affecting the tree (e.g. ground conditions) will also be included where relevant.







Arboricultural data tables are essentially an asset register of the trees and tree cover on and adjacent to a development site. The information included within the tables is used to produce a tree constraints plan (TCP) which shows in 2D the constraints and opportunities on a particular site.

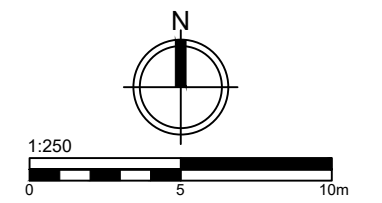
Appendix 3 – Arboricultural Plans

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.
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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 Constraints Plan

Client: Clive Ward

Site/Project: Land South Of The Green The Green Charlton Hampshire, SP10 4AZ

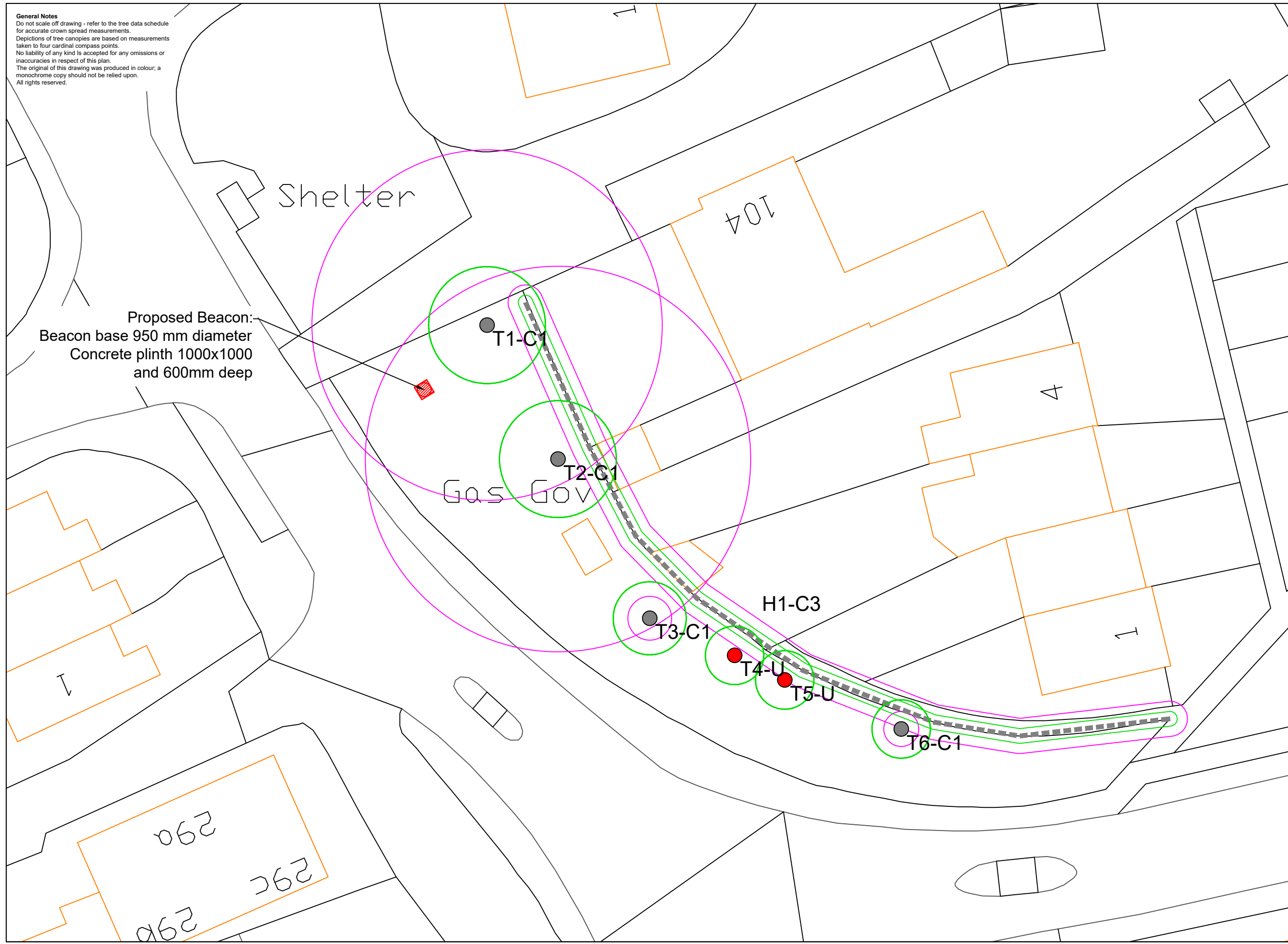
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





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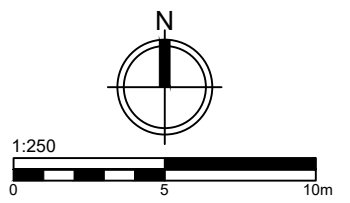
General Notes
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Proposed Beacon:
 Beacon base 950 mm diameter
 Concrete plinth 1000x1000
 and 600mm deep

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**
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-  **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 Assessment Plan

Client: Clive Ward

Site/Project: Land South Of The Green The Greenwood Charlton Hampshire, SP10 4AZ

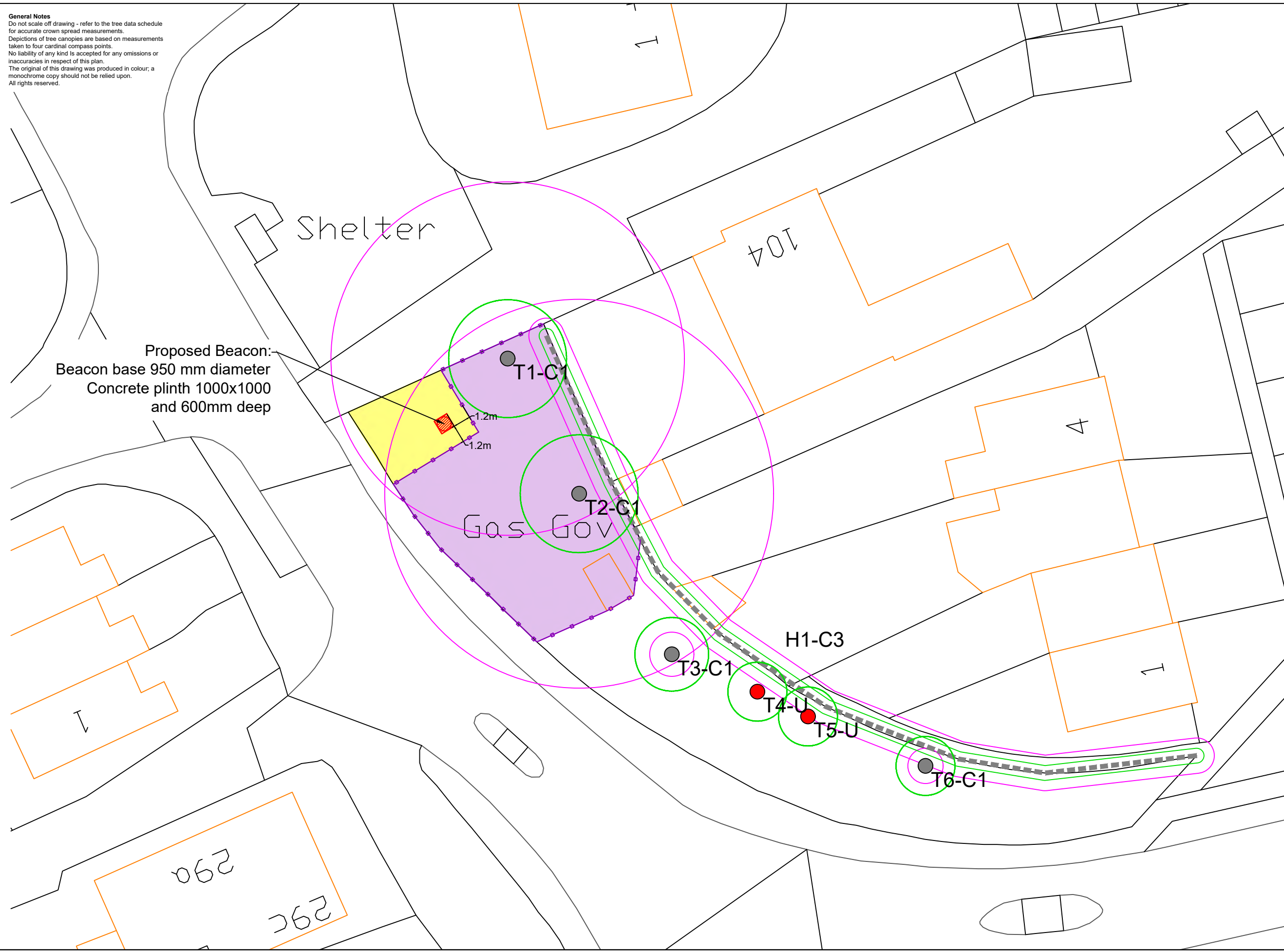
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Drawing No: 23_5837_04_37	Rev: 1	Drawn By: PH	Checked By: MH



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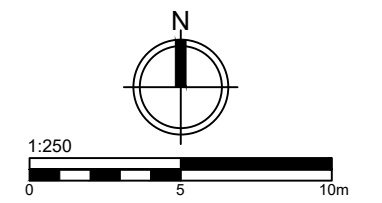
General Notes
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Proposed Beacon:
 Beacon base 950 mm diameter
 Concrete plinth 1000x1000 and 600mm deep



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- 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
- Ground Protection/Restricted Activity Zone
- Construction Exclusion Zone



Tree Protection Plan

Client: Clive Ward

Site/Project: Land South Of The Green The Greenwood Charlton Hampshire, SP10 4AZ

Scale/Sheet: 1:250 @ A3 Date: 16/05/2023

Drawing No: 23_5837_04_37	Rev: 1	Drawn By: PH	Checked By: MH
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