Tree Solutions

Arboricultural Consultants

Arboricultural Impact Assessment & Method Statement

New Pavilion - Holy Trinity Sports Ground, Southport

Prepared for:

HOLY TRINITY RECREATION GROUND LIMITED

Our Ref: 23/AIA/SEFTON/33

December 2023

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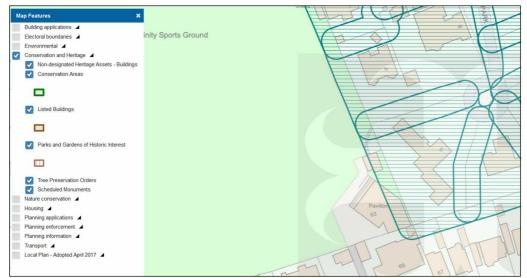
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1.0 INSTRUCTION

- 1.1 We have been instructed by Holy Trinity Recreation Ground (the applicant) to carry out an Arboricultural Impact Assessment (AIA) to assess the development proposal in relation to trees in accordance with the principles of British Standard 5837 'Trees in Relation to Design, Demolition & Construction Recommendations' 2012.
- 1.2 We are instructed to prepare a report to provide information to assist all parties involved in the planning process to make balanced judgements regarding arboricultural features in relation to the proposed new pavilion at Holy Trinity Sports Ground, Southport. As such, all trees within influencing distance to the development proposal both on and adjoining the site have been surveyed and are listed within a Tree Survey Schedule (*Appendix 1*) and plotted on all accompanying plans.
- 1.3 The stage 1 tree survey was carried out on 12 December 2023 by Alistair Henderson, Principal Consultant to Tree Solutions Ltd. Our appraisal of the mechanical integrity of trees on the site is enough to inform the current project. The assessment of trees is carried out from ground level without invasive investigation and the disclosure of hidden defects cannot therefore be expected. Whilst the survey is not specifically commissioned to report on matters of tree safety, we report obvious defects that are significant in relation to the existing and proposed land use. We do not carry out detailed safety inspections unless specifically instructed to do so in writing and have not carried out such inspections of trees on the proposal site.
- 1.4 Four individual trees (T1–T4) were surveyed and mapped on a Preliminary Tree Constraints & Impact Assessment Plan Ref: 23/AIA/SEFTON/33, Drawing No. 1 & 2 at *Appendix 2*. All arboricultural information recorded during the survey is presented within a schedule at *Appendix 1*.
- 1.5 The Arboricultural Impact Assessment is based on the proposed layout plan Ref: 9059.001 (Rev P10) and Drainage Plan Ref: 9059.001, P400 provided by the project Architect Richard Every.

2.0 STATUTORY CONTROLS & PLANNING POLICY

2.1 A search on Sefton Council interactive map revealed that all trees beyond the eastern boundary are subject to a Tree Preservation Order. It is however not clear if the Order is an Area or Group designation as this information is not available. As such, statutory planning consent is required to prior to undertaking any works to trees.



P1 - Extract from Sefton Council interactive map showing location of protected trees on adjoining land

2.2 Protected Species

2.2.1 Mature trees often contain cavities, crevices and hollows that offer potential habitat for species such as bats and barn owls. Both are afforded protection under the Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as well as The Conservation (Natural Habitats, &c) (Amendment) Regulations 2007.

2.3 Wildlife Habitats

2.3.1 Trees and hedgerows of most species provide valuable nesting sites for a wide range of birds, and it is likely that nesting birds will be present on the site during the period March to September.

3.0 THE SITE

3.1 The application site contains the existing sports pavilion, ancillary buildings, and car park. All trees are located beyond the eastern boundary wall within the garden of 5 Grove Park.



P1 - site location

4.0 DEVELOPMENT PROPOSAL

- 4.1 Erection of a new sports pavilion with four changing rooms, spectator facilities and lounge facilities, additional parking and bicycle storage area, and associated works following demolition of the existing sports club.
- 5.0 GENERAL CONSTRAINTS DATA CONSTRUCTION EXCLUSION ZONES (CEZ's)
- 5.1 GENERAL
- 5.1.1 During the development process for retention trees, there may be three and even four constraints to consider: Construction Exclusion Zone (CEZ's):
 - CEZ 1: Root Protection Area (see 5.2)
 - CEZ 2: Tree Crown Protection (see 5.3)
 - CEZ 3: Tree Dominance (see 5.4)
 - CEZ 4: New Tree Planting Zone (see 5.5)

CEZ's are explained below:

5.2 CEZ 1: ROOT PROTECTION AREA (RPA)

- 5.2.1 The RPA, calculated in m², should be protected before and during any demolition/construction works. This ensures the effective retention of trees by safeguarding a reliable quantum of functioning tree roots. The RPA is based on a radial measure from the centre of the tree stem, which is calculated by multiplying the stem diameter by a factor of twelve or by the (mean stem diameter²) x number of stems for multi-stemmed trees.
- 5.2.2 During the AIA 2, the derived radial measure is converted by the arboriculturalist into the actual area to be protected, having due regard to prevailing site conditions and how these may have affected the tree(s), particularly in relation to factors affecting their likely rooting disposition. The RPA for each tree should initially be plotted as a circle centred on the base of the stem. Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution.

5.2.3 The means of protecting the RPA will include the installation of tree protective fencing prior to the start of any demolition or construction work on site. The prohibition of various activities within the RPA must be adhered to (e.g. mechanical excavation, soil stripping, fire lighting, material storage, lowering levels and creating excessive sealed surfacing) and may include the use of temporary ground protection and/or special engineering solutions where construction is proposed near to retention trees or within the RPA.

5.3 CEZ 2: TREE CROWN PROTECTION ZONE

- 5.3.1 This is the area above ground occupied by the crown (branches) of the tree, along with allowances for working space (safe working area) and if appropriate, for future growth. The extent of CEZ 2 is determined by considering the existing and future crown spread of the tree(s), bearing in mind the possibility of this being modified by an acceptable quantum of pruning.
- 5.3.2 Access facilitation pruning is required to the western canopy of tree number 2 to provide a suitable easement for the erection of scaffolding. Pruning works will be kept to the minimum of 0.5m clear of scaffold boards to allow for clear unimpeded access for the proposed construction works. Given this is a Holly that has been pruned back to the boundary on the past, the necessary repeat pruning will have no adverse impact to its health and vitality.
- 5.4 CEZ 3: TREE DOMINANCE ZONE
- 5.4.1 There are no issues of overdominance or excessive shading from trees as the new building is non-residential and is a replacement for the existing.
- 5.5 CEZ 4: NEW PLANTING ZONE
- 5.5.1 Refer to landscape proposals.
- 6.0 SURVEY METHODOLOGY
- 6.1 The method used in the preparation of this report is based on the principles of BS 5837: 2012.
 - 1. Tree heights were surveyed to the nearest 1m
 - 2. Trunk diameters were measured by use of forestry girth tape
 - 3. The category assessment (Table 1) on which the trees is based include current and long-term arboricultural, landscape, cultural and conservation values (BS5837: 2012). This table can be found at **Appendix 1**
 - 4. For clarity, the grading system is summarised from *Table 2* of the BS as follows:
 - U grade trees for removal, effective for less than 10 years
 - A grade trees of high quality and value, effective for more than 40 years
 - B grade trees of moderate quality and value, effective for more than 20 years
 - C grade trees of low quality and value, effective for 10 years

Note: We have indicated colour coding on the drawing and therefore a monochrome copy should not be relied on.

- 6.2 SOIL ASSESSMENT
- 6.2.1 A soil assessment should be undertaken by a competent person to inform decisions relating to:
 - the root protection area (RPA)
 - tree protection
 - · new planting design; and
 - foundation design to take account of retained, removed and new trees (potential soil subsidence/heave)

Tree Solutions do not undertake soil assessments and the client is advised to seek specialist advice in this respect.

7.0 JUXTAPOSITION OF TREES AND STRUCTURES

7.1 Below ground constraints

- 7.1.1 The below ground constraints are generally summarised as the root protection area (RPA). The shape of the RPA and its exact location will depend upon arboricultural considerations including likely tolerance of the tree to root disturbance; morphology and disposition of the roots when known influenced by past or existing site conditions; soil type and structure; and topography and drainage.
- 7.1.2 The purpose of the RPA is to prevent physical damage to tree roots and to prevent damage to the soil structure. Tree roots are damaged by soil compaction, changes in soil levels or soil contamination which could reduce tree health and/or stability.
- 7.1.3 Root patterns are affected by topography and characteristics of the soil or substrate. Where trees are located within proximity to existing hard standing or underground physical barriers, they are unlikely to have an even distribution of lateral roots due to restrictions in root growth created by compacted sub-grades beneath. The RPA of tree number 2 has been modified and is shown running in line with the edge of the existing building and extending further east where a more favourable rooting environment exists. All other RPA's have all been plotted unmodified as there were no underground barriers to prevent good radial root spread.

7.2 Underground Services

7.2.1 As indicated on the AIA plan at Appendix 2, a new foul sewer is proposed along the eastern gable of the new pavilion building. This is aligned within the footprint of the existing building that is being demolished and runs outside the RPA of all trees. As such we do not anticipate any adverse impacts during installation.

8.0 DEVELOPMENT IMPACT TO TREES

- 8.1 Tree Solutions carried out a stage one preliminary tree survey and provided the project architect with a report in which all existing trees and their respective Root Protection Areas (RPA) were identified and plotted on a tree constraints and impact assessment plan. We are satisfied that the design has taken the long-term future of the trees into account and is in accordance with The National Planning Policy Framework (2023), Sefton Council Planning Policies and recommendations contained with BS5837: 2012.
- 8.2 The trees are located beyond a substantial brick wall that runs along the eastern boundary. They form part of a closed canopy group with others located to their south and east that are set well back into Grove Park. The nearest trees have been surveyed and plotted using a Leica laser taking measurements from within the site. As indicated on the AIA plan at Appendix 3, they are located outside the construction area of the new pavilion which is set back 2m from the boundary wall and 1m west of the existing building line. The only possible adverse impact could have been the required foul drainage for the new internal washrooms which also run outside the RPA of trees. As such, we are confident the new pavilion and associated infrastructure can be installed with no adverse impact to the health and vitality of trees.



Magenta - existing building line
Blue - new foul alignment
Cyan - new pavilion build line



P2 – Boundary wall to east and back of existing building P3 – T1 & 3 located beyond eastern boundary wall



P4 - Trees viewed from within site to north



P5 - Trees viewed from car park/access to west

9.0 PROPOSED REVISIONS TO THE SCHEME

9.1 We advise that all proposed revisions having implications for trees should be referred to us for review.

10.0 CONCLUSIONS

- 10.1 BS 5837: 2012 contains clear and current recommendations for a best practice approach to the assessment, retention and protection of trees on development sites. The proposed development has followed this guidance by:
 - Seeking arboricultural advice and undertaking a phase 1 preliminary tree survey to inform the layout and design of the proposed development
 - Respecting the constraints posed to development of the site by high or moderate quality trees
 - Acting upon arboricultural advice throughout the design process to obtain the best development proposal whilst considering the current and future tree requirements
 - Taking the above into consideration, we can see no viable Arboricultural grounds for refusal.

11.0 LIMITING CONDITIONS

- Unless stated otherwise:
- Information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of the inspection.
- The inspection is limited to visual examination of the subject trees from ground level only and without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.
- This report has been prepared for the sole use and benefit of the client. Any liability of Tree Solutions shall not be extended to any third party.
- No part of this report can be reproduced without the authorisation of *Tree Solutions Ltd.*

Appendix One

Tree Survey Schedule



Tree Solutions

Arboricultural Consultants

SITE:	NEW PAVILLION, HOLY TRINITY SPORTS GROUND, SOUTHPORT
CLIENT:	HOLY TRINITY RECREATION GROUND LIMITED
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR:	A HENDERSON
ASSESSMENT DATE:	12 DECEMBER 2023
VIEWING CONDITIONS:	GOOD
JOB REFERENCE:	23/AIA/SEFTON/33

PAGE 1 OF 1

TREE NO. T - Tree G - Group H- Hedge	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION OF GROWTH (N.S.E.W)	N			w	STEM/ MULTI-STEM* DIA.(mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB- CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
T1	Sycamore	EM	14 2.5\$	2	4	2.5	3	360	G	 Located off-site measured 3.6m east of boundary wall with laser Hard standing over primary rooting area Forms centre tree in small, closed canopy group Subject to TPO E.R.C. 20 	3 rd party tree, no works	B2	4.3 59m²
T2	Holly	EM	8	1.5	3.5	2	2.5	200	G	 Small insignificant tree that abuts boundary wall and is causing displacement E.R.C. 10 	Crown reduce western canopy to clear scaffold and provide easement to new building	C3	2.4 18m²
Т3	Sycamore	EM	12	5	2.5	3	3	260	G	 Forms closed canopy with T1 and leans 20° north of vertical due to close proximity E.R.C. 20 	3 rd party tree, no works	B2	3 31m²
T4	Holly	EM	3	1.5	1.5	1.5	1.5	200	G	Boundary hedge plantE.R.C. 10	3 rd party tree, no works	C1	2.4 18m²

HEADINGS & ABBREVIATIONS

BS 5837 RADIUS & BS 5837 RPA:

TREE NO.
SPECIES:
AGE RANGE/LIFE STAGE:
HEIGHT:
CROWN SPREAD:
CROWN CLEARANCE & DIRECTION OF GROWTH:
STEM DIA/MULTI-STEM DIA:
VITALITY:
E.R.C. = ESTIMATED REMAINING CONTRIBUTION:
SS 5837CATEGORY & SUB-CATEGORY GRADING:

REFERENCE NUMBER. REFER TO PLAN OR NUMBERED TAGS WHERE APPLICABLE (T = TREE, G = GROUP, H = HEDGE) COMMON NAME (LATIN NAMES AVAILABLE ON REQUEST)

Y = YOUNG, SM = SEMI MATURE, EM = EARLY MATURE, M = MATURE, PM = POST MATURE

ESTIMATED AND RECORDED IN METRES. APPROXIMATELY 1 IN 10 TREES ARE MEASURED USING A CLINOMETER AND THE REMAINDER ESTIMATED AGAINST THE MEASURED TREES MAXIMUM CROWN RADIUS MEASURED TO THE FOUR CARDINAL COMPASS POINTS FOR SINGLE SPECIMENS ONLY (MEASUREMENT FOR TREE GROUPS - MAXIMUM RADIUS OF THE GROUP)

HEIGHT IN METERS OF CROWN CLEARANCE ABOVE ADJACENT GROUND LEVEL (TO INFORM ON GROUND CLEARANCE, CROWN/STEM RATIO AND SHADING)

STEM DIAMETER - MEASURED AT APPROXIMATELY 1.5 METRES ABOVE GROUND LEVEL OR A COMBINATION OF STEMS FOR MULTI-STEMMED TREES

A MEASURE OF PHYSIOLOGICAL CONDITION. D = DEAD, MD = MORIBUND, P = POOR, M = MODERATE, G = GOOD

RELATIVE USEFUL LIFE EXPECTANCY (YEARS)

A = HIGH QUALITY AND VALUE, B = MODERATE QUALITY AND VALUE, C = LOW QUALITY AND VALUE, U = UNSUITABLE FOR RETENTION (SUB-CATEGORY REFERS TO ARBORICULTURAL., LANDSCAPE AND CULTURAL/CONSERVATION VALUES)
PROTECTIVE DISTANCE - RADIUS FROM THE CENTRE OF THE STEM TO THE LINE OF TREE PROTECTION (CONSTRUCTION EXCLUSION ZONE - CEZ) AND PROTECTIVE BARRIER ROOT PROTECTION AREA - BS 5837 (2012) ANNEX D (THE RECOMMENDATIONS STATE THAT THE RPA SHOULD BE CAPPED AT 707 M²) NOTE – ALL CALCULATIONS ROUNDED TO NEAREST DECIMAL

Category and definition	Criteria (including subcategories where appropriate)								
Trees unsuitable for retention	(see Note)								
Category U	Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse,								
Those in such a condition that they cannot realistically	including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)								
be retained as living trees in	Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline								
the context of the current land use for longer than 10 years	Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality								
To years	NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.								
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation						
Trees to be considered for rete	ention								
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)						
Category B	Trees that might be included in	Trees present in numbers, usually growing	Trees with material						
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	conservation or other cultural value						
Category C	Unremarkable trees of very limited	Trees present in groups or woodlands, but	Trees with no material						
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	merit or such impaired condition that they do not qualify in higher categories	without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	conservation or other cultural value						

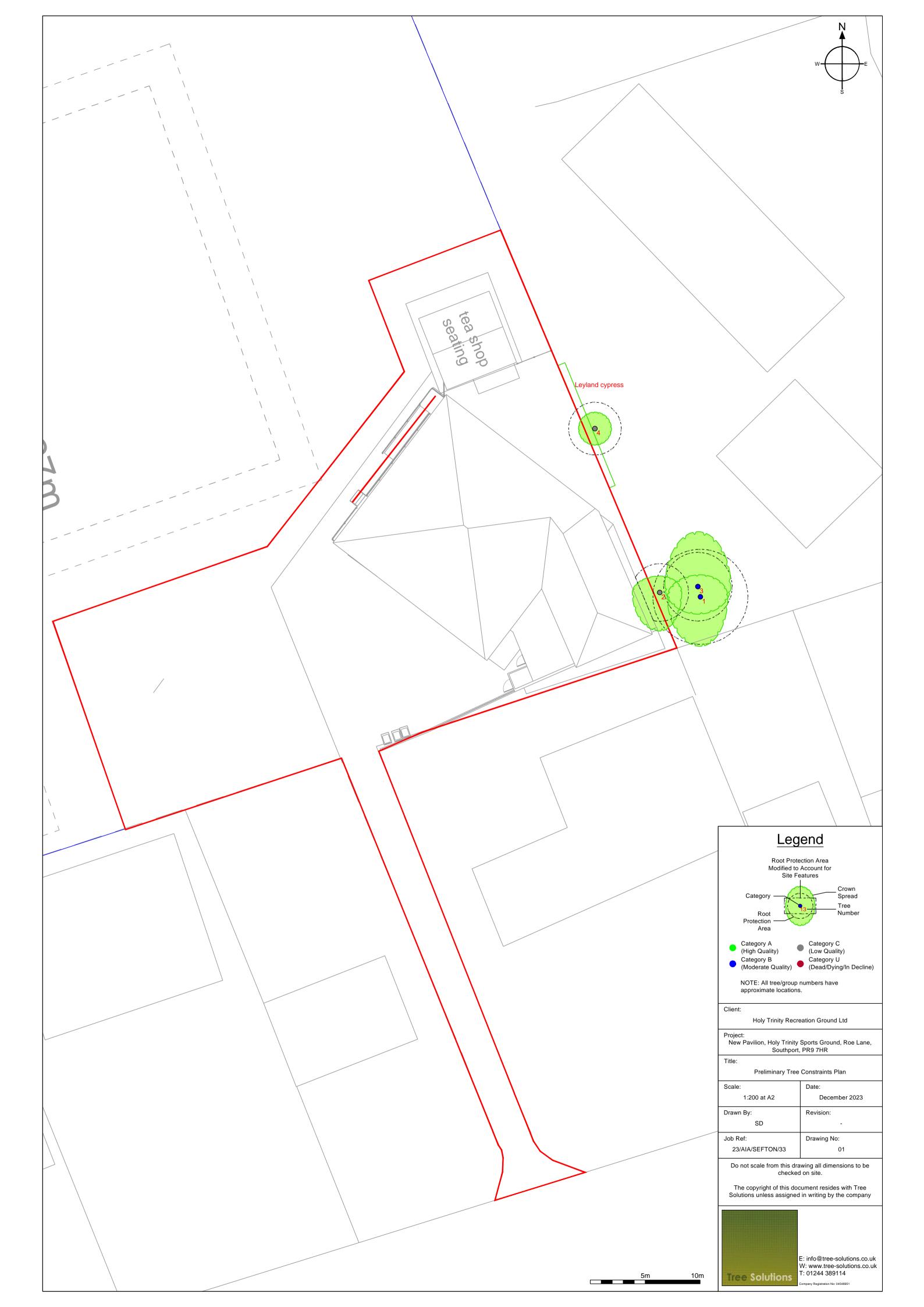
Cascade chart for tree quality assessment

Table 1

© The British Standards Institution 2012

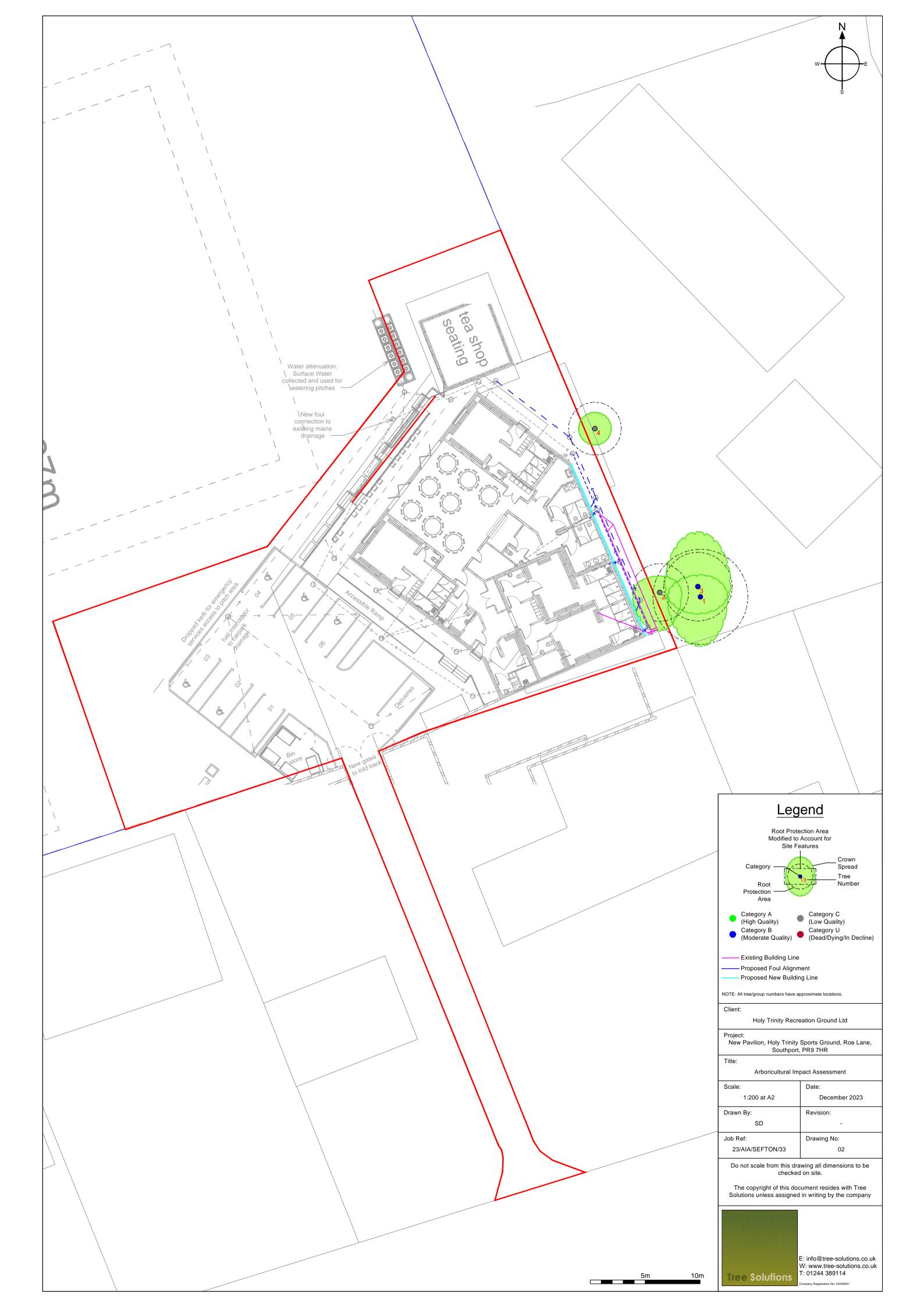
Appendix Two

Preliminary Tree Constraints Plan



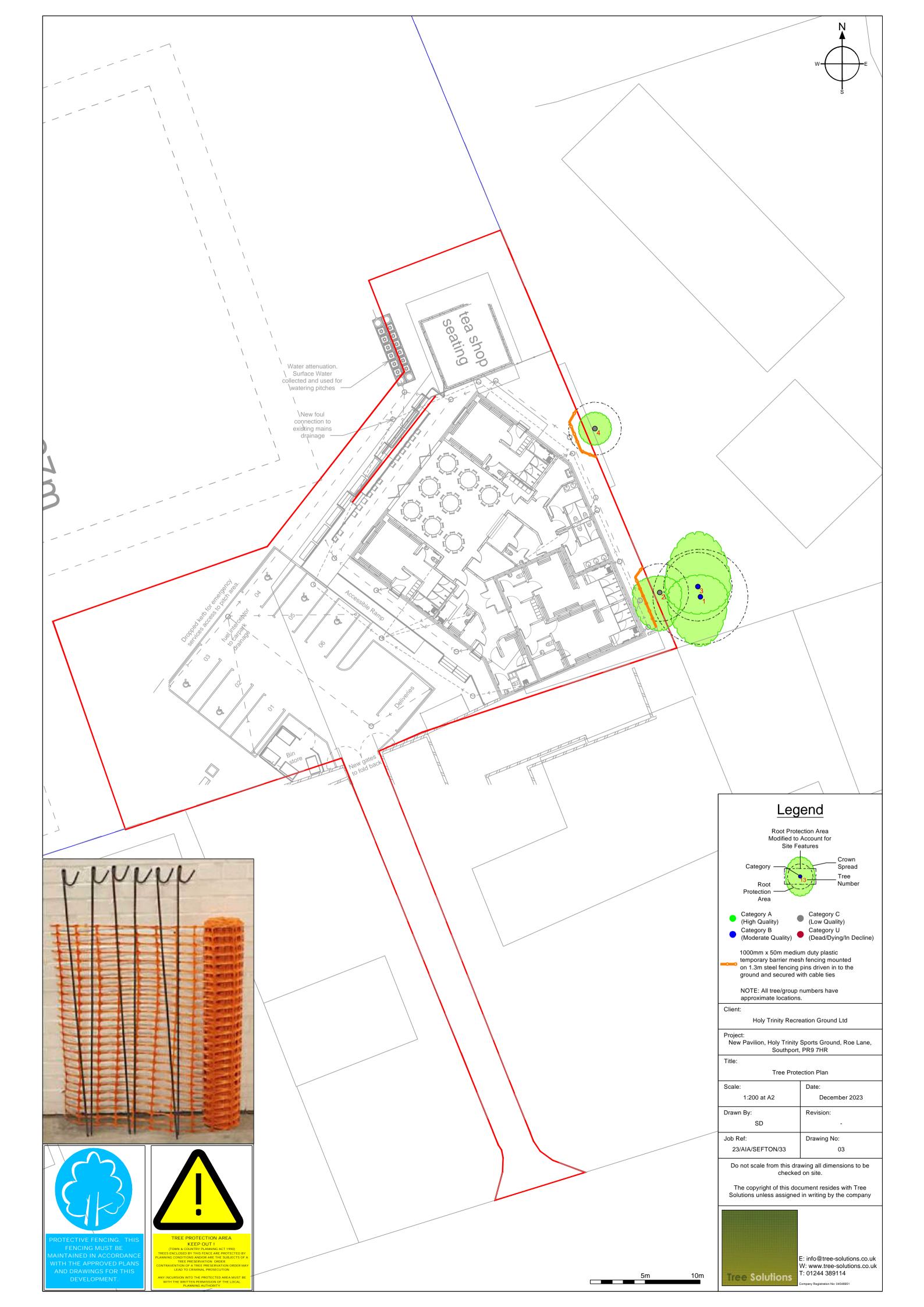
Appendix Three

Impact Assessment Plan



Appendix Four

Tree Protection Plan



Appendix Five

Tree Protective Measures/Method Statement

SEQUENCE OF OPERATIONS

From commencement of the above development, the following methodology shall be implemented in the manner and sequence described:

- 1. Tree surgery works
- 2. Erect temporary protective fencing
- 3. Main demolition/construction phase
- 4. Removal of temporary fencing
- 5. Landscaping within RPA
- 6. Arboricultural site supervision (ACoW)

1. Tree Surgery Works

- 1. Before the erection of the temporary protective fencing, all tree removal shall be implemented in accordance with the Tree Survey Schedule at *Appendix* 1
- 2. All possible efforts must be made to prevent damage to retained trees including potential root incursion or compaction caused by vehicle access.
- 3. All arboricultural works shall conform to the recommendations of BS 3998 (2010) 'Recommendations for Tree Work'
- 4. All operatives shall be equipped with and use personal protective equipment (PPE) in accordance with current Health & Safety Executive current directives and industry codes of practice.
- 5. Performance of all arboricultural operations and use of equipment shall be in accordance with current Health & Safety Executive current directives and industry codes of practice
- 6. Any additional access facilitation pruning required shall be undertaken by qualified tree contractors and conform to the recommendations of BS 3998 (2010) 'Recommendations for Tree Work'

3. Erect Temporary Tree Protective Fencing

1. Prior to commencement of any demolition and subsequent construction, preparation, excavation, or material deliveries the main contractor shall erect the temporary protective fencing as detailed in the 'Tree Protection Specification' and in the location indicated on the Tree Protection Plan.

4. Main Demolition/Construction Phase

- 1. There shall be no storage of construction material, site parking, site accommodation or equipment in any area designated as the Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) and enclosed by Temporary Protective Fencing
- 2. 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 metres of the trunk of a tree that is to be retained. No fires will be lit
- 3. The site agent shall supervise deliveries by self-loading crane, with vehicles positioned in such a manner that retained trees are not at risk of damage

Cement Mixing

• The cement mixer will be laid on top of plywood boards in a position outside the RPA of any trees. The mixer will be kept in this position throughout all development work.

Avoiding Damage to Stems and Branches

 Care shall be taken when planning site operations in proximity to trees to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without encountering retained trees.
 Such contact can result in serious injury resulting in safe retention impossible

On Site Storage of Spoil and Building Materials

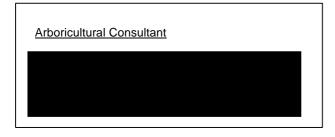
Prior to and during all site construction works no spoil will be stored and no cement mixing will take
place within the Root Protection Area of any tree on or adjacent to the site even if proposed site work
is to be within the crown spread. Any encroachment within this protected area will only be with the
prior agreement of LCC Arboricultural Officer

5. Remove all Temporary Tree Protective Fencing

1. Tree protective fencing will only be removed upon completion of all construction work and once all machinery associated with the works has left site.

6. Landscaping within RPA of Trees

- 1. There shall be **no rotovating** of ground within any area designated as a Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) and enclosed by Temporary Protective Fencing.
- 2. No hard-landscaping works or excavation for cables or any other service should be installed within the Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) without the written consent of the LPA



TREE PROTECTIVE FENCING

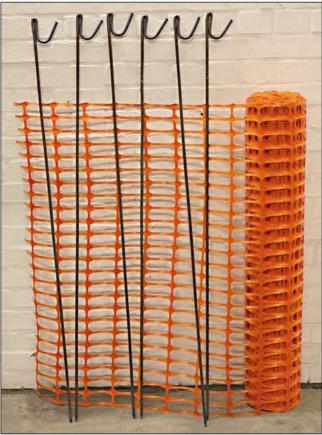
1 Before the commencement of any demolition and subsequent construction works on site (other than those set out in the schedule of tree works contained in this document), protective fencing will be erected as detailed on the Tree Protection Plan and as specified below.

Protective Fencing Detail

The fence types are shown on the Tree Protection Plan with the following colour key: -

Orange

1000mm x 50m medium duty plastic temporary barrier mesh fencing mounted on 1.3m steel fencing pins driven into the ground and secured with cable ties.



PLASNET - Plastic temporary barrier mesh fencing