



Notting Hill Home Ownership

ASHLEY PARK

Detailed Arboricultural Report





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WSP

1 Capital Quarter

Tyndall Street

Cardiff

CF10 4BZ

Phone: +44 2920 769 200

WSP.com

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Date	30/11/2018	19/12/2018		
Prepared by	Caroline Parker	John Mitchener		
Signature	-	 Digitally signed by Mitchener, John DN: cn=Mitchener, John, ou=Cardiff (1 Capital Quarter), email=john.mitchener@wsp.com Date: 2018.12.19 15:37:59		
Checked by	John Mitchener	Neil Davies		
Signature	-	 Digitally signed by Davies, Neil DN: cn=Davies, Neil, ou=Cardiff (1 Capital Quarter), email=Neil.Davies@wsp.com Date: 2018.12.19 15:41:57 Z		
Authorised by	John Mitchener	Neil Davies		
Signature	-	 Digitally signed by Davies, Neil DN: cn=Davies, Neil, ou=Cardiff (1 Capital Quarter), email=Neil.Davies@wsp.com Date: 2018.12.19 15:42:12 Z		
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1. INTRODUCTION

1.1. INTRODUCTION

- 1.1.1. WSP has been instructed by Notting Hill Home Ownership to undertake a tree survey and to subsequently provide a Detailed Arboricultural Report for land at Ashley House, Ashley Road, Tottenham Hale, N19 3AG (hereafter referred to as 'the Site').
- 1.1.2. This arboricultural report is British Standard BS 5837 *Trees in relation to design, demolition and construction – Recommendations* compliant and includes a tree survey schedule, arboricultural impact assessment, arboricultural method statement and a tree protection plan.
- 1.1.3. The purpose of this report is to identify all trees which may reasonably be affected by the proposed scheme, to assess the direct and indirect impact of the scheme upon those trees and to recommend such protection measures as are necessary to ensure the long-term wellbeing of trees which are to be retained.

1.2. VALIDITY PERIOD

- 1.2.1. Trees are dynamic organisms which are influenced by a variety of environmental variables and whose health and condition can rapidly change. As a result of this any recommendations made within this report are valid for a period of 24 months from the date of issue.

1.3. LIMITATIONS

- 1.3.1. This report in no way constitutes a health and safety survey. Where concerns for tree health and safety exist the necessary and appropriate tree inspections should be carried out.

1.4. DESCRIPTION OF THE PROPOSED DEVELOPMENT

- 1.4.1. The Ashley Park Site is located within a heavily urbanised area of Haringey, Greater London, and is proposed for redevelopment to provide residential and retail space, with associated access and landscaping. The 'Proposed Development' involves the construction of one residential building to include associated access and landscaping. The works will involve the demolition of the current buildings and structures on the Site, and clearance of other habitats (namely hardstanding). A detailed planning application for the Proposed Development is due to be submitted in December 2018, supported by this report
- 1.4.2. The Proposed Scheme includes:
 - A combination of 1, 2 and 3-bedroom apartments;
 - Commercial space; and
 - Play and communal space.

2. SITE DESCRIPTION

- 2.1.1. The Site is located off Ashley Road, Tottenham Hale, North London, approximately centred at Ordnance Survey (OS) grid reference TQ 34321 89644. The administrative authority is London Borough of Haringey.
- 2.1.2. The land surrounding the Site is urbanised and includes a mixture of residential, educational and commercial buildings including a primary school, a secondary school and a retail park. To the east of the Site is an area of green open parkland which forms an important recreational feature within the local area.
- 2.1.3. The Site is almost entirely dominated by hard surfacing with only a small area occupied by an existing building close to the western boundary. Although some scattered scrub and ruderal vegetation is present, no arboricultural features were identified within the Site boundary. Identified arboricultural features are external to the Site and are located along the western and southern edges.

Figure 1 - Aerial photograph of the survey area (edged in red)



- 2.1.4. Reference to the British Geological Survey¹ indicates that the underlying geology of the site forms part of the London Clay formation – clay, silt and sand. Reference to the Cranfield Soil and Agrifood

¹ <https://www.bgs.ac.uk/>

Institute Soilscales data², describes the soils as freely draining and slightly acid with a loamy texture and low fertility. Soils such as these are well suited to deciduous tree species.

- 2.1.5. However, urban soils can be highly disturbed and may contain contaminants from infill areas. Therefore, conditions in urban soils can be of poor suitability for new tree establishment and a soil assessment for post development planting would therefore be advisable.
- 2.1.6. The presence of a clay element within the soil is significant in terms of both tree protection and foundation design. Clay soils can experience substantial volume changes when vegetation extracts moisture from the ground and they are also prone to compaction when wet. On this basis it is essential that all recommended tree protection measures are implemented in full and are not relaxed at any point throughout the course of the development. Any foundations should also be designed in accordance with the recommendations contained within NHBC Chapter 4.2 (NHBC, 2018) and should account for the possibility of both subsidence and heave.

² <http://www.landis.org.uk/soilscales/>

3. LEGISLATIVE FRAMEWORK AND GUIDANCE

3.1. LEGISLATIVE FRAMEWORK

3.1.1. Legislation of specific relevance to this report is outlined below:

TREES ON THIRD-PARTY LAND

3.1.2. Under Common Law any roots or branches which cross a property boundary and encroach onto neighbouring land are deemed to be a nuisance. They are deemed to be a nuisance as they have the potential to affect the owner occupier's reasonable enjoyment of their land. This nuisance may be legally abated by the land owner or occupier cutting back encroaching roots or branches to the edge of their property if they so desire.

3.1.3. However, when abating a nuisance in this manner the owner/occupier must ensure that they that they are aware of and/or adhere to the following requirements:

- There is no duty to give notice to the tree owner although it would be considered courteous to do so;
- Unless otherwise agreed with the tree owner all work must be undertaken without trespass onto the neighbouring property;
- All arising's remain the property of the tree owner and should be both offered back and only disposed of with their permission; and
- A duty of care is owed to the landowner at all times meaning that all work should be undertaken with reasonable skill and in accordance with any relevant best practice guidance.

3.1.4. The potential for future nuisance must be considered when undertaking new tree planting with due regard given to the likely effects of encroaching roots and branches on neighbouring land. The possibility of direct physical damage to boundary walls and fences should be avoided by allowing sufficient room for future growth and movement due to wind.

3.2. PLANNING POLICY

3.2.1. Local planning policies of specific relevance to this report are outlined below:

3.2.2. Planning controls within the Study Area are administered by Haringey Council.

Policy – Haringey Development Management Plan (adopted 24 July 2017)

3.2.3. Policy DM1 – Delivering High Quality Design. This policy requires development proposals to demonstrate how trees within, and adjacent to, the site will be integrated.

OTHER GUIDANCE

3.2.4. Other guidance of specific relevance to this report is outlined below:

British Standard BS 5837:2012

3.2.5. British Standard BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (BS 5837:2012) provides recommendations and guidance on the relationship between trees and design, demolition and construction processes. It sets out principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures and is applicable whether or not planning consent is required.

4. CONSULTATION AND BASELINE DATA COLLECTION

4.1. STUDY AREA

- 4.1.1. The Study Area has been defined as all land within, and up to 15 metres beyond, the Site as identified in Appendix C of this report.

4.2. METHOD OF BASELINE DATA COLLECTION

- 4.2.1. Baseline data collection has been undertaken with reference to British Standard BS 5837:2012 '*Trees in relation to design, demolition and construction – Recommendations*'.

- 4.2.2. Baseline data collection has been undertaken using the following data sources:

- An arboricultural desk study, and;
- A walkover survey of all arboricultural features within the study area.

DESK STUDY

- 4.2.3. A desk-study has been undertaken as a means of identifying any statutory and non-statutory constraints which may apply to arboricultural features within the study area. The desk-based review has considered the following sources:

Tree Preservation Orders and Conservation Areas

- 4.2.4. Haringey Council is responsible for implementing any legal controls imposed through Tree Preservation Orders (TPOs) and conservation areas within the study area. The statutory status of trees within the study area was checked using the Council's interactive map for TPOs³ and conservation areas⁴ on 28 November 2018.

Notable, Ancient and Veteran Trees

- 4.2.5. The presence of locally notable, ancient and veteran trees within the study area was checked using the Woodland Trust's Ancient Tree Inventory⁵ on 28 November 2018

SITE VISIT / SURVEYS

- 4.2.6. A walkover survey of all arboricultural features within the Study Area was undertaken on 27 November 2018. The survey was undertaken by Theresa Reichlin, Arboriculture Consultant.

³ <https://www.haringey.gov.uk/map-tree-preservation-orders-tpos-haringey>

⁴ <https://www.haringey.gov.uk/planning-and-building-control/planning/planning-policy/design-and-conservation/conservation-areas>

⁵ <https://ati.woodlandtrust.org.uk/>

- 4.2.7. The survey was undertaken in accordance with British Standard BS 5837:2012 with Ordnance Survey Master Map forming the base mapping. The tree survey was undertaken in accordance with the following criteria:
- The trees have been inspected using the Visual Tree Assessment methodology as purported by Mattheck and Breoler⁶.
 - The tree survey was carried out from ground level only.
 - No tissue samples were taken nor was any internal investigation of the subject trees undertaken.
 - Tree heights and canopy spreads have been estimated to the nearest metre.
- 4.2.8. Stem diameters have been measured in accordance with Annex C of BS 5837. Diameters of single stem trees on level ground have been measured at 1.5m above ground level. The diameters of other commonly encountered stems have been measured where most appropriate and this is recorded within the schedule.
- 4.2.9. The combined stem diameters for multi-stemmed trees have been calculated in accordance with BS 5837 paragraph 4.6.1. Root Protection Areas are calculated as an area equivalent to a circle with a radius 12 times the stem diameter.

NOTES AND LIMITATIONS

- 4.2.10. Arboricultural survey data is of a preliminary nature and has been collected during a brief walkover survey. Only defects visible from the ground have been noted and each individual feature may not have been inspected closely due to access difficulties, the presence of dense ivy or vegetation or safety constraints. Safety related features have recorded on the basis that the arboricultural features will be subject to a normal programme of tree hazard assessment and only those features which materially affect the quality of the feature or pose a real and immediate safety concern have been recorded.
- 4.2.11. Arboricultural survey data is typically valid for a period of two years unless otherwise stated. Significant environmental events (such as extreme weather conditions) or changes to the Site may render it invalid within a shorter timescale.
- 4.2.12. Records held on the Ancient Tree Inventory are collected on a voluntary basis, therefore the absence of records does not demonstrate the absence of ancient, veteran or notable trees but may simply indicate a gap in recording coverage.
- 4.2.13. Whilst arboricultural surveys are not seasonally limited it is the case that certain pests and diseases may be more or less evident at different times of the year. This is especially true of certain wood decaying fungi such as the Giant Polypore (*Meripilus giganteus*) where fruiting bodies are short-lived and the early stages of root decay may not result in other identifiable symptoms. Walkover survey data is therefore based upon observations made at the time of the site visit and may be subject to change should further or more detailed inspections be undertaken.

⁶ Mattheck, C., Breloer, H., 2006. *The body language of trees*. Norwich: The Stationary Office

- 4.2.14. The survey has only been undertaken from land within the client's ownership, from public land or from areas where formal access has been arranged. Access could not be gained to T1, T2, T3 and T4 and as such all data associated with these trees has been estimated.
- 4.2.15. The position of arboricultural features not recorded on a topographical survey has been estimated using aerial photography. The position and extent of these features should be regarded as approximate only.

5. BASELINE CONDITIONS

5.1. DESK STUDY

- 5.1.1. The desk study confirmed the absence of any Tree Preservation Orders, conservation areas and ancient, veteran or notable trees within the study area.

5.2. SITE VISIT / SURVEY

- 5.2.1. A total of seven arboricultural features were surveyed details of which are provided within the Arboricultural Survey Schedule included in Appendix A of this report. A summary of the surveyed features including their category⁷ and designation is provided in Table 1.
- 5.2.2. There are an additional two arboricultural features, located on the northern edge of the Site. However, these features will have been referred to the in the Ashley House A planning application and will be managed accordingly as outlined in that permission (Ref: HGY/2018/2353). Therefore, the Ashley Park proposed development will not impact on these two arboricultural features.
- 5.2.3. All arboricultural features identified are located outside the Site boundary although within the Study Area of the Proposed Scheme.

Table 1 - Summary of surveyed arboricultural features

BS 5837 Category	Quality	Trees
B	Moderate	3
C	Low	3
U	Very low	1
TOTAL		7

Sub-categories

- 5.2.4. The value associated with each arboricultural feature is defined by its sub-category. Sub-categories vary depending upon the overall quality of the arboricultural feature, carry equal weight, do not influence retention priority and are simply included to indicate the primary value(s) associated with each surveyed item. The sub-category assigned to each arboricultural feature are identified within the Arboricultural Survey Schedule included in Appendix A of this report.

⁷ Categories are assigned based upon the criteria described within British Standard BS 5837:2012 Table 1.

5.2.5. Sub-categories are defined as follows:

Table 2 – Sub-categories associated with moderate quality category B arboricultural features

Sub-category	Area of value	Estimated remaining life expectancy (years)	Description
2	Landscape	>20	Trees present in numbers, usually 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.

Table 3 – Sub-categories associated with low quality C category arboricultural features

Sub-category	Area of value	Estimated remaining life expectancy (years)	Description
1	Arboricultural	>20	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
2	Landscape	>20	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.

Very Low-Quality U Category Arboricultural Features

5.2.6. Very low quality arboricultural features are those which have been identified as warranting inclusion within BS 5837 category U. Sub-categories are not assigned to very-low quality features which are identified by one or more of the following features⁸:

- Trees that have serious irremediable structural defects;
- Trees that are dead or are showing signs of immediate and irreversible physiological decline; and
- Trees infected with significant pathogens or very-low quality trees suppressing specimens of better quality.

MODERATE QUALITY ARBORICULTURAL FEATURES

5.2.7. Moderate quality trees are those which have been identified as warranting inclusion within BS5837 category B.

5.2.8. Three moderate quality B category trees were surveyed and comprise a short row of Norway maples (*Acer platanoides*) found growing close to the Site boundary within Down Lane Park which is an

⁸ These features do not apply in the instance that a tree is defined as ancient or veteran

area of partially landscaped green public space. These trees are recorded as T8, T9 and T10 within the Arboricultural Survey Schedule.

- 5.2.9. Although tree T10 does have evidence of a structural flaw in the form of an included stem union this is not considered to significantly reduce the value of the tree at the present time.
- 5.2.10. Whilst located outside of the Site boundary, these trees are sufficiently close to the perimeter for their rooting areas and canopies to encroach into the Site.
- 5.2.11. With an estimated remaining life-expectancy in excess of 20 years, the trees identified above have the capacity to provide a moderate level of public amenity in the foreseeable future and are considered noteworthy features within the surrounding landscape.

LOW QUALITY ARBORICULTURAL FEATURES

- 5.2.12. Low quality trees and groups are those which have been identified as warranting inclusion within BS 5837 category C.
- 5.2.13. A total of three individual trees have been recorded as low-quality C category specimens. All three trees are located on private property, along the southern edge of the Site.
- 5.2.14. These trees are generally of value only for the low level visual amenity and screening that they provide and are not considered to be important features within the wider landscape.

VERY-LOW QUALITY ARBORICULTURAL FEATURES

- 5.2.15. One very-low quality, category U tree (T4) is growing through a metal boundary fence. Due to the current growing conditions, this tree is not sustainable and likely life expectancy is less than 10 years. This tree should not be viewed as a constraint to development and its potential removal should not be viewed as a material consideration within the planning process. However, as a third-party tree, future development works should seek to avoid significant damage to this tree without the owner's consent.

6. ARBORICULTURAL IMPACT ASSESSMENT

- 6.1.1. The following Arboricultural Impact Assessment (AIA) evaluates the direct and indirect effects of the proposed design on existing trees and identifies the necessary mitigation measures where these are deemed appropriate.

6.2. ARBORICULTURAL FEATURES TO BE REMOVED/RETAINED

- 6.2.1. All arboricultural features will be retained.

6.3. TREE PRUNING REQUIREMENTS

- 6.3.1. The tree pruning requirements associated with the implementation of the Proposed Scheme are identified in Table 4.

Table 4 – Tree pruning requirements

Reference Number	Pruning Specification	Reason for Work
T8, T9, T10	Crown lift to 2.5 metres	To allow construction and maintenance access

- 6.3.2. The canopies of trees T8, T9 and T10 should be lifted to account for changes in land use and to permit unrestricted maintenance access along the western boundary of the Site. The proposed pruning regime will not have an adverse impact on the health of appearance of these trees and can be undertaken in accordance with current best practice⁹ guidance.

6.4. POTENTIALLY DAMAGING ACTIVITIES

- 6.4.1. Demolition, construction and access activities carried out within the Site will need to consider arboricultural features on third party land. In the process of delivering the Proposed Scheme there exists the potential for damage to occur to arboricultural features T1, T2, T3, T4, T8, T9 and T10.
- 6.4.2. Damaging activities may occur as a result of the following activities:
- Removal of hard surfacing within root protection areas;
 - Changes to current boundary treatments; and
 - Soft landscape works within root protection areas.
- 6.4.3. The potential for damage to occur during the completion of the above activities can be minimised to acceptable levels through the application of the following tree protection measures:
- Existing hard surfacing shall be removed using hand tools only and under the direct supervision of an arboriculturist.
 - Fence posts shall be located to avoid important tree roots (>50mmØ).

⁹ British Standards Institution, 2010. *BS 3998:2010 Tree work - Recommendations*. London: BSI.

- Soft landscaping works shall be undertaken with due regards to roots and soil. Measures shall be taken to prevent excessive compaction of the soil or the severance of important tree roots.

6.4.4. It is recommended that an Arboricultural Method Statement and revised Tree Protection Plan be provided once detailed design work has been completed and the chosen contractor's working requirements are known. Should Haringey Council deem it necessary then details of the tree protection measures contained therein could be secured to their satisfaction using a suitably worded condition attached to a grant of full planning consent.

6.4.5. Additional information which will potentially be required in order to provide a suitably robust Arboricultural Method Statement and Tree Protection Plan is likely to include:

- Foundation details for any fence posts including any options to amend post spacings;
- Details of any underground services including drainage and soakaways;
- The contractor's spatial requirements where they relate to demolition and construction.

6.4.6. For the purposes of this report an outline Arboricultural Method Statement and Tree Protection Plan have been included in Appendices A and C. The purpose of this information is to provide outline proposals for the protection of trees and to highlight the principals needed to ensure sustainable retention.

6.5. ARBORICULTURAL IMPACTS

6.5.1. It is envisaged that the Proposed Development will be beneficial in arboricultural terms. Beneficial effects will arise from the removal of hard surfacing from within the root protection areas of trees T1, T2, T3, T4, T8, T9 and T10. Beneficial effects will arise from an improvement in the rooting environment associated with these trees such that it will improve their health and longevity.

6.5.2. Further arboricultural benefits will arise from the establishment of new trees within the Site. Details of new planting are provided as part of the landscaping proposals submitted as part of this planning application.

6.6. TREE PROTECTION PLAN

6.6.1. The above and below ground constraints associated with retained arboricultural features are identified in the Tree Protection Plan(s) included within Appendix C of this report. These account for the physical and physiological requirements of each tree, and include their root protection area, crown spread and stem location.

6.6.2. The Tree Protection Plan shows the location of proposed tree protection measures which, in this instance, includes the location of tree protection fencing and areas where existing hard surfacing will be removed with due regard for nearby trees.

6.6.3. Additional specification relating to the proposed tree protection measures is included in Appendix A of this report.

7. GLOSSARY OF TERMS

Table 5 – Glossary of Terms

Term	Definition
Ancient Tree	A tree that has passed beyond maturity and is old, or aged, in comparison with trees of the same species. Characterised by biological, cultural or aesthetic features of interest.
Arboricultural Method Statement	A methodology for the implementation of any aspect of development which is within the root protection area, or has the capacity to adversely affect, any retained tree.
Arboriculturist	A person who has, through relevant education, training or experience, gained expertise in the field of trees in relation to construction.
Construction Exclusion Zone	An area within which all site clearance and construction activities, access and storage of materials are prohibited.
Crown	The upper part of a tree, measured from the lowest branch, including all branches and foliage.
Notable Tree	A tree that is very large but might not qualify as ancient or veteran.
Proposed Scheme	All works associated with the proposed development of the Site
Root Protection Area	Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's vitality.
Veteran Tree	A tree that has the biological or aesthetic characteristics of an ancient tree but is not ancient in years compared with others of the same species.

Appendix A

ARBORICULTURAL METHOD STATEMENT



PURPOSE

The purpose of this Arboricultural Method Statement (AMS) is to provide a summary of the tree protection measures which must be adopted in order to ensure the sustainable preservation of retained trees. The measures described are deemed to be appropriate given the scale, intensity and proximity of development to nearby trees.

ARBORICULTURAL MONITORING

General Requirements

Effective tree protection can only be achieved by adherence to a logical sequence of works combined with effective arboricultural monitoring. The purpose of arboricultural monitoring is to ensure that all tree protection measures are fit for purpose, are implemented in accordance with any approved details and as a means of enabling any previously unforeseen arboricultural issues to be promptly identified and suitably addressed.

The Principal Contractor will be responsible for ensuring that all site personnel are made aware of the requirements of this AMS and that any future amendments are known and understood. Copies of the approved AMS will be available onsite the requirements of which will be incorporated into all relevant site management documents and site induction procedures.

Pre-Commencement

A pre-commencement meeting will be held between the Principal Contractor, local authority tree officer and the project arboriculturist. The purpose of this meeting will be to ensure that all aspects of the tree protection measures are clear and understood and that any future sequencing and supervisory arrangements are agreed. The details of this meeting will be recorded and will be circulated to all parties in writing.

The Principal Contractor shall nominate a person to be responsible for all arboricultural matters onsite. This person must:

- Be present on site whenever work is being undertaken,
- Be aware of their arboricultural responsibilities,
- Have the authority to stop any work that is causing, or has the potential to cause harm to any retained tree,
- Be responsible for ensuring that all site operatives are aware of their responsibilities toward retained trees and the consequences of any failure to observe those responsibilities,
- Make immediate contact with the local authority and/or the project arboriculturist in the event of any tree related problems occurring, whether actual or potential.

During/Post-Construction

Once works commence the project arboriculturist will undertake a programme of monitoring. This may include phone and email contact with the site manager, regular site visits and direct monitoring of sensitive works. The frequency of any monitoring will be determined by the intensity and proximity of works to trees and will be flexible enough to accommodate changes in the scheduling of tasks as they occur on the site.

The project arboriculturist will maintain a record of all aspects of the arboricultural monitoring which has been undertaken. This will provide a record of compliance with any agreed tree protection measures and will assist in the efficient discharge of any relevant planning conditions or demonstration of compliance with any statutory requirements.

TREE REMOVAL AND PRUNING

Purpose

A detailed schedule of all tree removal and pruning requirements shall be developed during detailed design and contractor. This shall clearly identify trees selected for removal and any which are to be pruned.

General Requirements

- All tree pruning work shall adhere to British Standard BS 3998:2010 Tree work – Recommendations paragraphs 7.2.4, 7.2.5, Table 1 and Figure 2.
- The statutory protection afforded by the Wildlife and Countryside Act 1981 (Amended) and Countryside and Rights of Way Act 2000 (Amended) will also be adhered to. Where there is evidence that bats, nesting birds or other protected species are present then specialist advice will be obtained prior to the commencement of work.
- All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

Specification

A current schedule of identified tree work is provided below:

Table 6 – Current schedule of identified tree work

TREE REFERENCE NUMBER	RECOMMENDED WORKS
T8, T9, T10	Crown lift to 2.5m where crowns overhang the site

Should the requirement for a tree felling or pruning arise which is additional to that identified above then the following process shall be applied:

- Any specification shall be technically approved by an arboriculturist;
- Written approval shall be obtained from the Local Planning Authority prior to implementation of the work.

TREE PROTECTION FENCING

Purpose

To protect retained trees including their stems, crowns, rooting areas and the soil within which they grow.

General Requirements

- Tree protection fencing should be specified by an arboriculturist.
- Tree protection fencing will be used to prevent access to the root protection areas (RPAs) of retained trees. In all instances the following specification will be strictly adhered to:
- The area to the rear of the tree protection fencing shall be considered to form a Construction Exclusion Zone. No construction activities, storage of materials or pedestrian or vehicular access shall take place within this area.
- All weather notices will be attached to the tree protection fencing at suitable intervals and shall include suitably sized informative text containing the following statement:

“TREE PROTECTION FENCING

CONSTRUCTION EXCLUSION ZONE – NO ACCESS”

- Regular daily checks will be carried out by an appointed person to ensure that all tree protection fencing is still in place and functioning; any damage will be rectified without delay.

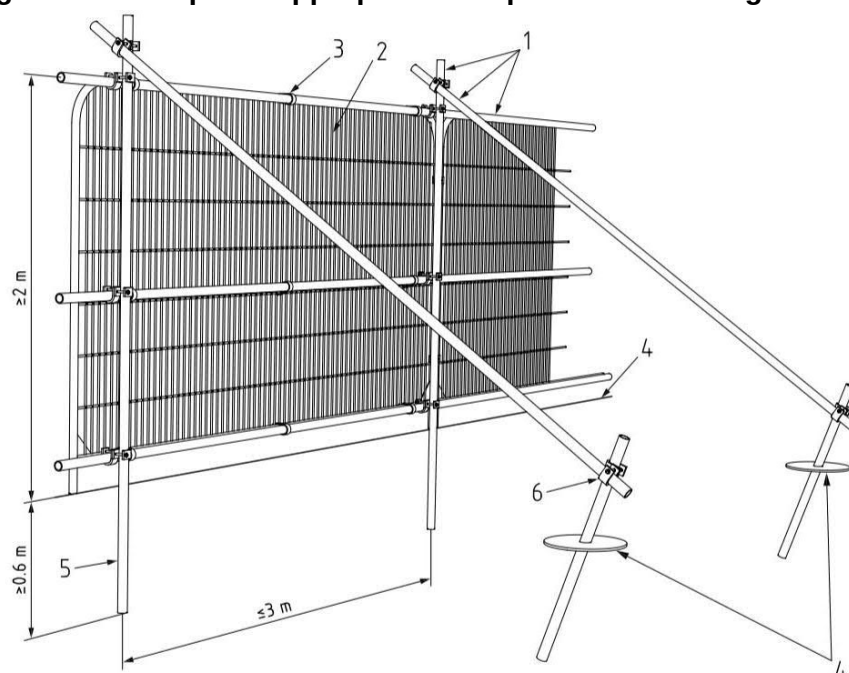
Timing

- Tree protective fencing shall be erected prior to any works onsite including site clearance, ground work or the importation of plant and materials.
- Once erected tree protection fencing shall remain in-situ until all construction activities are complete.

Specification for Fencing

- Tree protection fencing shall be fit for the purpose of excluding construction activity and appropriate for the degree and proximity of work taking place. An example of the type of tree protection fencing which may be required is included in Figure 2.

Figure 2 - Example of appropriate tree protection fencing



Key:

1. Standard scaffold poles
2. Heavy gauge 2m tall galvanised tube and welded mesh infill panels
3. Panels secured to uprights and cross-members with wire ties
4. Ground level
5. Uprights driven into the ground until secure (minimum depth 0.6m)
6. Standard scaffold clamps

PRECAUTIONS OUTSIDE CONSTRUCTION EXCLUSION ZONE

In all instances the following tree protection measures will be adopted during any site clearance or construction activities undertaken immediately outside, or in proximity to, the root protection area of any retained tree:

- Oil, bitumen, cement or other material likely to be injurious to a tree will not be stored or mixed within 10m of any stem unless contained within a bunded structure. Concrete mixing will not be carried out within 10m of a tree unless undertaken within a bunded container. Any spillage shall be immediately reported to the project arboriculturist who will determine what mitigation is required.
- Fires will not be lit nearer than five metres from the limit of any crown spread; will be down-wind of any tree and will be prevented from becoming so large as to cause damage to any nearby tree.
- Notice boards, telephone cables or other services will not be attached to any part of any tree. Trees to be retained will not be used as anchors for equipment used to remove stumps, roots, other trees or for any other purposes.
- Care will be exercised when using cranes or similar equipment near the spread of the canopy of a tree.

It is essential that allowance be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.

INSTALLATION OF UNDERGROUND APPARATUS AND SERVICE RUNS

Purpose

To ensure underground services can be installed, operated and maintained without detriment to retained trees. To prevent services becoming damaged by trees.

Design

- Wherever possible any underground services (cabling and pipes) shall be located outside the root protection area of any retained tree. Soakaways must not be located within root protection areas.
- Wherever possible services will be grouped together, will utilise common ducts and have all inspection chambers located outside of the RPA.

Timing

At no point shall work be undertaken without appropriate tree protection measures having been agreed and implemented.

Specification

- Any new services installed within the zone of influence (not just the root protection area) of any proposed, or retained, tree will incorporate sealed and flexible joints and be sufficiently robust to avoid damage due to differential soil movement.
- In situations where services must pass through the root protection area of a retained tree then trenchless techniques will be used wherever possible. Receptor pits will be located outside the root protection area and potentially toxic external lubricants will not be used.
- In situations where trenchless techniques are impractical then the use of open trenches will only be considered if they can be excavated without the need for shoring of the sides. The method of

excavation will be using an 'air-spade' or similar to ensure that soil can be removed from around the tree roots whilst causing only minimal damage.

ERECTION OF FENCING POSTS WITHIN ROOT PROTECTION AREAS

All works will be undertaken in accordance with the following requirements:

- All staff involved will be made aware of this working methodology.
- Existing underground services or other objects that may cause injury if damaged will be identified and marked.
- Any trees, shrubs or other woody vegetation which obstructs the line of the fence will be cut back in accordance with BS3998:2010.
- Any mixing of cement will be undertaken outside of the RPA. Where posts are to be secured using poured concrete post holes will be lined with an impervious membrane to prevent leachate from entering the surrounding soil.
- Where it is necessary to import materials using a wheelbarrow boards will be laid on the surface of the ground to prevent compaction or rutting.
- Post holes will be excavated with caution taking care not to damage roots or their bark. Soil can be removed from roots by using compressed air or a brush.
- Roots less than 25mm in diameter may only be severed using a sharp tool such as a saw or secateurs. The cut should be as small as possible and must avoid leaving a ragged end. Roots over 25mm diameter may only be cut on the advice of an arboriculturist.
- If a root over 50mm is encountered, or groups of roots over 25mm, then the excavated hole will be backfilled and the fence post located to an alternative location.
- All spoil must be deposited outside the root protection area.
- Exposed roots, including any cut ends, must be protected from extremes of temperature and desiccation. If left exposed overnight they will be covered with a loose mix of soil and sand, or wrapped with hessian.

REMOVAL OF HARD SURFACING

Timing

No works will be carried out if the soil moisture is of a level likely to allow compaction to occur.

Specification

- All works to be subject to an agreed programme of arboricultural supervision.
- Hard surfacing shall be broken up using hand tools only and shall be removed by hand.
- Once removed the area shall be immediately covered with a maximum 100 millimetres of loosely compacted topsoil and shall be watered to aid consolidation.

SOFT-LANDSCAPING OPERATIONS

Purpose

To avoid damage to trees during the implementation of soft landscaping activities.

Design

The root protection areas of retained trees are identified on the Tree Protection Plans included in Appendix C of this report. All soft landscaping activities will conform to the following specification where they take place within the root protection area of any retained tree.

Timing

No works will be carried out if the soil moisture is of a level likely to allow compaction to occur.

Specification

General requirements

- Only pedestrian operated machinery up to a gross weight of 50kg shall be used.
- All pedestrian operated machinery shall utilise low ground pressure tyres.
- Landscaping works shall be undertaken only when the soil is dry and friable and soil moisture is at a level whereby compaction is unlikely to occur.

Soil preparation

- Compacted areas of soil will be broken up by using hand tools only.
- There shall be no excavation or lowering of soil levels.
- Depressions may be levelled through infilling with a maximum depth of 150mm of loosely compressed good quality topsoil or other porous material.
- Grass seeding, wildflower seeding and turfing
- Soil shall be cultivated to a depth of no more than 25mm.

Planting

- Bare root seedlings, transplants, whips and feathered trees shall be notch planted
- Container grown shrubs, feathered trees, and standard trees shall be planted into individual pits.
- In no circumstances shall planting take place into cultivated beds or trenches.
- All planting pits shall be excavated with due care for underlying tree roots and using hand tools only.

In instances where tree roots are found within the planting pit then roots less than 25mm in diameter may be severed using a sharp tool such as a sharp saw or secateurs. The cut should be as small as possible and must avoid leaving a ragged end. Roots over 25mm diameter may only be cut on the advice of an arboriculturist. If roots over 50mm are encountered, or groups of roots over 25mm, then the planting pit will be backfilled and moved to an alternative location.

Appendix B

ARBORICULTURAL SURVEY
SCHEDULE



Key:									
REFERENCE NUMBER:	Individual reference number								
TYPE:	T - Tree	G - Group	W - Woodland	H - Hedge					
SPECIES:	Species listed by common name								
HEIGHT:	Overall height (m)								
DIAMETER:	Stem diameter (mm) calculated in accordance with BS 5837 paragraph 4.6.1. An average stem diameter is provided for groups, woodlands and hedges. * Denotes an estimated stem diameter								
NO. OF STEMS:	Number of stems (individual trees only)								
N, E, S, W:	Crown spread taken at each cardinal point (m)								
LCH:	Lowest crown height (m)								
FSB:	Height of lowest significant branch (m)								
AGE CLASS:	Young - < 1/3rd estimated life expectancy		Semi-mature – 1/3rd to 2/3rd estimated life expectancy		Mature - > 2/3rd estimated life expectancy		Veteran – a tree which exists significantly beyond its normal life expectancy		
PHYSIOLOGICAL CONDITION:	Good		Fair		Poor		Dead		
STRUCTURAL CONDITION:	Good		Fair		Poor				
ESTIMATED REMAINING CONTRIBUTION:	>10 years		10+ years		20+ years		40+ years		
CATEGORY:	BS 5837 Category - A, B, C, U		BS 5837 Sub-category - 1, 2, 3						
RPA RADIUS	The radius of the circular Root Protection Area associated with the tree as measured from the centre of the stem (m)								

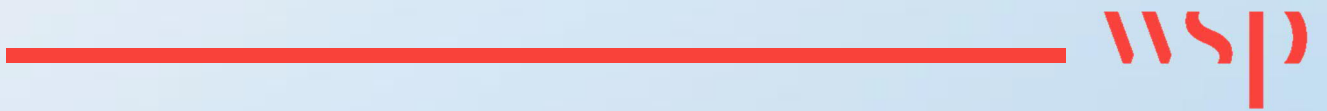


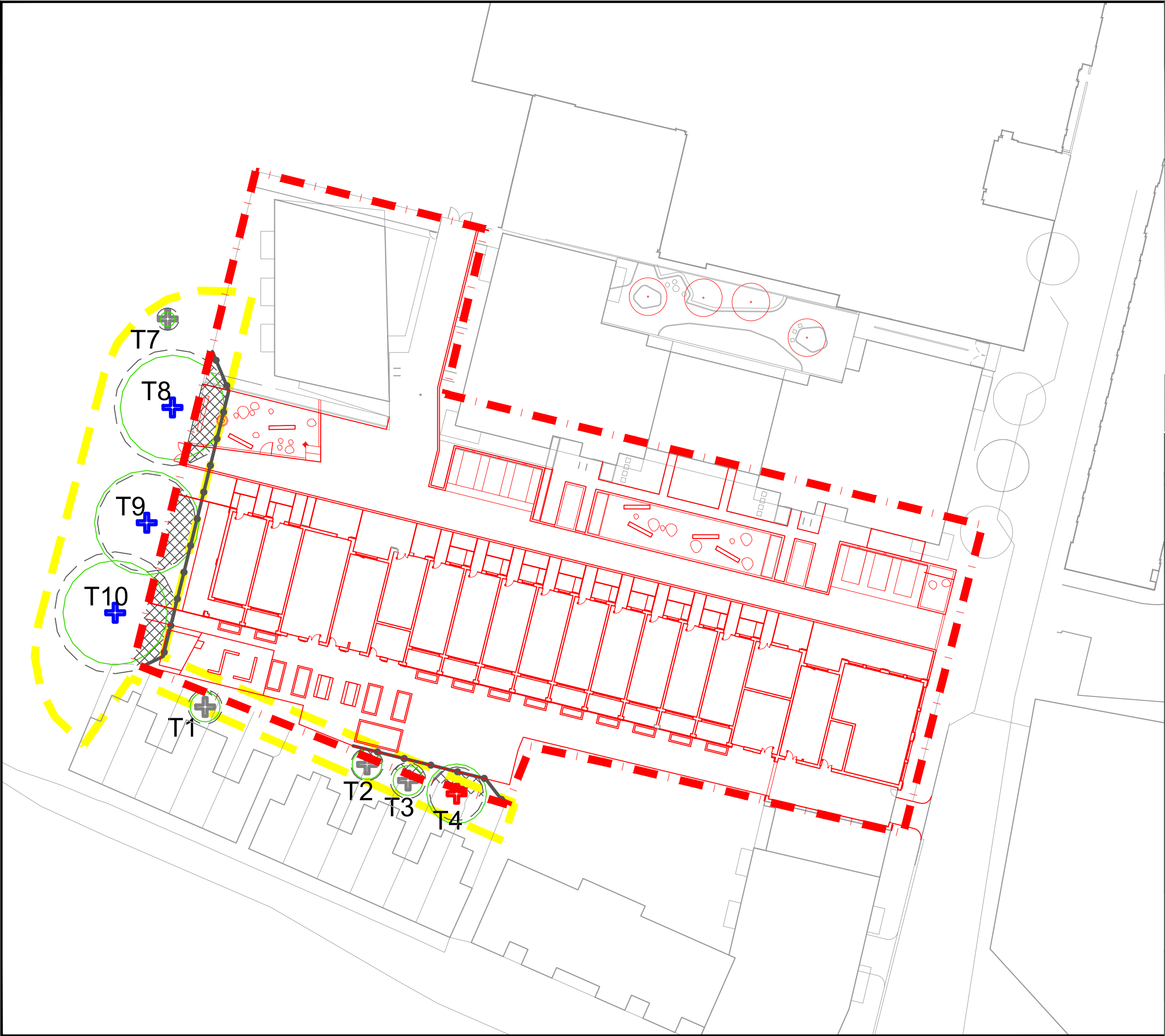
TREE NO	TYPE	SPECIES	HEIGHT (m)	STEM DIAMETER (mm)	N	E	S	W	LCH	LBH	AGE CLASS	PHYSIOLOGICAL CONDITION	STRUCTURAL CONDITION	ESTIMATED REMAINING CONTRIBUTION	CATEGORY	SUB-CATEGORY	NOTES AND PRELIMINARY MANAGEMENT RECOMMENDATIONS	RPA RADIUS (m)
1	T	Elder	7	190	2	2	2	2	2	1	Mature (Early)	Good	Fair	10+	C	1	No access. Private property. All measurements estimated.	2.3
2	T	Elder	7	180	0	0	2	2	2	2	Mature (Early)	Fair	Fair	10+	C	1	No access. Private property. All measurements estimated.	2.2
3	T	Elder	5	200	1	1	2	2	2	1	Mature (Early)	Fair	Poor	10+	C	1	No access. Private property. All measurements estimated.	2.4
4	T	Sycamore	8	300	3	4	4	3	2	0	Mature (Early)	Fair	Poor	10+	U	-	Ingrown into adjacent metal fencing. Multiple stems, one has been topped.	3.6
REFERENCE NUMBERS 5 AND 6 NOT USED																		
7	T	Field Maple	5	120	1	1	1	1	2	2	Young	Good	Good	10+	C	2	-	1.4

TREE NO	TYPE	SPECIES	HEIGHT (m)	STEM DIAMETER (mm)	N	E	S	W	LCH	LBH	AGE CLASS	PHYSIOLOGICAL CONDITION	STRUCTURAL CONDITION	ESTIMATED REMAINING CONTRIBUTION	CATEGORY	SUB-CATEGORY	NOTES AND PRELIMINARY MANAGEMENT RECOMMENDATIONS	RPA RADIUS (m)
8	T	Norway Maple	15	650	7	4	7	7	2	2	Mature (Early)	Good	Good	20+	B	2	-	7.8
9	T	Norway Maple	16	550	7	3	7	7	2	2	Mature (Early)	Good	Good	20+	B	2	-	6.6
10	T	Norway Maple	15	680	7	4	7	7	2	1	Mature (Early)	Good	Fair	20+	B	2	-	8.2

Appendix C

TREE PROTECTION PLAN





DO NOT SCALE

T

TREE

CATEGORY GRADING

●

B CATEGORY

●

C CATEGORY

ATTRIBUTES

○

INDICATIVE ROOT PROTECTION AREA

○

INDICATIVE TREE CANOPY

OTHER ATTRIBUTES

□

SITE BOUNDARY

□

ARBORICULTURAL STUDY AREA

□

TREE PROTECTION FENCING

□

HARD SURFACING REMOVED - REPLACED WITH SOFT LANDSCAPING

P21	18/12/2019	JM	RLB & LAYOUT REVISED	CP	CP
P01	29/11/2018	JM	FIRST ISSUE	CP	CP
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS:

TECHNICALLY APPROVED

wsp

1 Capital Quarter, Tyndall St, Cardiff, CF10 4BZ, UK
T+ 44 (0) 292 076 9200
wsp.com

CLIENT:

NOTTING HILL HOME OWNERSHIP

ARCHITECT:

NOT APPLICABLE

PROJECT:

ASHLEY PARK

TITLE:

TREE PROTECTION PLAN

SCALE @ A3: 1:500	CHECKED: CP	APPROVED: CP
PROJECT No: 70045903	DESIGNED: JM	DRAWN: JM
DATE: 29/11/2018		

DRAWING No: 70045903-TPP-EV-001	REV: P02
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1 Capital Quarter
Tyndall Street
Cardiff
CF10 4BZ

wsp.com