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Design • Ecology • Arboriculture • Tree Surgery • Groundworks • Landscape Construction • Maintenance

Arboricultural Method Statement

for development at

Chester Road Hostel
Chester Road
London N19

Date: 20th February 2022

Our Ref: DFC4363 AMS

Prepared by: Philippa Roberts FdSc, MArborA

Summary

This report been prepared in respect to planning consent for development at Chester Road Hostel, Chester Road, London, N19. It seeks to provide information in accordance with British Standard *BS 5837:2012, Trees in relation to design, demolition and construction.*

The report contains details for protecting retained trees in the course of the approved development, with separate details provided for both the demolition and construction phases.

The approved layout allows for construction works within root protection areas of retained trees. Specialist methods of work will be required, and details provided within section 3 of this report, to ensure that development work has a minimal impact on trees to be retained.

Contents

1.0 Introduction

1.1 Instruction

DF Clark Contractors have been instructed to produce an Arboricultural Method Statement in relation to development at Chester Road Hostel, Chester Road, London, N19.

1.1.1 It has been produced in accordance with the principles of British Standard *BS 5837:2012, Trees in relation to design, demolition and construction - Recommendations* (BS 5837) and includes the following information:

- an analysis of the approved scheme and the impact on trees to be retained;
- a tree protection plan, for both the demolition and construction phases, showing the location and specification of protective fencing and ground protection if required, in accordance with BS 5837;
- proposed methods of work to minimise the impact on retained trees;
- a tree surgery schedule which includes work to facilitate construction; and
- a schedule of site monitoring and/or supervision of demolition and construction activity with the ability to damage retained trees.

1.2 Scope and purpose of this report

1.2.1 This report covers trees on the site and those adjacent to the site which could be affected by the development. It is concerned with the impact the development may have on trees and the effect retained trees may have on the development. Its purpose is to enable retained trees to survive the development process and allow the client and contractor to comply with planning conditions. It also allows the local planning authority (LPA) to assess the tree protection information and audit compliance with planning conditions.

1.2.2 This AMS will cover the lifetime of the development and will be subject to an appropriate regime of monitoring and review of all operations within this report at suitable intervals.

1.2.3 It is intended to be a working document to be used by the demolition and building contractors.

1.3 Planning consent and legal considerations

1.3.1 Planning permission was granted on 11th May 2021 (2020/3461/P) to demolish the existing hostel buildings and construct three new ones, including re-landscaping of the surrounding amenity areas.

1.3.2 The following conditions relates to trees:

> 17 Tree protection measures
>
> Prior to the commencement of any works on site, details demonstrating how trees to be retained shall be protected during demolition and construction work, to include a schedule of monitoring and supervision by the project arboriculturist, shall be submitted to and approved by the local planning authority in writing. Such details shall follow guidelines and standards set out in BS5837:2012 "Trees in Relation to Construction". All trees on the site, or parts of trees growing from adjoining sites, unless shown on the permitted drawings as being removed, shall be retained and protected from damage in accordance with the approved protection details.

> 18 Foundation details affecting trees
>
> Prior to commencement of above ground works (excluding demolition), details of the design of building foundations and the layout, with dimensions and levels, of service trenches and other excavations on site in so far as these items may affect trees on or adjoining the site, shall be submitted to and approved in writing by the local planning authority. The relevant part of the works shall not be carried out otherwise than in accordance with the details thus approved.

1.4 Other information included in this report

1.4.1 The following information is included in Appendix 1:

- Documents and information provided
- Legal constraints and liabilities
- Survey methodology
- Reference documents

2.0 Appraisal

2.1 Areas considered

- tree surgery works;
- protection of trees for site clearance, demolition and construction activities, in the form of protective barriers and/or ground protection;
- specialist methods of work employed for demolition;
- specialist methods of work employed for construction;
- monitoring and supervision.

2.2 Site construction timeline

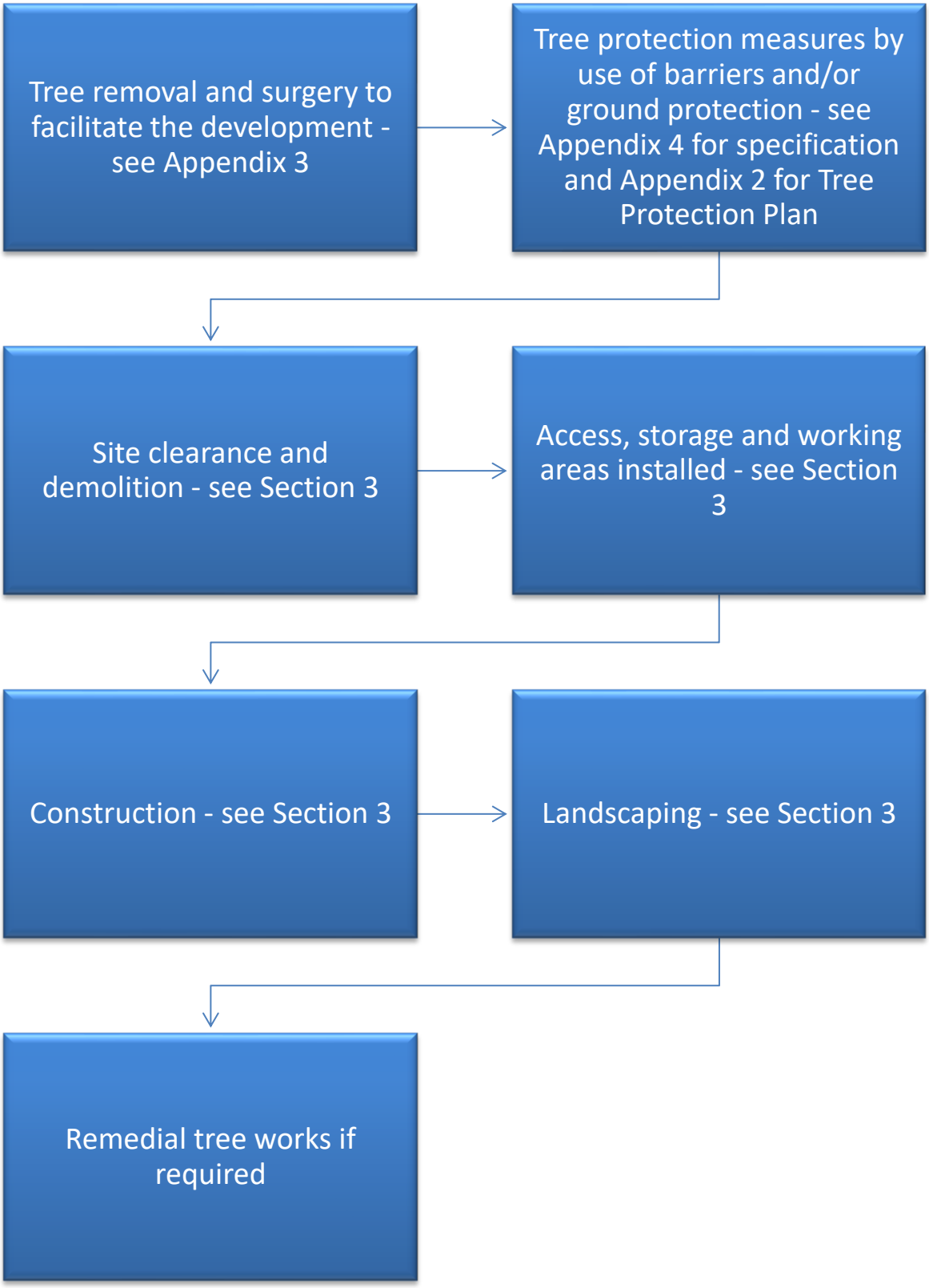
2.2.1 Damage to trees on development sites can easily occur before construction starts. Tree roots can be asphyxiated and die if the rooting zone becomes compacted and soil structure damaged which can easily occur, particularly on clay soils, even with the passage of light vehicles. In addition, damage to the branches and trunks of trees can occur if site clearance occurs before trees are protected. Therefore in order to enable planning conditions relating to tree protection to be discharged and prevent possible enforcement action, it is important that all works with the potential to affect trees follows a process to ensure their protection. Below is a flowchart showing the sequence of works to follow.

2.3 The site

2.3.1 The site comprises three main buildings, set at varying levels across the site, with a private garden to the south and further amenity space, including a thoroughfare, to the north. The site contains a mix of soft and hard landscape, with numerous level changes across the entire site.

2.3.2 There are a number of offsite trees, which are located close to the site boundary and may therefore be impacted by development works within. These trees will be protected in a similar manner to trees to be retained on site, and are therefore also shown on the tree protection plans. Details of tree locations can be found on the plans at Appendix 2.

Site construction timeline flowchart



2.4 Appraisal of approved development upon retained trees

2.41 Details of the impact of the approved development, with respect to both the demolition and construction phase, upon individual trees is provided within table 1 below. The table highlights potentially damaging development works in respect to RPA incursion, and provides working methods/actions to minimise the risk of significant damage being caused, with reference to the relevant paragraphs of the following arboricultural method statement in section 3.

Tree	RPA incursion	Comments
T1	Removal of existing hard surface	Paving slabs and sub-base to be removed carefully following details within 3.8 below. Fencing to be repositioned to enclose RPA, and top soil/sharp sand used to cover any exposed roots.
	New hard surface	New pedestrian access to incorporate no dig construction (see 3.10), if levels require excavation, works to be carried under arb. supervision (see 3.11)
	Soft landscaping works	Works within RPA to be carried out sensitively to prevent root damage and soil compaction (3.15)
T2	Removal of existing hard surface	Paving slabs and sub-base to be removed carefully following details within 3.8 below. Fencing to be repositioned to enclose RPA, and top soil/sharp sand used to cover any exposed roots.
	New hard surface	New pedestrian access to incorporate no dig construction (see 3.10), if levels require excavation, works to be carried under arb. supervision (see 3.11)
	Soft landscaping works	Works within RPA to be carried out sensitively to prevent root damage and soil compaction (3.15)
T10	Removal of existing hard surface	Hard surface and sub-base to be removed carefully following details within 3.8 below. Fencing to be repositioned to enclose RPA, and top soil/sharp sand used to cover any exposed roots.
	Demolition of building	Walls and debris to be pulled away from tree, foundations, if unable to remain in situ, to be removed with minimal disturbance to ground adjacent to tree (3.9)

Tree	RPA incursion	Comments
T10	Landscaping works	Works within RPA to be carried out sensitively to prevent root damage and soil compaction (3.15)
	New building	The footprint of the new building extends marginally beyond the existing footprint and therefore specialised foundations are not considered necessary. Any excavation should be carried out under arb. supervision
T11	Removal of existing hard surface	Hard surface and sub-base to be removed carefully following details within 3.8 below. Fencing to be repositioned to enclose RPA, and top soil/sharp sand used to cover any exposed roots.
	Landscaping works	Works within RPA to be carried out sensitively to prevent root damage and soil compaction (3.15)
T12	Demolition of building and low-rise structures	Walls and debris to be pulled away from tree, foundations, if unable to remain in situ, to be removed with minimal disturbance to ground adjacent to tree (3.9)
	Removal of existing hard surface	Hard surface and sub-base to be removed carefully following details within 3.8 below. Fencing to be repositioned to enclose RPA, and top soil/sharp sand used to cover any exposed roots.
	New building and retaining wall.	The single storey element of Block A requires specialised foundations to minimise root damage (3.14)
	Landscaping works	Works within RPA to be carried out sensitively to prevent root damage and soil compaction (3.15)
T16	Removal of existing hard surface	Hard surface and sub-base to be removed carefully following details within 3.8 below. Fencing to be repositioned to enclose RPA, and top soil/sharp sand used to cover any exposed roots.
	New building and retaining wall.	The single storey element of Block A requires specialised foundations to minimise root damage (3.14)
	New hard surface	New pedestrian access to incorporate no dig construction (see 3.10), if levels require excavation, works to be carried under arb. supervision (see 3.11)

Tree	RPA incursion	Comments
T16	Soft landscaping works	Works within RPA to be carried out sensitively to prevent root damage and soil compaction (3.15)
T19	Removal of existing hard surface	Hard surface and sub-base to be removed carefully following details within 3.8 below. Fencing to be repositioned to enclose RPA, and top soil/sharp sand used to cover any exposed roots.
	Landscaping works	Works within RPA to be carried out sensitively to prevent root damage and soil compaction (3.15)
T20	Removal of existing hard surface	Hard surface and sub-base to be removed carefully following details within 3.8 below. Fencing to be repositioned to enclose RPA, and top soil/sharp sand used to cover any exposed roots.
	New hard surface	New pedestrian access to incorporate no dig construction (see 3.10), if levels require excavation works to be carried under arb. supervision (see 3.11)
	Soft landscaping works	Works within RPA to be carried out sensitively to prevent root damage and soil compaction (3.15)

3.0 Arboricultural method statement

3.1 Tree removal plan (TRP) and tree protection plans (TPP1 & TPP2)

3.1.1 The plans found at Appendix 2 are based on provided information and all measurements and site boundaries must be checked against the submitted plans. The tree removal plan shows trees to be retained with green outlines, trees to be removed in red, and trees to be pruned with green cross hatching. There are two tree protection plans, one for the demolition phase (TPP1), showing the existing site layout, and one for the construction phase (TPP2), showing the approved site layout. Only trees to be retained are included, with tree protection shown as barriers and/or ground protection defining the tree protection zone (TPZ)[1] and any areas requiring specialist methods of demolition or construction are shown, as indicated within the key on the plan.

3.2 Site clearance, demolition and pre-construction works

3.2.1 Site clearance, demolition and pre-construction works such as soil investigations, are often undertaken before trees for retention are protected and this can result in irreparable damage being caused to the trees or their soil environment. It is important therefore that trees are protected before any works are carried out. The only exception to this is tree felling and tree surgery works which may be necessary before barriers are erected. Clearance of other site vegetation to enable access to erect the protective barriers should be factored in at this stage if necessary and this must be carried out with the use of hand tools only (including chainsaws, brushcutters etc.) but without the use of tracked or wheeled plant and machinery.

3.3 Tree protection barriers

3.3.1 Appendix 4 includes guidance for protective barriers based on BS 5837. The location of the barriers, with dimensions from the tree, and the TPZs is shown on the TPP. The correct location of the barriers and other protective measures should be confirmed at the pre-commencement meeting before any demolition or construction activities, including site clearance, start.

[1] *Tree Protection Zone. An area based on the RPA in m^2 identified by an arboriculturist, to be protected during development, including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long-term retention of a tree.*

3.4 Ground protection

3.4.1 In areas where it is not possible to erect protective barriers, ground protection must be used to protect the TPZ of trees. Where it has been agreed during the design stage, and as shown on the TPP, that vehicular or pedestrian access for the construction operation may take place within the TPZ, the possible effects of construction activity should be addressed by a combination of barriers and ground protection. The position of the barrier may be within the TPZ at the edge of the agreed working zone but the soil structure beyond the barrier to the edge of the TPZ should be protected with ground protection. The precise location should be confirmed at the pre-commencement meeting before any demolition or construction activities, including site clearance, start. This is to protect soil structure and tree roots.

3.5 Tree removals and tree surgery works

3.5.1 Trees for removal are identified on the tree removal plan (TRP) in red, and within the tree surgery schedule in Appendix 3.

3.5.2 Recommendations for tree works can be found in the tree surgery schedule in Appendix 3. Trees recommended for pruning are also shown on the tree removal plan with green cross hatching. All works shall be in accordance with British Standard *BS 3998:2010 'Tree work: Recommendations'*, or in accordance with current best practice. The use of a competent tree surgery contractor is necessary to comply with this. The main contractor and tree surgery contractor must ensure that any necessary consents have been received from the local authority and that no protected species are harmed whilst carrying out site clearance or tree surgery works. Within TPZs, stumps, shrubs and other vegetation must be removed by hand or using specialised stump grinding machinery to minimise root damage to retained trees. Where poisoning of stumps is specified, this must be carried out by trained and qualified operatives. Only chemicals approved for this purpose and used in accordance with the manufacturer's instructions will be used.

3.6 Site set-up

3.6.1 Space must be allowed outside of RPAs for site cabins, machinery and materials storage, fuel storage, cement mixing and washing points etc. No discharge of potential contaminants should occur within 10m of a retained tree stem or where there is risk of run-off into RPAs.

3.6.2 Temporary buildings can sometimes be used within RPAs if agreed with the LPA and if site conditions allow. They will need to be installed on appropriate ground protection

with no excavation taking place. All temporary services must be installed above ground level.

3.7 Work within tree protection zones

3.7.1 Only work agreed with the local planning authority can be carried out within TPZs**.**

3.7.2 Soil and archaeological investigations, contaminated soil removal, Japanese knotweed control, and other works not strictly part of the development but often needing extensive excavation. This has the potential to damage trees if within RPAs. The project arboriculturist should review any proposals to see if there are any conflicts with trees to be retained, and if so, discussions to find a mutually acceptable solution should occur.

3.8 Removal of existing surfaces

3.8.1 The use of conventional tracked and wheeled machinery causes damage to soil structure from compaction and damage to roots from excavation, and must not be used within the TPZ. All areas of hard surfacing requiring removal within a TPZ will be broken up using a hand held pneumatic drill or mounted hydraulic breaker attached to a digger located outside the TPZ. The broken rubble will then be removed by hand.

3.8.2 The only exception to this is where the hard surface is of such a size as not to be reachable from outside the TPZ. In this situation a rubber tracked mini-digger will be used. The maximum working height of the machine must be less than the lowest branch of any overhanging trees.

3.8.3 The mini-digger will work from the existing hard surface pulling the debris away from the tree/s.

3.8.4 No excavation of existing soil beneath the hard surface will take place.

3.8.5 Immediately after removal of the hard surface, topsoil or sharp sand must be used to cover the soil surface and any roots, to prevent drying out.

3.8.6 Upon completion, the tree protection barrier must be moved out to the edge of the TPZ or ground protection used if access is required.

3.9 **Demolition of buildings and structures close to trees**

3.9.1 All structures including buildings, hard surfaces, walls and fences within or adjacent to a TPZ must be removed following the methods detailed below to minimise damage to tree roots and upper parts of the tree.

3.9.2 Protective fencing and ground protection MUST be in place before demolition begins.

3.9.3 Buildings within RPAs must be demolished by pulling inwards, away from the tree.

3.9.4 Debris fallen within TPZs must be removed by hand.

3.9.5 Removal of foundations within RPAs must be undertaken from within the footprint of the building, away from the tree, with excavation on the tree side of the foundation kept to the strict minimum required to effect removal. This operation should be supervised by the appointed arboriculturist. If trenches left by removal of foundations are not to be reused as part of the development, they must be backfilled with topsoil suitable for root growth, where within RPAs.

3.9.6 All removal of fences, sheds, garden structures, low walls, raised planters etc., must be undertaken by hand where within TPZs.

3.10 **Installation of new hard surfacing within RPAs**

3.10.1 Finished surfaces of footpaths and paved areas will need to be of porous design to allow water and air passage in and out.

3.10.2 An illustrative example of a cellular confinement no-dig system can be found below. The actual system will need to be designed by a structural engineer to accommodate the loadings anticipated.

3.10.3 The principles to follow are:

- No excavation other than the removal of existing hard surfaces if required, or the removal of surface vegetation and no more than 50mm of leaf litter, vegetation debris etc.
- A method to spread and support the load of the hard surface and anticipated usage without causing compaction of the soil structure beneath.
- The use of a porous sub-base and finishing layer to allow water and air diffusion in and out of the soil.

- Porosity must be designed to be long-term and not to block with fine particles in the short-term; therefore irregular, no-fines aggregate must be used.
- The pH of the aggregate must be considered as many conventional road stones have very high pH values which can damage susceptible trees and therefore aggregates with a near neutral pH should be preferred.

Images of cellular confinement systems and edging detail

3.11 Changes to existing hard surfaces within RPAs

3.11.1 Suitable existing sub-bases should be re-used, but where they are insufficient, they should be removed carefully, ensuring that the underlying sub-soil is not disturbed. A no-dig sub-base should be installed (see 3.10 above), according to the structural engineer's design in respect to anticipated load.

3.11.2 If ground levels need to be lowered or excavation for the new surface's sub-base goes deeper than the existing, excavations must be carried out under arboricultural supervision and likely to be by hand tools only. This is to enable the project arboriculturist to assess the impact on the tree. Roots found with a diameter of 25mm of less, can be cut using sharp tools, making as small a cut as possible. If a larger root is found, the project arboriculturist will assess whether the root can be cut or if an engineering solution, such as bridging the root, is required.

3.12 **Site hoarding, signs & fencing**

3.12.1 Where posts are to be installed within RPAs the holes must be dug carefully by hand. If roots with a diameter of 25mm or greater are found, the position of the post must be moved. Roots smaller than 25mm diameter can be cut with sharp tools leaving as small a wound as possible. The sides of the hole should be lined with an impermeable membrane such as plastic sheeting to prevent the caustic and toxic effects of wet cement in the concrete from damaging tree roots.

3.13 **Services**

3.13.1 The locations of all new services are outside of RPA of retained trees, as detailed within the Site Services Layout Ground Floor, drawing no. J093-A-001 Rev C (Ritchie & Daffin Ltd).

3.13.2 The location of new drainage and SuDS are predominantly located outside of RPAs of retained trees. However, one section of a 'tanked permeable paving' encroaches within the RPA of trees T23 & G23, and therefore works will need to be carried out under arboricultural supervision.

3.14 **Foundations**

3.14.1 Excavation for footings for low-rise structures and retaining walls must be carried out under arboricultural supervision and likely to be by hand tools only. This is to enable the project arboriculturist to assess the impact on the tree. Roots found with a diameter of 25mm of less, can be cut using sharp tools, making as small a cut as possible. If a larger root is found, the project arboriculturist will assess whether the root can be cut or if an engineering solution, such as bridging the root, is required.

3.14.2 The foundations for the single storey element of Block A encroach within the RPA of tree T12, and therefore needs to incorporate a root sensitive design, to minimise excavation and ground disturbance. No design is available as the time of writing,

with condition 18 only needing to be discharged before commencement of the construction phase. The foundation design of the single storey element adjacent to T12 should be discussed with the project arboriculturist, to ensure that it meets the rooting requirements of the adjacent tree. An addendum to this report should be prepared, once a suitable foundation design becomes available.

3.15 Landscaping

3.15.1 Landscape operations within root protection areas have the potential to damage trees if not carried out with care; in addition the removal of protective barriers to carry out landscape operations may allow other contractors in previously protected areas.

3.15.2 If protective fencing is taken down to facilitate landscaping operations, the area of the TPZ must be delineated by pins and marker tape, spray paint, or some other method to clearly show the extent of the TPZ.

3.15.3 The preparation of soil for planting and turfing must be carried out by hand where within TPZs. Cultivation should be kept to a minimum and new topsoil added must not exceed 100mm in depth within 1m of the stem of any tree.

3.15.4 Topsoil and other materials must be transported by wheelbarrow on running boards when working within TPZs.

3.16 Other site works with the ability to affect trees

3.16.1 Site and fuel storage, cement mixing and washing points

3.16.1.1 All site storage areas, cement mixing and washing points for equipment and vehicles and fuel storage areas should be outside RPAs unless otherwise agreed with the LPA. No discharge of potential contaminants should occur within 10 m of a retained tree stem or where there is a risk.

3.16.2 Use of piling rigs, cranes and other tall plant and vehicles

3.16.2.1 Piling rigs and cranes are often used close to trees. Where tree protection barriers do not entirely protect the canopies of trees from potential damage from high vehicles and plant, care must be taken to ensure no damage is caused. Work must be carefully planned and a banksman used to guide the operator. Arboricultural supervision may be required.

4.0 Site management and supervision

4.1 Pre-commencement site meeting

4.1.1 Before any site works begin, including site clearance, a site meeting between the site manager and arboricultural consultant should be held and to which the LPA tree officer will be invited. The purpose of the meeting will be to discuss tree protection measures detailed in this document and to agree the sequence of events where they can impact on trees. At this meeting a programme of tree protection will be agreed by all parties to form the basis of any monitoring and/or supervision arrangements between the arboricultural consultant and the developer.

4.1.2 At the pre-commencement meeting, the contact details of the following should be agreed:

- The site manager or other person on site responsible for ensuring tree protection is in accordance with that agreed.
- The LPA tree officer and/or case officer.
- The project arboriculturist.
- Any other relevant party.

4.2 Site management

4.2.1 It is the responsibility of the main contractor to ensure that the details of this report are known, understood and followed by all site personnel. As part of the site induction, all site personnel who could have an impact on trees should be briefed on specific tree protection requirements. Copies of the report and plans should be available on site at all times.

4.3 Site monitoring and supervision

4.3.1 Once work begins on site, the project arboricultural consultant should visit site at an interval agreed at the pre-commencement site meeting. The interval should be sufficiently flexible to allow the supervision of key works as they occur. These are likely to include the following although the list is not exclusive:

- installation of tree protection barriers and ground protection
- demolition of structures and surfaces close to trees;
- construction of new structures and surfaces close to trees.

4.3.2 The arboricultural consultant's role is to monitor compliance with arboricultural conditions and advising on any tree problems that arise or modifications that become necessary. Following every site visit, a short report will be sent to the local authority tree officer and the client/developer. Tree site supervision reports are useful as an audit trail for the client and local planning authority, showing compliance to tree protection conditions.

4.3.3 Should any issues or compromises occur during the development which have an impact on any retained tree it is the responsibility of the site manager to inform the project arboriculturist who will notify the LPA tree officer of the issue and any proposed remedial works.

4.3.4 A schedule of arboricultural monitoring and supervision should be completed at the pre-commencement site meeting listing key stages requiring monitoring and/or supervision. Areas where work will need to be supervised by the project arboriculturist are identified on the tree protection plans TPP1 & TPP2 in Appendix 2.

5.0 Conclusions

5.1 Twelve trees were shown to be removed as part of the approved arboricultural impact assessment (AIA). A further tree is shown to be removed within this report, due to the proximity of the approved basement and drainage requirements, which were not fully appreciated at the time the AIA was prepared.

5.2 The demolition phase of the development requires sections of the existing buildings, low-rise structures and hard surfaces to be removed adjacent to, and from within the RPA of, trees to be retained. Details of how these works should proceed are provided within the arboricultural method statement, section 3, of this report. Certain elements of these works will need to be carried out under arboricultural supervision, so that immediate professional advice can be provided to the contractor. Works to be supervised are shown on the tree protection plan (demolition), TPP1.

5.3 The construction phase of the development, including landscaping works, requires construction of a single storey section of a new building, retaining walls, new hard surfaces, SuDS and landscaping works to be carried out within the RPA of, trees to be retained. Details of how these works should proceed are provided within the arboricultural method statement, section 3, of this report. Certain elements of these works will need to be carried out under arboricultural supervision, so that immediate professional advice can be provided to the contractor. Works to be supervised are shown on the tree protection plan (construction), TPP2.

5.4 Provided tree protection and methods of work close to trees outlined in this report are followed, the impact of the development on trees should be acceptable.

6.0 Recommendations

6.1 Tree protection barriers and/or ground protection must be in place before any works begin on site, including site clearance and site set-up.

6.2 This arboricultural method statement should be observed by all site personnel and supervised at key stages by the project arboriculturist. Supervision/monitoring reports to be issued after each inspection as a record of compliance and audit trail for the local authority.

6.3 The foundation design for the single storey element of Block A should be discussed with the project arboriculturist, to ensure that it meets the rooting requirements of the adjacent tree. Foundation design in general should take into account trees to be removed, retained and planted.

6.4 A copy of this report and associated plans should be kept on site and be part of the site induction where applicable.

Appendix 1

Survey and background information

1. Methodology

The trees were surveyed from ground level without detailed investigations. All trees with a trunk diameter of 75mm or above[2] were surveyed. All dimensions were estimated unless otherwise indicated. Obvious hedges and shrub masses were identified where appropriate. Information collected is in accordance with recommendations in subsection 4.4.2.5 of BS 5837 and includes species, height, diameter, branch spread, crown clearance, age class, physiological condition, structural condition and remaining contribution. Each tree was then allocated one of four categories (U, A, B or C) to reflect its suitability as a material constraint on development.

2. Documents and information received

- 177-DR-050-P03_Drainage Layout
- 0614-BPA-06060-DEMOLITION SITE PLAN
- 0614-BPA-XX-DR-A-00100-PROPOSED LOWER GROUND FLOOR SITE PLAN
- 0614-BPA-XX-DR-A-00101-PROPOSED GROUND FLOOR SITE PLAN
- Appendix 3 - CHR_Topographic and Services Survey Plan
- CHR_220-PL-001-Landscape Masterplan
- CHR_A[--] 001 Site Services Layout Ground Floor

Reference documents

- *British Standards Institution (2012) BS 5837: Trees in relation to design, demolition and construction – Recommendations*
- *British Standards Institution (2010) BS 3998: Tree work – Recommendations*
- *DETR Tree Preservation Orders – A Guide to the Law and Good Practice*
- *National Joint Utilities Group (2007) Volume 4, Issue 2: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees*
- *DTLR (2001) Principles of Tree Hazard Assessment and Management - David Lonsdale*

3. Legal constraints and liabilities

Tree preservations orders: It is understood that none of the subject trees are protected by a tree preservation order (TPO).

The tree protection status is correct at the time of report production but can be subject to change. It is therefore the responsibility of any persons undertaking tree works operations to the trees which are the subject of this report and in accordance with our

[2] *BS 5837recommends that in most circumstances all trees over 75mm stem diameter should be included in a pre-planning land and tree survey*

recommendations, to undertake their own statutory tree protection checks with the local planning authority, to include TPO, conservation area (CA) and planning conditions prior to works commencing.

Conservation Areas: The site is located within the Dartmouth Park Conservation Area, which places certain restrictions on tree works.

Occupiers Liability 1957 and 1984: The Occupiers Liability Act places a duty of care to ensure that no reasonably foreseeable harm takes place due to tree defects. Therefore this report includes recommendations within the tree tables for work required for safety reasons. 'Common sense risk management of trees (National Tree Safety Group 2012)' states that *'the owner of the land on which a tree stands, together with any party who has control over the tree's management, owes a duty of care at common law to all people who might be injured by the tree. The duty of care is to take reasonable care to avoid acts or omissions that cause a reasonably foreseeable risk of injury to persons or property.'*

Common Law: This enables pruning back of the crown and roots of trees on adjacent land where they overhang neighbouring property, providing the work is reasonable and does not cause harm. This right does not override TPO and CA legislation.

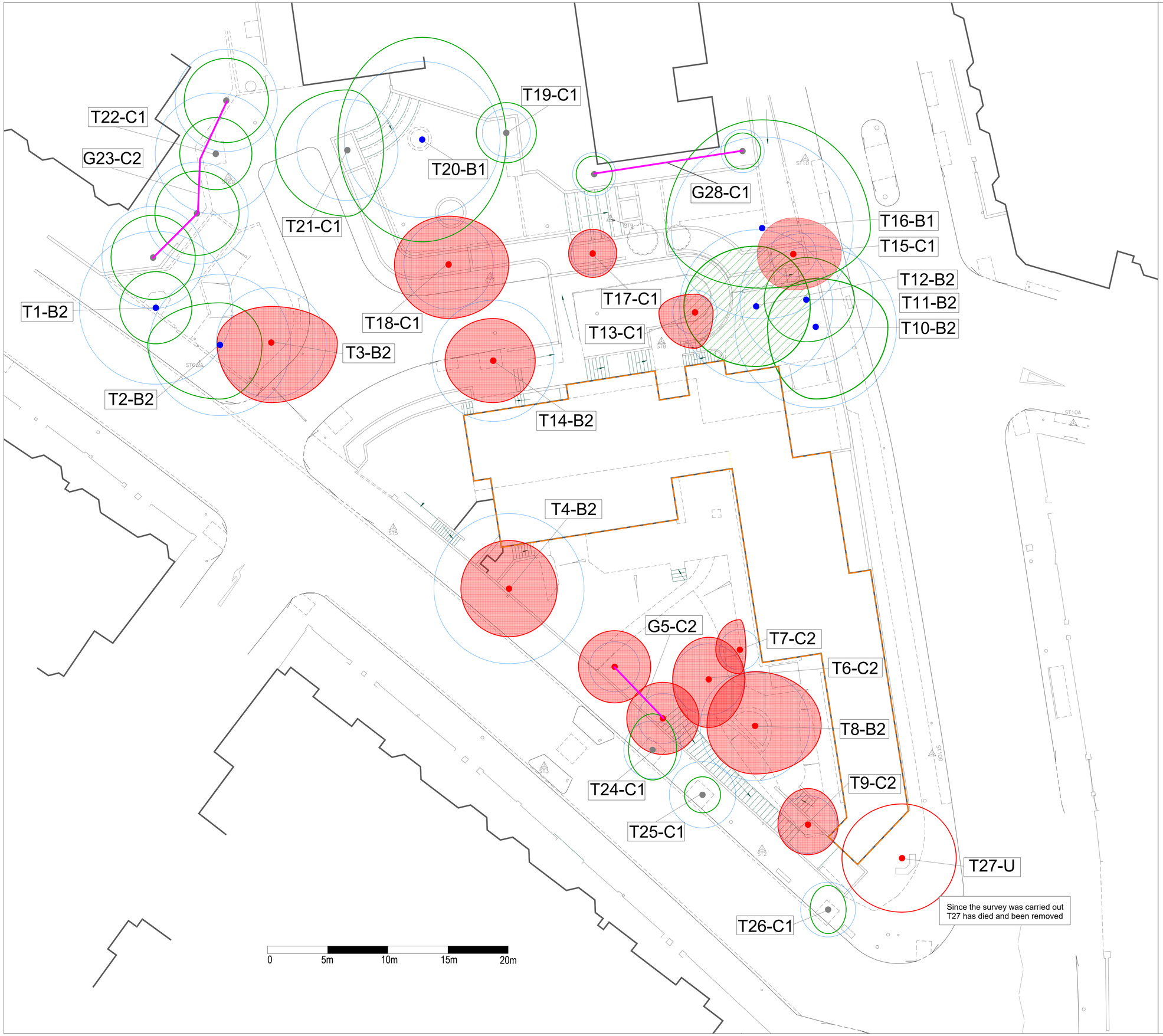
Ecological constraints: The Wildlife and Countryside Act 1981, as amended, The Conservation of Habitats and Species Regulations 2010 and the Countryside and Rights of Way Act 2000, provide statutory protection to species of flora and fauna including birds, bats and other species that are associated with trees. These could impose significant constraints on the use and timing of access to the site. It is the responsibility of the main contractor and tree surgery contractor to ensure that no protected species are harmed whilst carrying out site clearance or tree surgery works. Unless competent to do so, the advice of an ecologist must be sought.

Appendix 2

Tree Removal Plan, DFC4363 TRP

Tree Protection Plan (demolition), DFC4363 TPP1

Tree Protection Plan (construction), DFC4363 TPP2



Category B – Moderate quality and value

Category C – Low quality and value

RPA – root protection area as defined by Table 2 BS 5837: 2012

Tree to be retained

Group of trees to be retained

Tree to be removed

Tree to be pruned

Revision	Description	Drawn	Date

D F Clark Contractors
Est. 1988
Design - Ecology - Arboriculture - Tree Surgery - Groundworks - Landscape Construction - Maintenance

Andrews Farm
Burnham Road
Althorne
Chelmsford
Essex
CM3 6DS
Tel 01621 740876
Fax 01621 742242
www.dfclark.co.uk

Client: London Borough Of Camden

Site address: Chester Road Hostel, Chester Road, Highgate

Drawing title: Tree Removal Plan

Date: 19.02.2022

Scale: 1:150@ A1

Drawing number: DFC4363_TRP

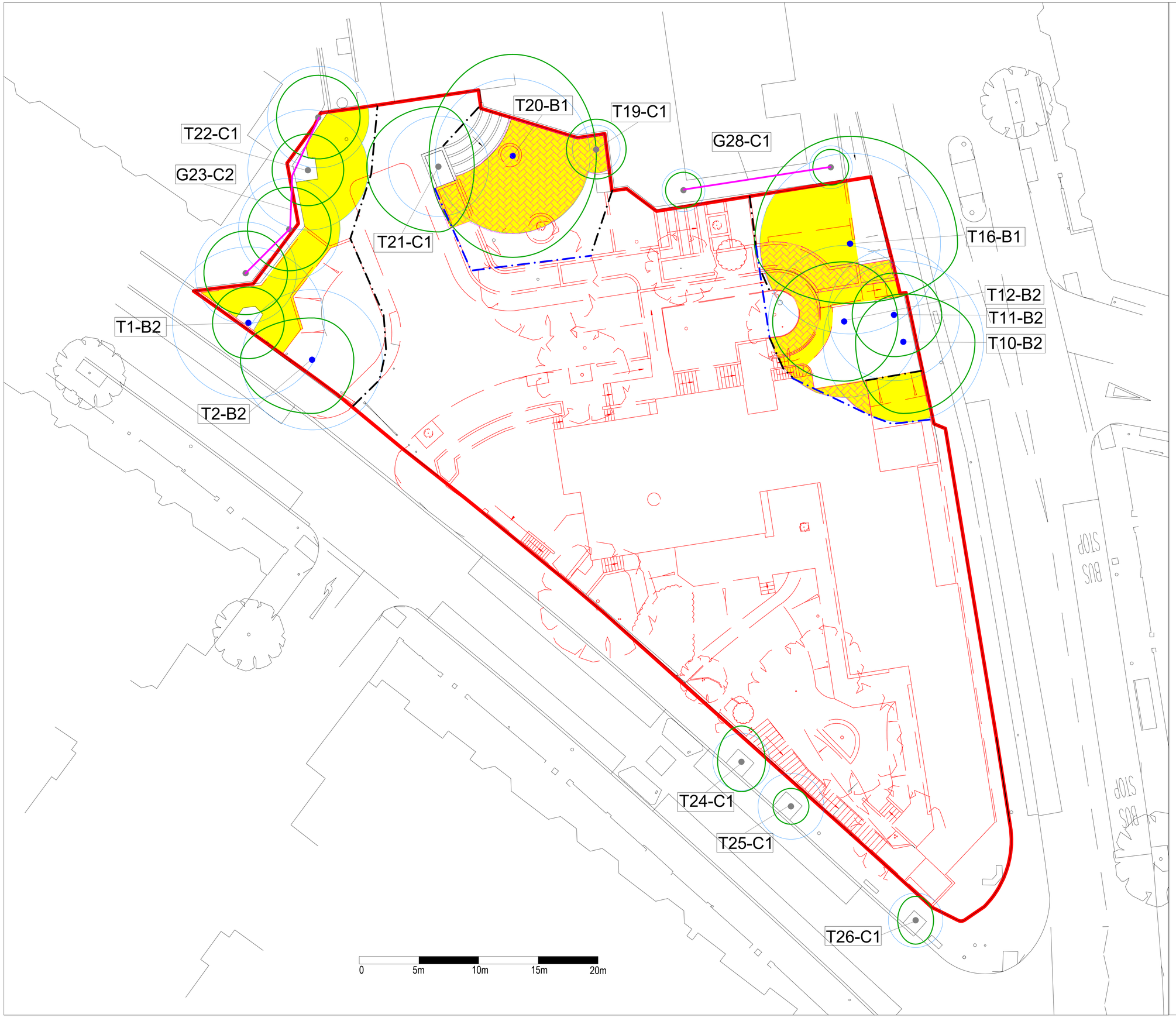
Revision:

Drawn: PJR

Authorised:

Drawing status:

Orientation



Category B – Moderate quality and value

Category C – Low quality and value

RPA – root protection area as defined by Table 2 BS 5837: 2012

Tree to be retained

Group of trees to be retained

Tree protection fencing

Additional fencing following demolition

Area subject to AMS – refer to tree report

Works to be carried out under arboricultural supervision

Revision	Description	Drawn	Date

D F Clark Contractors
Est. 1960
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Andrews Farm
Burnham Road
Althorne
Chelmsford
Essex
CM3 6DS
Tel 01621 740876
Fax 01621 742242
www.dfclark.co.uk

Client: London Borough Of Camden

Site address: Chester Road Hostel, Chester Road, Highgate

Drawing title: Tree Protection Plan (Demolition)

Orientation

Date: 19.02.2022

Scale: 1:150@ A1

Drawing number: DFC4363_TPP1

Revision

Drawn: PJR

Authorised

Drawing status

- Category B – Moderate quality and value
- Category C – Low quality and value
- RPA – root protection area as defined by Table 2 BS 5837: 2012
- Tree to be retained
- Group of trees to be retained
- Tree protection fencing
- Temporary ground protection
- Area subject to AMS – refer to tree report
- Works to be carried out under arboricultural supervision

Revision	Description	Drawn	Date

D F Clark Contractors
Est. 1968
Design · Ecology · Arboriculture · Tree Surgery · Groundworks · Landscape Construction · Maintenance

Andrews Farm
Burnham Road
Althorne
Chelmsford
Essex
CM3 6DS
Tel 01621 740876
Fax 01621 742242
www.dfclark.co.uk

Client
London Borough Of Camden

Site address
Chester Road Hostel, Chester Road, Highgate

Drawing title
Tree Protection Plan (Construction)

Date
19.02.2022

Scale
1:150@ A1

Drawing number
DFC4363_TPP2

Revision

Drawn
PJR

Authorised

Drawing status

Orientation

Appendix 3

Tree works schedule

Tree work recommendations

All tree works to be undertaken in accordance with *BS 3998:2010 Recommendations for tree works*, or industry best practice.

Tree no.	Species	Proposed works	Reason
T1	Locust tree	Remove	Conflicts with SuDS and works associated with basement
T4	Lime	Remove	Conflicts with proposed building
G5	Lilac & cotoneaster	Remove	Conflicts with proposed building
T6	Apple	Remove	Conflicts with proposed building
T7	Rowan	Remove	Conflicts with proposed building
T8	Locust tree	Remove	Conflicts with proposed building
T9	Cotoneaster	Remove	Conflicts with proposed building
T12	Silver maple	Crown lift western aspect to 3.5m	To provide clearance of single storey structure.
T13	Apple	Remove	Conflicts with proposed building
T14	Locust tree	Remove	Conflicts with proposed building
T15	Cherry	Remove	Conflicts with demolition requirements
T17	Rowan	Remove	Conflicts with proposed building
T18	Cherry	Remove	Conflicts with proposed building

Appendix 4

Tree protection barriers & ground protection

Design of welded mesh, Heras type tree protection barrier

Barriers should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place. The default specification should be in accordance with 6.2.2.2 of BS 5837, as set out below.

Specifications: Barrier shall be a minimum 2 m high. It shall consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated below. The vertical tubes should be spaced at a minimum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed. See Figure 2 overleaf.

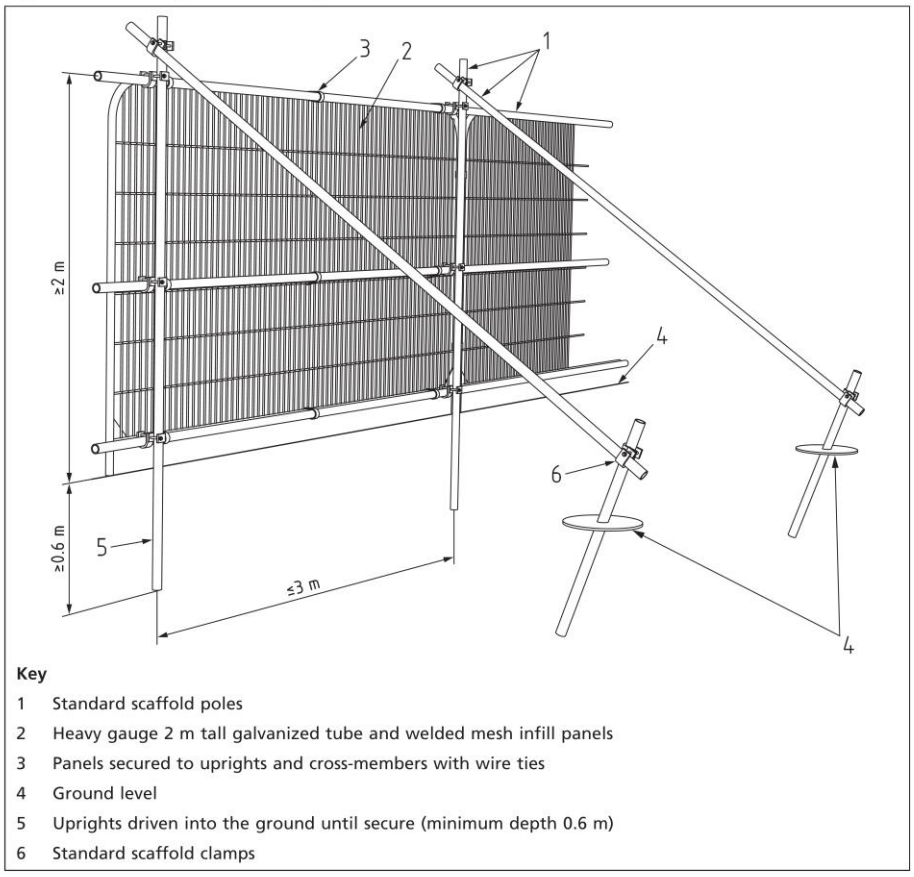
Where site circumstances and associated risk of damaging incursions into the RPA do not necessitate the default level of protection, an alternative specification may be used if agreed with the local authority. An example would be 'Heras' type welded mesh panels on rubber or concrete feet. The panels should be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The panels should be supported on the inner side by stabiliser struts. See Figure 3 overleaf. All-weather notices should be attached to the barrier with words such as 'TREE PROTECTION ZONE - NO ACCESS.

Location: Barriers shall be positioned on the perimeter of the Root Protection Area to define the Tree Protection Zone or as specified in the Tree Protection Plan.

Shown on the Tree Protection Plan by a dashed black line

Figure 1 Example **of welded mesh barriers in use**

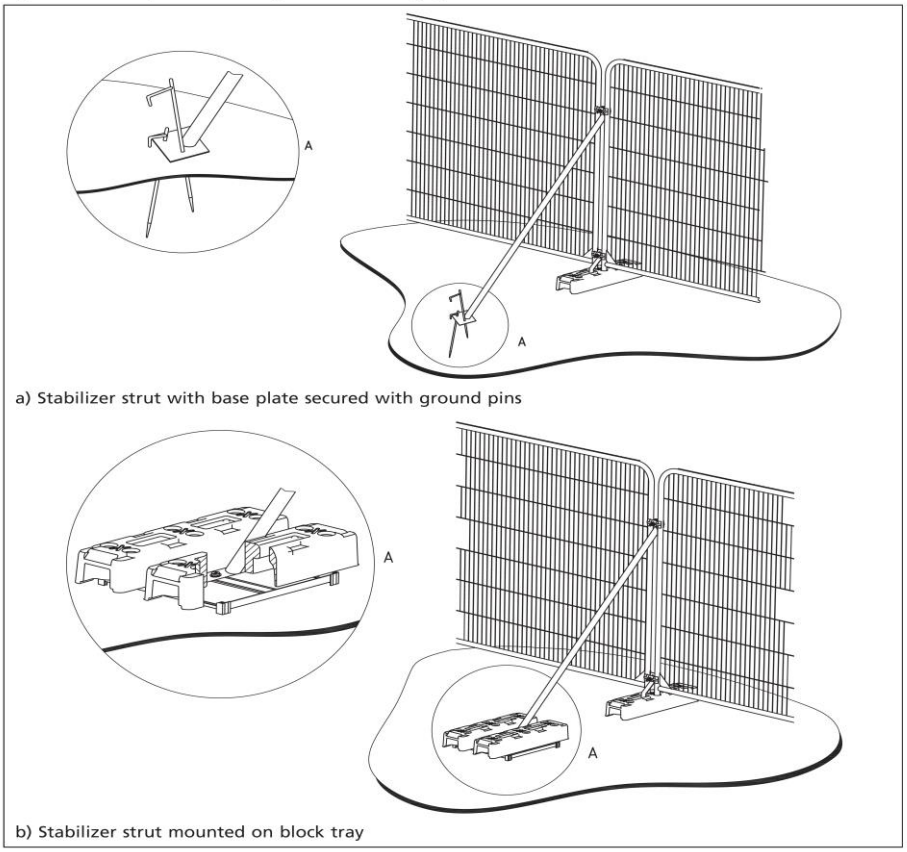
Figure 2 **Default specification for protective barrier**



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized 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 0.6 m)
6 Standard scaffold clamps

Figure 3 **Examples of above-ground stabilizing systems**



Figures above are reproduced with the permission of the British Standards Institute.

Suggested protective fencing warning sign format

Ground protection

In areas where it is not possible to erect protective fencing, ground protection must be used to protect the TPZ of trees. Where it has been agreed during the design stage, and as shown on the tree protection plan, that vehicular or pedestrian access for the construction operation may take place within the TPZ, the possible effects of construction activity should be addressed by a combination of barriers and ground protection. The position of the barrier may be within the TPZ at the edge of the agreed working zone but the soil structure beyond the barrier to the edge of the TPZ should be protected with ground protection. **This must be installed before any site activity takes place to protect soil structure and tree roots.**

Ground protection must be fit for the purpose of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil. It might comprise one of the following:

- For pedestrian movements or the erection of scaffolding within the RPA the installation of ground protection in the form of a single thickness of scaffold boards either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip laid onto a geotextile.

- For pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards or panels placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane.

- For wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

The following is a list of suppliers of temporary ground protection including polymer, metal or wooden panels. Other companies supply similar products and the following are given only as an example.

- www.ground-guards.co.uk
- www.evetrakway.co.uk
- www.trakmatseurope.com
- www.centriforce.com
- www.marwoodgroup.co.uk

Cellular confinement no-dig systems can also be used.

Examples of proprietary ground protection panels

Green-Tek Ground Guards showing geotextile membrane, 100 mm of woodchip with panels above protect tree roots

Appendix 5

Specific report caveats

Specific report caveats

- The survey was based on a drawing provided by the client.
- No internal diagnostic equipment was used other than a sounding mallet and probe.
- The survey is concerned solely with arboricultural issues.
- Any work with trees will discharge the due diligence requirements of all relevant wildlife and countryside legislation.
- Trees are dynamic living organisms whose health and condition can change rapidly. Any changes to the tree or conditions close to the tree may change the stability and condition of the tree and a further examination would be required and may affect the validity of this report.
- This report is valid for 12 months.

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Arboricultural Method Statement

for development at

Chester Road Hostel

Chester Road

London, N19

Date: 20th February 2022

Our Ref: DFC4363 AMS

Prepared by: Philippa Roberts FdSc, MArborA

Tel: 01621 740876

www.dfclark.co.uk

Andrews Farm Yard
Burnham Road
Althorne
Chelmsford
Essex CM3 6DS