A1 File Reference TF1153-FAB-00-XX-DR-G-8400.dwg Plot Date 31-Aug-23

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General

This illustrative plan is intended to inform the location of protective barriers, other relevant physical protection and highlight precautionary areas for retained trees prior to site enablement and excavation. This plan should be incorporated into the overarching Method statement for the works, subsequent drawings and contractors method statements and issued for use on site, to ensure that all parties are fully aware of the areas in which access and works may and may not take place. The Contractor will be required to prepare detailed Risk Assessments and Method Statements which take into account relevant health and safety requirements, including those associated with the Construction Design and Management (CDM) Regulations, specific phasing and other Client requirements to ensure the works are undertaken in a safe, economic, sustainable, legal and appropriate manner. This document may therefore require review and therefore presents only the conceptual understanding of how the works will be undertaken and is not a substitute for the detailed Risk Assessment and Method Statements required to be prepared by the Contractor as part of the future works.

Excavation and Installation has potential to have an adverse impact on trees located within within the site (T9 - T10).
Any discrepancies must be reported to *tree:*fabrik immediately.

Site Boundary

Indicative site boundary

Tree Constraints

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

B Category tree
Trees of moderate quality and value

A Category tree
Trees of high quality and value

C Category tree
Trees of low quality and value

Crown spread

Preliminary root protection area
Illustrated as a radius centered on the trunk

Statutory Designations (trees)

The site lies within the Bloomsbury Conservation Area. As such, six weeks prior notice must be given to Camden Council in writing prior to carrying out tree works. All tree works must be carried out by a competent person experienced in arboriculture and in accordance with British Standards 3998 (2010) Recommendations for tree work.Attention is drawn to the responsibilities under the Wildlife & Countryside Act (1981) as amended by the Countryside and Rights of Way Act 2000.

Arboricultural Method Statement

The primary purpose of this plan is to aid the preservation of retained trees through setting out the appropriate working practices, demolition techniques and tree protection measures that are to be adopted when excavation works are undertaken in the proximity of trees. The methodology of this Tree Protection Strategy follows a logical sequence of events. Variations to the sequence could significantly reduce the efficiency of the tree protection measures.

This plan should be incorporated into subsequent drawings and method statements used for design purposes or issued for use on site, to ensure that all parties are fully aware of the areas in which access and works may and may not take place. A summary of tree protection will be provided to all personnel through the Site Induction. This summarises the key precautionary measures and responsibilities of all site personnel to ensure an awareness of trees during site works and that they are successfully protected throughout the demolition and site enablement works. Contractor - It is the responsibility of the Contractor to ensure that the Tree Protection Plan is implemented on site, maintained during the process and understood by all site personnel and contractors prior to commencement of works.

Site Traffic

Access prohibited following installation of Protective barriers (Pedestrian access only)

Site Set-Up

Responsibilities of key personnel & site induction - Equally as important as the physical measures of tree protection are the links of communication. Pre-commencement discussions will be carried out between the Project Arboriculturist and members of the Technical Team to ensure that tree issues are considered within the complexities of detailed construction and site management.
A summary of Tree Protection will be provided to all personnel through the Site Induction. This summarises the key precautionary measures and responsibilities of all site personnel to ensure an awareness of trees during site works and that they are successfully protected throughout the excavation process.

Site Manager - It is the responsibility of the Site Manager to ensure that details of this Arboricultural Method Statement is implemented on site, maintained during the complete process and understood by all site personnel and contractors prior to commencement of works. The Site Manager will notify the appointed Project Arboriculturist of any programmed or unscheduled works within the RPA or Construction Exclusion Zone. It is the responsibility of the Site Manager to inform the appointed Project Arboriculturist at least 72hrs before commencement of each operation within the arboricultural scope of works outlined within Arboricultural Monitoring & Recording (below) and of any unscheduled works or variations to enable action by the Project Arboriculturist.

Site Personnel - Information on the required protection measures will be provided at the **site induction** to personnel. All damage to protective barriers or accidental damage to trees must be reported to the Site Manager immediately. Works occurring within the vicinity will cease immediately until adequate tree protection measures are rectified.

Project Arboriculturist - It is the responsibility of the Project Arboriculturist to liaise with the Client and Council representative to ensure appropriate tree protection and precautionary measures are designed and implemented prior to commencement of works. Once the site is active, the appointed Project Arboriculturist will monitor compliance with the arboricultural conditions through regular site visits and provide supervision and technical support on tree issues arising during the development as agreed with the client.

Unscheduled works - The Site Manager will notify the appointed Project Arboriculturist of any unscheduled works within the RPA or construction exclusion zone. The extent of works will be discussed and a method statement and provision for tree protection implemented. All unscheduled works must be agreed by the appointed Project Arboriculturist and if appropriate the Local Authority Representative consulted prior to commencement of the works.

Breaches of tree protection & unforeseen events - All damage to protective barriers or accidental damage to trees must be reported to the Site Manager immediately. Works occurring within the vicinity will cease immediately until adequate tree protection measures are rectified. A record of the damage will be made by the Site Manager and, if appropriate in consultation with the appointed Project Arboriculturist, remediation measures carried out. In the event of spillage the area is to be secured with sandbags on the line of the tree protection area and measures taken to drain/soak any spillage away from the protected area.

Storage and delivery of materials - During site enablement and installation of tree protection fencing within the site, all delivery vehicles will unload in the designated area and materials carefully stored outside the tree protection barriers.

Pre-commencement meeting - A pre-commencement meeting shall be held on site prior to commencement of enabling or excavation works . This shall be attended by the Client's Representative, Excavation Contractor, Installation Contractor and Project Arboriculturist. The Local Authority Tree Officer will be notified and invited to attend. The methods of tree protection outlined within this statement and revisions shall be fully discussed at the meeting, so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications to this statement shall be recorded and circulated to all parties in writing.

In brief, the work stages for the site enablement and demolition phase will be as follows;

Stage 1 Pre-commencement meeting to identify tree removal and facilitative pruning works.
Stage 2 Execute agreed felling facilitative pruning works
Stage 3 Installation of tree protection and protective mesh
Stage 4 Demolition of structures within RPA
Stage 5 Airspade excavation of proposed route of services and installation of drainage provision
Stage 6 Reinstatement of excavated soil into trench
Stage 7 On completion, Site Manager to review tree protection

Tree Roots - The majority of tree roots are typically concentrated within the top 600mm of soil. Repeat tracking by vehicles, excavation or cement (including washings and crush) over soft ground near trees is likely to cause root damage. This may have an adverse impact on the trees health and stability. Any tree roots exposed during operations should be treated at once. Exposed roots smaller than 25mm diameter may be pruned back, preferably to a side branch, using proprietary cutting tools. In the event that roots are required to be pruned, sharp cutting tools are to be used to ensure the minimum damage is caused. Clean cuts can result in the redevelopment of fine roots. Poor untidy cuts can, however, result in root die back and decay. No roots greater than diameters of 25mm are to be pruned without prior agreement with the Project Arboriculturist. Exposed roots will be wrapped in dry, clean Hessian sacking to prevent desiccation and to protect from rapid temperature changes Following completion of works within the immediate vicinity all exposed roots will be covered with good quality topsoil before backfilling. In the event that large quantities of structural roots are found, a re-evaluation of the proposed works and impact is to be made by the Project Arboriculturist and a record made.

Tree Protection Barriers - A scheme for the protection of trees shall be implemented to avoid damage or loss of retained trees. All barriers are to be erected prior to commencement of any works on site, including site enablement and excavation, or the delivery of machinery, materials, plant or equipment to the site or any adjacent land thereto. Where sequential installation is required, barriers will be erected prior to commencement of operations as specified. Where appropriate the protection barriers may be aligned with the site hoarding. Barriers are to be retained throughout the appropriate phase of development process and are to be fit for purpose. The area between the tree and the protection barriers forms the Construction Exclusion Zone. The construction exclusion zone is to remain sacrosanct with storage of materials, machinery or equipment prohibited. No excavation or changes in land levels are to occur within this area unless agreed in writing by the Local Planning Authority. All Weather tree protection notices are to be fixed to the outside of all tree protection barriers. See Example - Tree Protection Signage.
Any damage to protective barriers or accidental damage to trees must be reported to the Site Manager immediately. Works occurring within the vicinity will cease immediately until adequate tree protection measures are rectified. All personnel using the site including site managers, agents, supervisors, operatives and other relevant personnel are to be informed of the role of the tree protective fences and its importance.

Type 1 Barriers - shall consist of a scaffold framework comprising of a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum of 3m and driven into the ground. Onto this, weldmesh panels should be securely fixed with wire or scaffold clamps unless similar fencing is agreed with the Local Planning Authority. See Tree Protection Barriers - Type 1 (extract of Fig.2 BS5837 2012 - Default specification for protective barrier).

Tree Protection Plywood Boxing - Barriers must be fit for purpose and should consist of marine grade sheet ply forming a free standing box excluding the trunk from accidental damage. The box must be a minimum of 2.1m height and braced to resist impact.

Demolition of Structures - All plant and vehicles engaged in demolition work must operate outside of the RPA or within an area of the existing foundation slab. All plant and vehicles will be appropriate to the demolition in hand and in consideration of all site constraints in order to minimise damage/disturbance to trees. Precautionary measures must be observed to avoid contact with the crown of any retained trees from tall loads, plant with booms, plant & counterweights. All plant and vehicles will operate with a banksmen where demolition operations occur within 2m of the crown extents.

Demolition of standing structures, shall be carried out using a 'top down and pulled back' methodology within the footprint of the existing building and/or hardstanding. Following demolition of standing structures and **prior to commencement of removal of the foundation base,** areas of potential conflict will be marked out on site by the Site Manager and Project Arboriculturist to indicate precautionary areas.
Removal of the foundation base must be carefully carried out in order not to disturb tree roots that may be present directly below them. Appropriate machinery under arboricultural monitoring will be used to break-up and remove the existing surface and sub-base ensuring that excavation does not encroach within the soft ground below. When the foundation is close to the soil level, hand tools or appropriate machinery is to be used to prevent unnecessary damage to the tree roots. Any tree roots exposed by such operations should be recorded and treated at once. Exposed roots will be wrapped in dry, clean hessian sacking to prevent desiccation and to protect from rapid temperature changes until the proposed surface is reinstated, damaged roots will be recorded and cleanly cut (see Tree Roots) **NOTE: Demolition of structures within the RPA of a retained tree shall be carried out under a watching brief by the Project Arboriculturist to minimise risk of root damage and to enable assessment of potential constraints during construction**

Demolition of Structures outside RPA

Direction of Demolition

Temporary ground protection -
Ground protection will be required within the RPAs of trees
BS. 5837:2012 states that where construction working space or temporary construction access is justified within the RPA, this should be facilitated by;

- The retention of areas of suitable existing hard surfacing that is not proposed for re-use as part of the finished design, to act as temporary ground protection during construction (Subject to evaluation by the project arboriculturist and an engineer as appropriate).
- The use of new temporary ground protection, where the set-back of the tree protection barrier would expose unmade ground to construction damage, as part of the implementation of physical tree protection measures prior to work starting on site.

New temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil. 'In all cases, the objective should be to avoid compaction of the soil, which can arise from the single passage of a heavy vehicle, especially in wet conditions, so that tree root functions remain unimpaired.'
Suitable forms of ground protection include:

- Pedestrian movement only.
  A single thickness of scaffold boards placed 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. 100mm depth of woodchip), laid onto a geotextile membrane;
- Pedestrian-operated plant up to a gross weight of 2t.
  Proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150mm depth of woodchip), laid onto a geotextile membrane.
- Wheeled or Tracked Construction Traffic exceeding 2T.
- 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.

Arboricultural supervision of service trench excavation. Any work within RPAs requires a high level of care. Qualified arboricultural supervision will be present to minimise the risk of misunderstanding and misinterpretation. Site personnel will be properly briefed before any work starts. Ongoing work will be inspected regularly and, on completion, the work will be signed off by the arboriculturist to confirm compliance by the contractor. In the context of this method statement, an appropriate supervising officer is to be an arboriculturist.

Air spade excavation of proposed service trench. Specialist tools for removing soil around roots using compressed air will be employed as an appropriate alternative to hand digging. All soil removal will be undertaken with care to minimise the disturbance of roots beyond the immediate area of excavation. Where possible, flexible clumps of smaller roots, including fibrous roots, will be retained if they can be displaced temporarily or permanently beyond the excavation without damage. Excavations are to be finished below 600mm.

Exposed roots to be removed (if required) will be cut cleanly with a sharp saw or secateurs 10–20cm behind the final face of the excavation. Roots temporarily exposed will be protected from direct sunlight, drying out and extremes of temperature by appropriate covering. Roots greater than 2.5cm in diameter will be retained where possible. Roots 2.5–10cm in diameter will only be cut in exceptional circumstances. Roots greater than 10cm in diameter will only be cut after consultation with the appropriate supervisory officer.

Arboricultural Monitoring & Recording

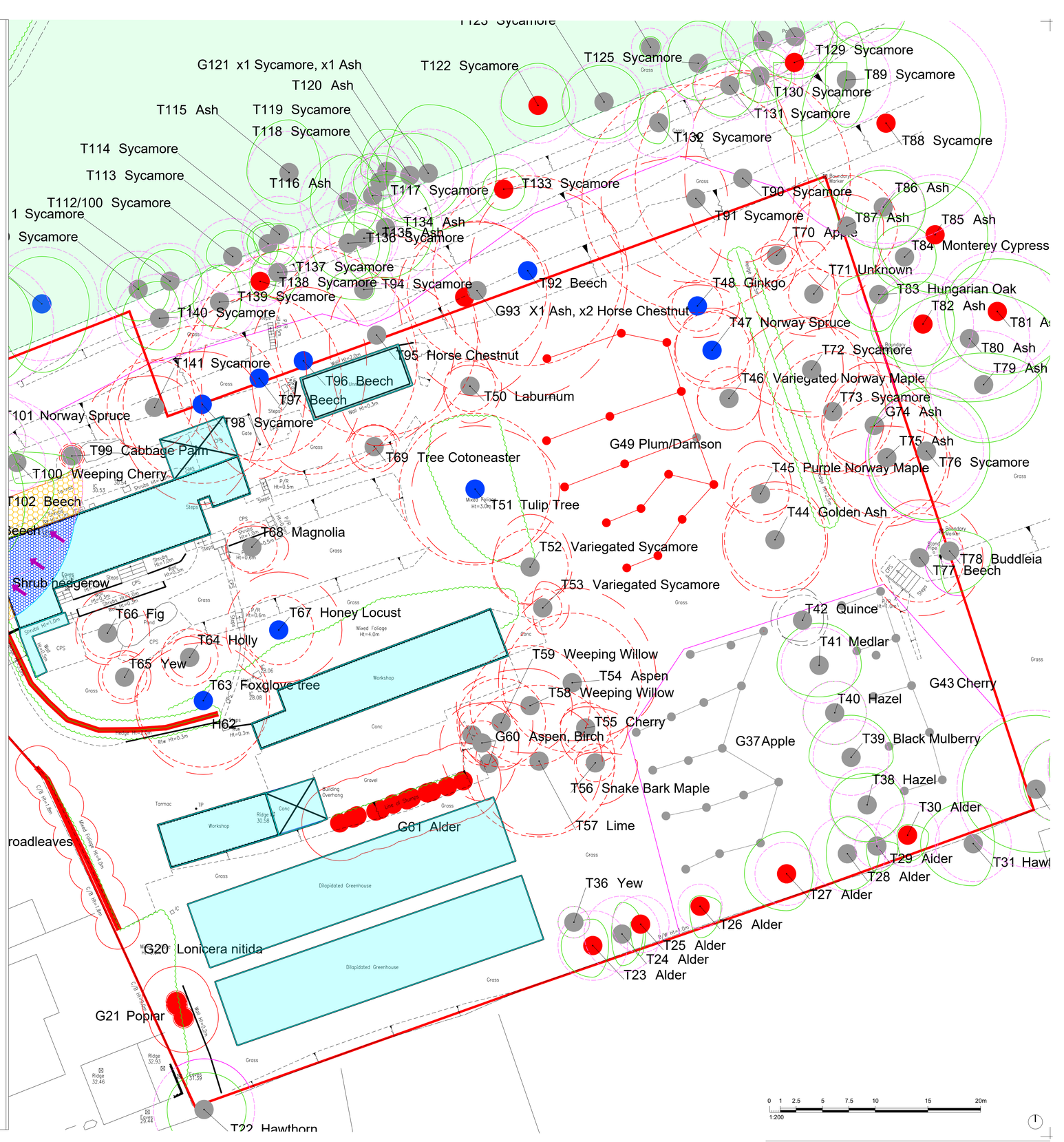
All works within the Root Protection Area (RPA) and close to the crown extents of retained trees will be carried out under an Arboricultural Watching Brief by the Project Arboriculturist.

It is the responsibility of the Client to appoint a Project Arboriculturist and agree the level of monitoring and recording prior to commencement. The frequency of site visits will be determined by the scope of works and complexities of development prior to commencement of key work stages. As a minimum, a site visit will be made at the key work stages identified and within 1 month of commencement. Following each site visit, the appointed Project Arboriculturist will circulate a report to the Site Manager and LPA Tree Officer within 5 working days. The reports shall be retained to form an auditable log for inspection by the LPA at such time as is requested. The key work stages and associated scope of works for Arboricultural Monitoring forms Table 1 below.

It is the responsibility of the demolition contractor to inform the Client's Representative of works within the RPA atleast 72hrs prior to commencement.

TABLE 1 - ARBORICULTURAL MONITORING AND RECORDING

Work Stage	Scope	Site Inspection	Site Monitoring
Pre-commencement meeting	*Prior to site enablement or excavation* - discuss tree protection outlined within this statement and revisions for the particular phase with main contractor so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications to this statement shall be recorded and circulated to all parties in writing.	No	–
Tree Protection Barriers	*Prior to site enablement - inspect tree protection identifying any outstanding works or action required. On completion of any outstanding actions sign off on completion. Report breaches to Site Manager for action.*	YES Visit Following completion of tree removal	–
Demolition Operations	*During demolition phase* - inspect tree protection identifying any outstanding works or action required. On completion of any outstanding actions sign off on completion. Report breaches to Site Manager for action.		Yes W/C 06/11/23
Excavation Phase	*During excavation phase* - inspect tree protection identifying any outstanding works or action required. On completion of any outstanding actions sign off on completion. Report breaches to Site Manager for action.	YES 11/02/24	YES 11/02/24
Tree Protection Barriers	*Following dismantling of scaffold - inspect tree protection identifying any outstanding works. On completion of any outstanding actions sign off on completion. Report breaches to Site Manager for action. Transition to construction Phase*	Yes Upon Completion	–



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Revision	Date	Reason	Drawn	Checked
P01	31/08/23	Initial Issue	RD	RD

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2. Do not scale from this drawing. Only figured dimensions are to be taken from this drawing.
3. All contractors must visit site and be responsible for taking and checking all dimensions related to the works shown on the drawing prior to fabrication or setting out.
4. This drawing uses coloured lines. Please do not rely on a monochrome copy.

External References:
- 20050 - SK101J (Site Plan) 19042023
- D2000-FAB-00-XX-M3-L-0001
- D2003-FAB-00-XX-M2-G-7001 Levels
- D3303-FAB-00-XX-M3-G-7004 Drainage
- XREF1

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draft

Project: Castlemer, Kingston
Client: Greenplan Designer Homes
Drawing Title: Arboricultural Method Statement and Tree Protection Plan (Demolition) 1 of 2

Purpose of Issue	Drawn By	Checked By	Drawn Scale	Date of First Issue
PRELIMINARY	rd	rd	1:200 @ A1	aug | 2023

Project Number	Origin	Zone	Level	File Type	Role	Number	Revision
TF1153	FAB	00	XX	DR	G	8400	P01