



Northern Estate Programme

Norman Shaw North Standalone Arboriculture Statement

March 2021

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HOUSE OF COMMONS
NORTHERN ESTATE PROGRAMME

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| C01 | 29/03/2021 | PM | AN | For Planning | |

Contents

| | | |
|---|--|----|
| 1 | Introduction | 3 |
| 2 | Tree Survey | 5 |
| 3 | Impact Assessment and Method Statement | 1 |
| 4 | Implementation of Method Statement | 7 |
| 5 | Conclusion..... | 12 |
| | Appendix A - Tree Constraints Plan | 13 |
| | Appendix B - Temporary Welfare Unit Plan..... | 14 |
| | Appendix C - Hard Landscape Strategy..... | 15 |
| | Appendix D - Table 1 of BS5837:2012 | 16 |
| | Appendix E - Tree Protection Plan | 17 |
| | Appendix F - Site Notice for Tree Protective Fencing | 18 |
| | Appendix G - Glossary of Terms..... | 19 |

1 Introduction

- 1.1.1 This Arboriculture Statement relates to an application for the Norman Shaw North Standalone works Full Planning and Listed Building Consent.
- 1.1.2 This Statement has been produced to support an application for full planning permission and listed building consent for internal and external refurbishment works to the Norman Shaw North (NSN) building, located on the Parliamentary Northern Estate. The report has been prepared by BDP Ecology on behalf of the Corporate Officer of the House of Commons.

1.2 Description of the Norman Shaw North Standalone Proposals

- 1.2.1 The description of development (the Proposed Development) relating to the Norman Shaw North Standalone proposals application is set out below:

“Full planning consent for the refurbishment of Norman Shaw North including the installation of a glazed roof covering to the internal courtyard, to provide further accommodation for parliamentary uses (Sui Generis); installation of chillers at ground level adjacent to the northern elevation; basement piling; alterations to the courtyard eaves to create a roof access gallery; alteration of the northern elevation; alteration of north western corner stepped plinth; alteration to Laundry Road landscape and levels to provide accessibility improvements; and crane gantry screw piling located in Commissioners' Yard.

Listed Building Consent for the internal and external refurbishment, including installation of new building services and rooftop repairs and reconfiguration including rooftop louvres and reconstruction of chimneys; courtyard roof fixings; secondary glazing; and interiors; alterations to existing openings and basement vaults; and associated works including temporary construction works.”

1.3 Introduction to Report

- 1.3.1 Trees are a material consideration to the planning process. In determining planning applications, Westminster City Council will consider how a Proposed Development is likely to affect trees within or on land adjacent to an application site (including street trees).
- 1.3.2 This report will allow the Local Planning Authority (LPA) to assess the impact of the Norman Shaw North Proposed Development on relevant trees as part of the associated applications for full planning permission and listed building consent.

1.4 Structure of the Statement

1.4.1 This Arboriculture Statement assesses the implications of the delivery of the Norman Shaw North Standalone proposals on the trees identified and advises on arboricultural measures to mitigate any detrimental impact resulting from the project where relevant.

1.4.2 The structure for the Arboricultural Statement is as follows:

- Tree survey
- Arboricultural Impact Assessment and Mitigation Measures
- Implementation of Method Statement
- Conclusions

2 Tree Survey

- 2.1.1 A site survey was carried out in May 2018. During the site survey each specified tree or group of trees identified within the topographical survey (refer to Appendix A for Tree Constraints Plan) provided was recorded.
- 2.1.2 All parts of each tree or group of trees were viewed insofar as possible from ground level using binoculars. Where appropriate, trees may have been grouped by common characteristics such as species, age, vitality and dimensions. The following information was recorded for each tree or group of trees:
- Species
 - Stem Diameter
 - Height
 - Age Range
 - Crown Spread
 - Crown Clearance
 - Condition
 - Comments and Preliminary Recommendations
 - Estimated Remaining Contribution
 - Tree Quality Category Rating
 - Root Protection Area
- 2.1.3 The data collected during the site survey was subsequently recorded onto a Tree Data Schedule to meet the criteria specified in BS5837:2012 and a Tree Constraints Plan was produced to accurately enable the identification of trees and group of trees described in the Tree Data Schedule. This Tree Data Schedule should be read in conjunction with the Tree Constraints Plan found in Appendix A.
- 2.1.4 The limitations of this report are restricted to the persons, time and information made available and purpose for which this report has been prepared. This report does not deal with any existing tree root/building conflicts and no information has been provided regarding soil type.

2.2 Results

Trees Surveyed

- 2.2.1 A total of thirty eight individual trees across the Northern Estate were surveyed in May 2018 and plotted in order to assess their health and dimensions. Out of those trees surveyed, four are of relevance to the proposed works at Norman Shaw North (T4, T5, T6 and T38). The following Arboricultural data table (Table 2.1) sets out the findings of the survey for the three trees.

Table 2.1 Norman Shaw North Site Arboricultural Data Table

| Tree No. | Species | Dbh | Height (m) | Age | Crown Spread | | | | Crown C | Cond R | Comments and Preliminary Management Recommendations | ERC (Yrs) | TQC R | RPA (m ²) | RPA Circle Radius (m) |
|----------|--------------|-----|------------|-----|--------------|-----|---|-----|---------|--------|--|-----------|-------|-----------------------|-----------------------|
| | | | | | N | E | S | W | | | | | | | |
| T4 | London Plane | 600 | 19 | EM | 7 | 9 | 6 | 5 | 5 | A/B | A vigorous street tree within paved area. Previously reduced but has responded well, typical of species. Minor stem lean but good overall form. | 40+ | A1 | 162.86 | 7.20 |
| T5 | London Plane | 180 | 7 | SM | 3 | 4.5 | 4 | 3 | 3 | B | A young specimen within paved area. Previously pruned from light column. In a poor location. | 10+ | C1 | 14.66 | 2.16 |
| T6 | London Plane | 570 | 18 | EM | 6 | 5 | 8 | 7 | 5 | A/B | A vigorous street tree within paved area. Previously reduced but has responded well, typical of species. Minor stem lean but good overall form. | 40+ | A1 | 146.98 | 6.84 |
| T38 | Robinia | 270 | 12 | EM | 5 | 5.5 | 5 | 4.5 | 4 | B | Located within tree pit within the confines of the Northern Estate Site. Exhibits reasonable form with minor deadwood present and broken branches, typical of the species. Minor secondary stem at 2.5m. - Crown clean. | 20+ | B1 | 32.98 | 3.24 |

2.3 Tree Assessment

2.3.1 In general the trees surveyed were found to be in reasonable condition for their age and species and all trees will be retained as part of the development proposals. Refer to Tree Constraints Plan in Appendix A where the location/rating of each tree is illustrated.

2.3.2 The quality rating for the trees on or affecting this site can be summarised as follows:

C- 1 tree

A - 2 trees

B – 1 tree

2.4 Development

2.4.1 Table 2.1 details the condition of the trees and identifies their worthiness for retention. In addition the Estate-wide Tree Constraints Plan of Appendix A illustrates their Root Protection Area's (RPA's) in accordance with the British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. The RPA is an area that should be left undisturbed in order to provide adequate rooting area for retained trees.

2.5 Standard of Work

2.5.1 All tree work should be undertaken in accordance with British Standard 3998:2010 and by competent contractors insured with public liability cover of at least two million pounds.

2.6 Statutory Controls

2.6.1 The trees are all contained within the Whitehall Conservation Area. When planning to carry out work on a tree in a Conservation Area, you must give the City Council at least six weeks' notice in writing (a section 211 notice). This gives the Council an opportunity to consider whether a Tree Preservation Order (TPO) should be made in respect of the tree(s).

2.6.2 A review of Westminster City Council's TPO list confirms that there are no TPOs assigned to any of the four trees surveyed.

2.7 Wildlife

2.7.1 All operations should take account of wildlife needs and be planned to take advantage of weather conditions and time of year for minimum damage and disturbance. If any protected species or nesting birds are discovered at any time, works is to temporarily cease whilst an ecologist is contacted for guidance and assistance. This can be BDP (020 7812 8000) or Natural England (0845 600 3078).

3 Impact Assessment and Method Statement

3.1 Introduction

3.1.1 The implication tables clearly detail the condition of the trees and identifies their worthiness for retention. In addition the Tree Constraints Plan at Appendix A illustrates their Root Protection Area's (RPA's) in accordance with the British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. The RPA is an area that should be left undisturbed in order to provide adequate rooting area for retained trees.

| Table 3.1 Norman Shaw North Works Implications Table | | | | | | |
|--|---------|---------------------|--|-------------------|--|---------------------------------------|
| Tree No. | Species | Tree Quality Rating | Root Protection Area (m ²) | Circle Radius (m) | Distance to any proposed construction or surfacing (m) | Can the Tree be Successfully Retained |
| T4 | Plane | A1 | 162.86 | 7.20 | 3.9m | Yes |
| T5 | Plane | C1 | 14.66 | 2.16 | 4.0m | Yes |
| T6 | Plane | A1 | 146.98 | 6.84 | 3.9m | Yes |
| T38 | Robinia | B1 | 32.98 | 3.24 | 1.5m | Yes |

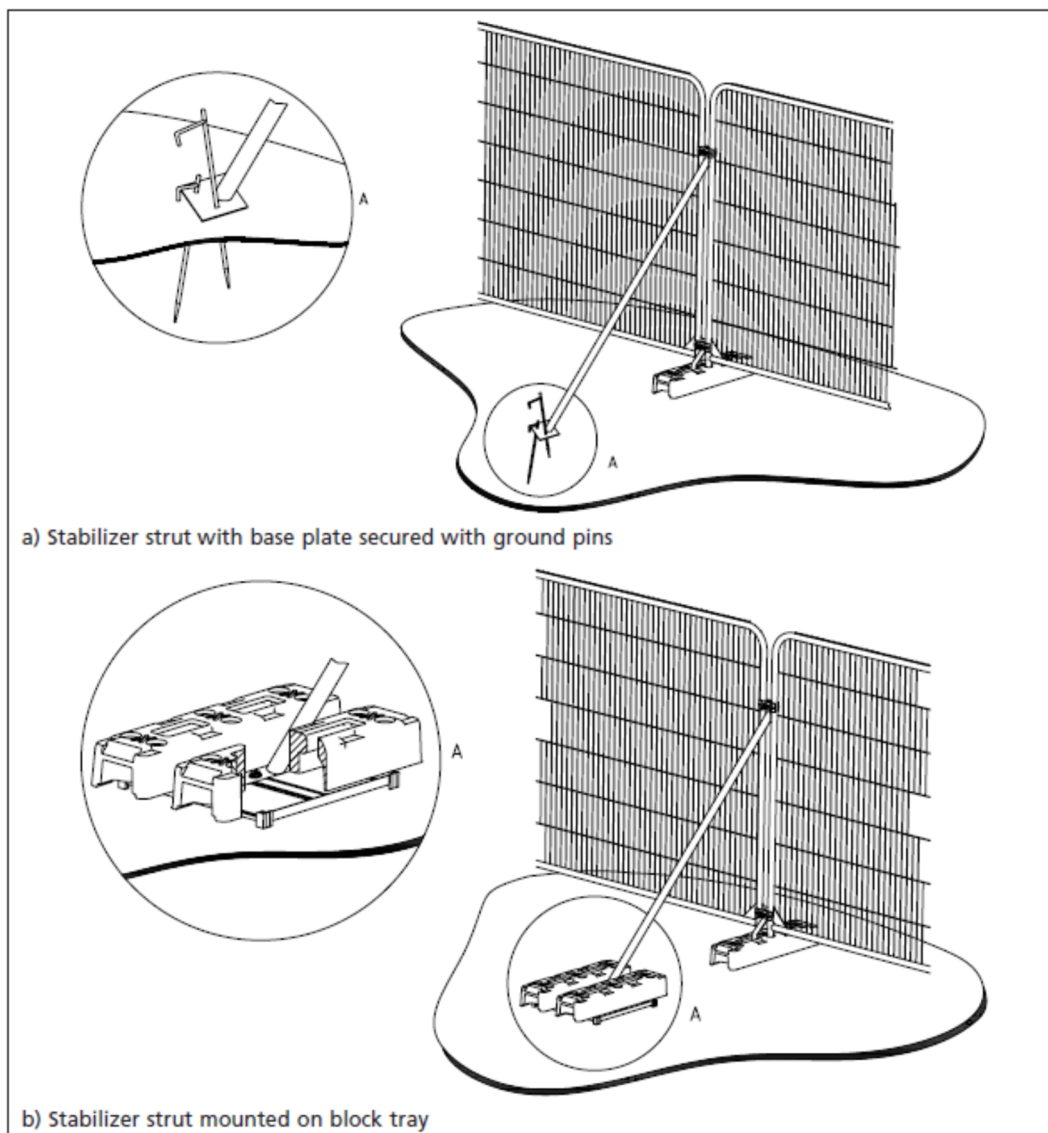
3.1.1 The infrastructure to support the implementation of the Norman Shaw North Standalone scheme will include a temporary welfare unit (ref. Appendix B) and scaffolding (refer to drawing ref. 00NSN-4216-WTS-90-XX-W-XX-DR-00026). The proposals will also include a hard landscape strategy (ref. Appendix C).

3.2 Tree Protection Measures

3.2.1 T38 is the single tree located within the site boundary. The tree is to be retained and will be protected from construction activities by the installation of an appropriate barrier at the commencement of site set-up.

3.2.2 The location of the protective barrier is shown on the tree protection plan of Appendix E. As there is limited available space within the site and the existing hard surfacing will be retained an above ground protective barrier system will be specified, as per Figure 3.1.

Figure 3.1: Example of above ground stabilising systems



3.2.3 During the localised works to the existing granite setts surrounding T38, a portable barrier will demarcate the working area to protect the tree temporarily for the duration of the proposed works.

3.2.4 T4, T5 and T6 are all located outside of the site boundary and will be protected from general day to day construction activities by the existing external fencing and proposed site hoarding.

3.3 Temporary Welfare Unit

- 3.3.1 The temporary welfare unit will have a footprint 6.0m x 24.0m and be four storeys high, the structure will be located within the light well garden area on the east elevation of the building and will sit over the single storey vaults that are separate from the main building.
- 3.3.2 The existing amenity grassland, which introduced shrub planting and associated substrate within the garden area will be removed, as the vaults on which the substrate sits is leaking and the structure will be waterproofed as part of the works.
- 3.3.3 A trial trench dug within the forecourt confirms a maximum 400mm depth of substrate on top of the concrete slab vault ceiling. The footings of the railings wall are fixed to the external vault wall and the concrete slab forming the ceiling of the vaults.
- 3.3.4 The garden area should therefore be discrete and not accessible to tree roots located in the adjacent footpath, however, the trial trench revealed there are fine adventitious fibrous roots not exceeding 25mm present within the soil adjacent to pipe ducting. The excavation of the existing planting and substrate area will lead to the loss of adventitious roots. The excavation will be of no detriment to the adjacent trees as this area will be a minor source of nutrient.
- 3.3.5 The excavation works should be overseen by a suitably qualified arboriculturist. The works should begin at the railing wall with a trench being dug along the wall using vacuum excavation to expose any roots. Any roots encountered less than 25mm in diameter should be severed cleanly as close to the wall as possible with a sharp tool avoiding ripping or snagging.
- 3.3.6 If any roots above 25mm in diameter are encountered, works should cease and the project arboriculturist should agree a methodology with the LPA before commencement of works.
- 3.3.7 The site welfare cabins will be installed by the tower crane mounted in Commissioners' Yard Gate. The Tree Constraints Plan (Appendix A) illustrates the crown spreads of T4 and T6 extend into the application site. A photograph taken on the 12 January 2021, a view south along the Norman Shaw North site boundary (ref. photograph 1), shows some branches extending less than 2m into the application site.



Photograph 1. View south along the Norman Shaw North site boundary

- 3.3.8 The installation of the welfare unit with the tower crane will be overseen by a suitably qualified arboriculturist. While pruning is not considered necessary, should any pruning be required it will be minimal tip pruning on the building side by no more than 2m measured inwards from the outer tips. All branches shortened must be pruned to a suitable side shoot or natural fork. This type of pruning will have no long term effects on the form and health of the trees and following development the crown will simply regain its natural shape.

3.4 Scaffolding

- 3.4.1 The Norman Shaw North southern and northern single storey structures fronting Victoria Embankment will support scaffold 950mm above the structure (refer to drawing ref. 00NSN-4216-WTS-90-XX-W-XX-DR-00026).
- 3.4.2 The Tree Constraints Plan (Appendix A) illustrates the crown spread of T4 extends to the edge of the southern single storey structure and the crown spread of T6 extends above the northern single storey structure.

- 3.4.3 The crowns of T4 and T6 are at least 1000mm from the respective structures and while pruning may not be necessary, the installation of the scaffolding will be overseen by a suitably qualified arboriculturist. Should any pruning be required it will be minimal tip pruning on the building side by no more than 2m measured inwards from the outer tips. All branches shortened must be pruned to a suitable side shoot or natural fork. This type of pruning will have no long term effects on the form and health of the trees and following development the crown will simply regain its natural shape.

3.5 Hard Landscape Strategy

- 3.5.1 The hard landscape strategy shows the existing granite setts which surround the tree pit of T38 will be temporarily lifted, stored, cleaned and then re-laid with a new sub base.
- 3.5.2 The existing surfacing below the granite setts will not be excavated and will be protected in the interim using a geotextile material such as 'Cellweb', which is a honey comb system designed to protect underlying roots by spreading the load across the surface alleviating compaction.
- 3.5.3 The appointed arboriculturist will deliver a toolbox talk and initial supervision to relevant site operatives prior to the proposed work to the existing granite setts surrounding T38.
- 3.5.4 A bin store is proposed to be installed to the north of T38. The bin store will be sited outside of the root protection area of the tree and the bins will be manually moved to the vehicle servicing the bins which will remain on the vehicular route. There will be no impact to T38 from the construction and/or operation of the bin store.

3.6 Summary of Methodology for the Protection Trees

- 3.6.1 The erection of Protective Fencing in accordance with this Method Statement and plans of Appendix E and to be supervised and checked by a competent arboriculturist before commencement of works.
- 3.6.2 Careful hand and air excavation to be done under the strict supervision of the appointed arboriculturist.
- 3.6.3 Any roots encountered above 25mm to be retained and protected as detailed above unless otherwise agreed with the appointed arboriculturist all root pruning to be carried out carefully and cleanly with sharp tools.
- 3.6.4 Open trenches to be back filled with Urban Tree Soil as agreed with the appointed arboriculturist.
- 3.6.5 The installation and removal of the welfare unit to be supervised with the appointed arboriculturist in order to avoid damage to tree branches. Minor pruning works may need to be organised in order to facilitate this.
- 3.6.6 The appointed arboriculturist will deliver a toolbox talk to relevant site operatives prior to the proposed work to the existing granite setts surrounding T38 and supervise the initial works.
- 3.6.7 The removal of protective fencing is only to be done with the agreement of a competent arboriculturist the LPA.

4 Implementation of Method Statement

4.1 Arboricultural Champion

4.1.1 The construction manager will nominate an arboricultural champion within the principal contractor's construction team prior to the commencement of works. The arboricultural champion must:

- be based on site throughout the works and have the authority to influence site activities.
- be briefed on the project's arboricultural responsibilities on-site by the project arboriculturist prior to site set-up and commencement of work.
- ensure that all site operatives are aware of their arboricultural responsibilities through the attendance of appropriate level of training based on their trade and the construction tasks they are performing to ensure trees are protected throughout the project.
- in the event of any arboricultural incidents cease any relevant works and contact the project arboriculturist for guidance.

4.2 Project Arboriculturist

4.2.1 A project arboriculturist will be appointed to oversee the project's arboricultural obligations within this Arboricultural Statement and ensure the protection of trees during the project. The project arboriculturist must be registered with the Arboricultural Association, or have the level of qualifications and experience needed to be registered.

4.2.2 The appointed project arboriculturist will brief the site manager and nominated arboricultural champion at the start of the project on the project's arboricultural responsibilities as set out in the this Arboricultural Statement.

4.2.3 The appointed project arboriculturist will attend site prior to site set-up and commencement of work to inspect trees and supervise the installation of site hoarding and tree protection measures.

4.2.4 The project arboriculturist will attend site at the start of any activities which will occur in the vicinity of the existing trees. These activities include, but are not limited to:

- Installation and removal of 1.5 Tonne Mini Digger into Lightwell Garden Area
- Installation and removal of Temporary Welfare Unit
- Installation and removal of scaffolding
- Proposed works to existing granite setts surrounding T38

4.2.5 Prior to the commencement of the activities listed above the project arboriculturist will deliver specific tool box talks with the relevant site operatives who will be performing the works.

4.2.6 The project arboriculturist will also undertake monthly visits to monitor the condition of the trees, determine if any minor tree works are required and check the applicable site hoarding and tree protection measures.

- 4.2.7 The project arboriculturist will produce written records of each site visit which will be stored electronically and circulated to the project manager, arboricultural champion and local planning authority within five days of each site visit.
- 4.2.8 If any unforeseen arboricultural incidents occur, the relevant works will cease while the project arboriculturist is notified and attends site visit to assess the incident. All incidents will be reported and circulated electronically to the project manager, arboricultural champion and local planning authority within five days.

4.3 Supervision Schedule

- 4.3.1 The project arboriculturist will undertake site visits during relevant site works and on a monthly basis as per the site supervision schedule in Table 4.1.

Table 4.1. Site Supervision Schedule

| Proposed Commencement* | Activity Name | Project Arboriculturist Tasks | Reporting |
|------------------------|---|--|--|
| w/c 09/08/2021 | Pre-commencement Arboricultural Brief | <ul style="list-style-type: none"> ▪ Brief site manager and nominated arboricultural champion on the project's arboricultural responsibilities and agree key dates for Project Arboriculturist supervision. | <ul style="list-style-type: none"> ▪ Content of briefing and details of attendees. |
| w/c 23/08/2021 | Installation of site hoarding adjacent to applicable trees (T4, T5, T6) | <ul style="list-style-type: none"> ▪ Pre-works inspection of trees. ▪ Deliver toolbox talk to applicable site operatives and supervise installation of hoarding adjacent to applicable trees (T4, T5, T6). | <ul style="list-style-type: none"> ▪ Condition of trees. ▪ Condition of hoarding adjacent to applicable trees (T4, T5, T6) and if any further remedial measures are necessary. ▪ Content of toolbox talk and details of attendees. |
| w/c 04/10/2021 | Removal of vegetation and associated substrate over existing vaults | <ul style="list-style-type: none"> ▪ Pre-works inspection of trees and hoarding adjacent to applicable trees (T4, T5, T6). ▪ Deliver toolbox talk to applicable site operatives and supervise trial trench works. ▪ Once the project arboriculturist is satisfied that the vegetation be removed without impact to potential roots of the applicable trees (T4, T5, | <ul style="list-style-type: none"> ▪ Condition of trees. ▪ Condition of hoarding adjacent to applicable trees (T4, T5, T6) and if any further remedial measures are necessary. ▪ Content of toolbox talk and details of attendees. ▪ Any roots encountered and, if applicable, how they were managed and/or methodology to |

| | | | |
|----------------|--|---|--|
| | | <p>T6) or a methodology has been agreed with the LPA, the excavation of the existing vegetation will commence.</p> <ul style="list-style-type: none"> ▪ A 1.5 tonne mini-digger will be lifted into the garden area using a mobile crane located in Commissioners' Yard, the mini digger will be lifted over the pavilion. On completion the process will be repeated to remove the mini-digger from the garden area. ▪ Deliver toolbox talk to applicable site operatives and supervise lifting works. The mini-digger (3710mm by 2290mm by 990mm) can be lifted by mobile crane into the garden area without the requirement of any tree works. | <p>progress works agreed with LPA.</p> |
| w/c 07/02/2022 | Installation of Temporary Welfare Unit | <ul style="list-style-type: none"> ▪ Pre-works inspection of trees and hoarding adjacent to applicable trees (T4, T5, T6). ▪ Deliver toolbox talk to applicable site operatives and supervise installation works. | <ul style="list-style-type: none"> ▪ Condition of trees. ▪ Condition of hoarding adjacent to applicable trees (T4, T5, T6) and if any further remedial Content of toolbox talks and details of attendees. ▪ Any minor pruning works undertaken. |
| w/c 13/09/2021 | Installation of Scaffolding | <ul style="list-style-type: none"> ▪ Pre-works inspection of trees and hoarding adjacent to applicable trees (T4, T5, T6). ▪ Deliver toolbox talk to applicable site operatives and supervise works. | <ul style="list-style-type: none"> ▪ Condition of trees. ▪ Condition of hoarding adjacent to applicable trees (T4, T5, T6) and if any further remedial measures are necessary prior to commencement of works. ▪ Content of toolbox talk and details of attendees. |

| | | | |
|----------------|--|---|---|
| | | | <ul style="list-style-type: none"> ▪ Any minor pruning works undertaken. |
| TBC | Proposed work to existing granite setts surrounding T38. | <ul style="list-style-type: none"> ▪ Pre-works inspection of T38, supervise the removal of tree protection measures and installation of portable barrier which will protect T38 for the duration of the works. ▪ Deliver toolbox talk to applicable site operatives and initial supervision of works. | <ul style="list-style-type: none"> ▪ Condition of T38. ▪ Condition of existing tree protection fence and replacement portable barrier when in situ. ▪ Content of toolbox talk and details of attendees. |
| Monthly | Monthly site visits | <ul style="list-style-type: none"> ▪ Pre-works inspection of trees and hoarding adjacent to applicable trees (T4, T5, T6). ▪ Deliver toolbox talk to applicable site operatives and supervise. | <ul style="list-style-type: none"> ▪ Condition of trees. ▪ Condition of tree protection fencing and hoarding adjacent to applicable trees (T4, T5, T6) and if any further remedial measures are necessary. ▪ Propose any tree works that may be required. |
| w/c 28/08/2023 | Removal of temporary welfare unit, scaffolding, and applicable site hoarding/ any tree protection measures | <ul style="list-style-type: none"> ▪ Pre-works inspection of trees and hoarding adjacent to applicable trees (T4, T5, T6). ▪ Deliver toolbox talk to applicable site operatives and supervise removal works. ▪ Oversee any minor pruning works that maybe required. | <ul style="list-style-type: none"> ▪ Condition of trees. ▪ Condition of hoarding adjacent to applicable trees (T4, T5, T6) and if any further remedial measures are necessary prior to commencement of works. ▪ Content of toolbox talk and details of attendees. ▪ Any minor pruning works undertaken. |

*proposed dates are indicative and based on current programme

4.4 Record Keeping

4.4.1 The project arboriculturist will record key information from every site visit as per the Arboricultural Site Visit Recording Template below:

Table 4.1. Arboricultural Site Visit Recording Template

| | | | |
|--|--|--|--|
| PROJECT: | | PLANNING REF: | |
| DATE OF VISIT: | | ACTIVITY: | |
| SITE VISIT CHECKLIST: | | | |
| Applicable hoarding and tree protection measures as approved: | | Applicable operatives briefed / toolbox talk delivered: | |
| Trees damaged: | | Remedial action required: | |
| Notes: | | | |
| | | | |
| Recommendations: | | | |
| | | | |
| Conclusion: | | | |
| | | | |
| Project Arboriculturist: | | | |
| Signature: | | | |

5 Conclusion

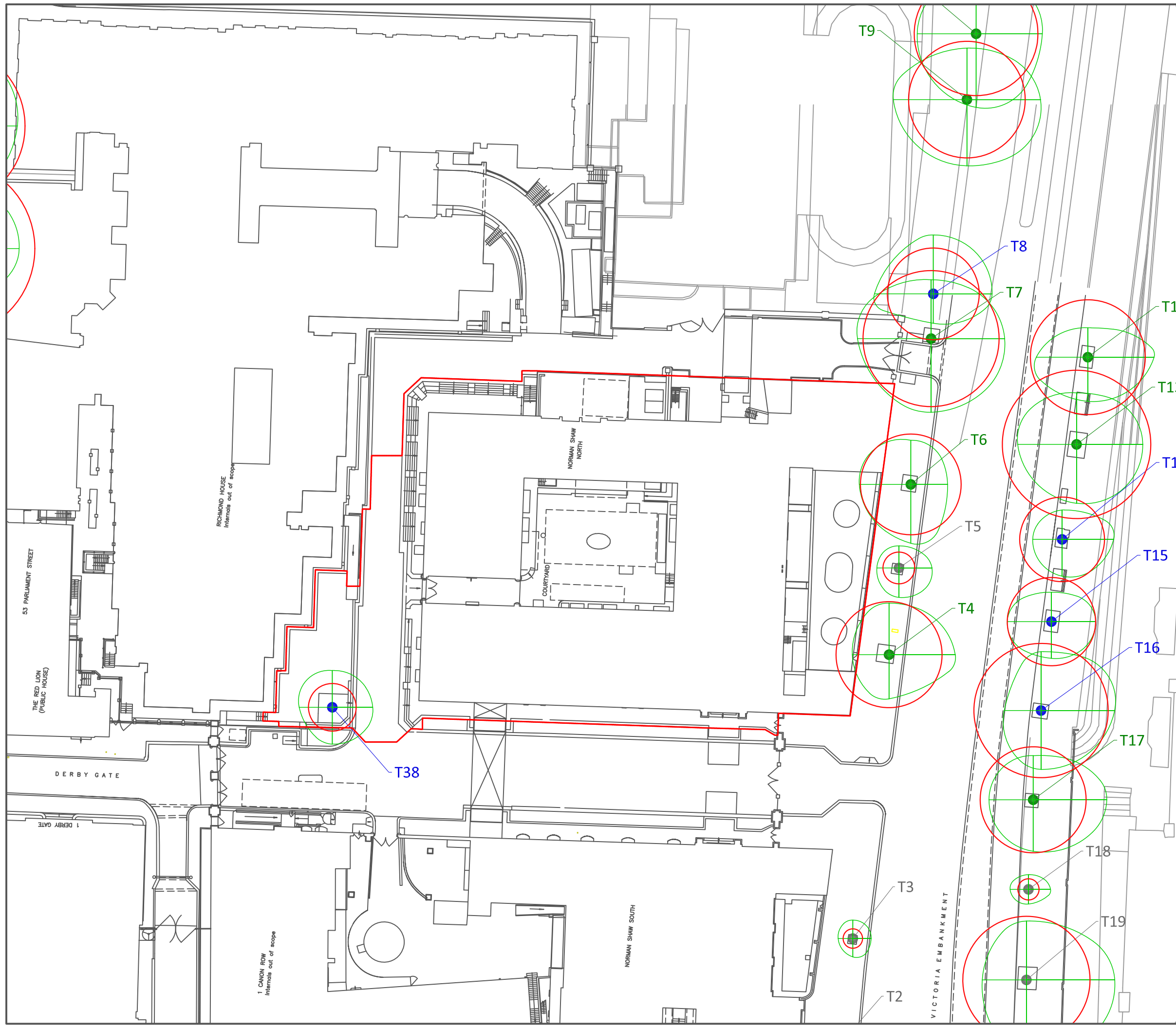
- 5.1.1 Should the method statement be implemented as set out within this Arboricultural Statement then the proposed works should cause no significant impacts to trees T4, T5, T6 and T38.

Appendix A - Tree Constraints Plan

BDP SHALL HAVE NO RESPONSIBILITY FOR ANY USE MADE OF THIS DOCUMENT OTHER THAN FOR THAT WHICH IT WAS PREPARED AND ISSUED.
 ALL DIMENSIONS SHOULD BE CHECKED ON SITE.
 DO NOT SCALE FROM THIS DRAWING.
 ANY DRAWING ERRORS OR DIVERGENCES SHOULD BE BROUGHT TO THE ATTENTION OF BUILDING DESIGN PARTNERSHIP AT THE ADDRESS SHOWN BELOW

Legend

- A - Trees of high quality
- B - Trees of moderate quality
- C - Trees of low quality
- U - Trees of poor quality
- Root Protection Area (RPA)
- Crown spreads
- Site boundary

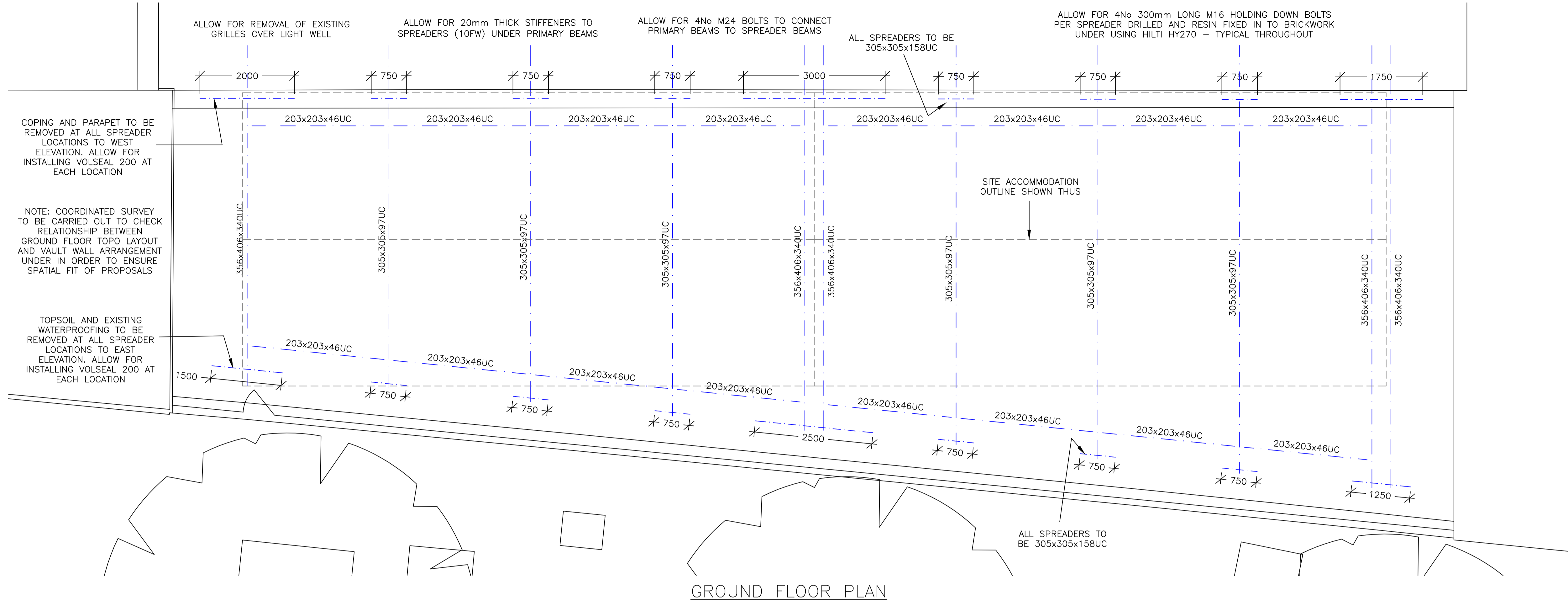


11 Ducie Street
 P.O. Box 85, Piccadilly Basin
 Manchester M60 3JA
 United Kingdom
 T +44 (0)161 828 2200
 F +44 (0)161 828 2235
 www.bdp.com

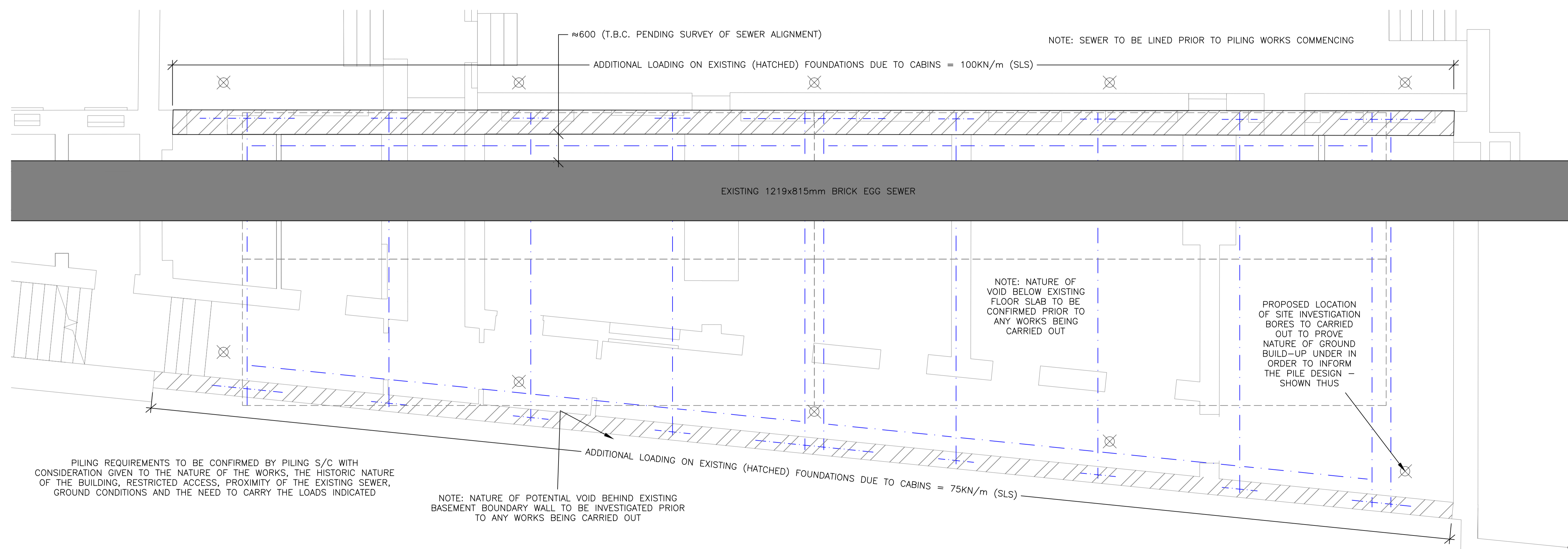


| | | |
|------------------------------|----------|--------------|
| PROJECT | | |
| Norman Shaw North Standalone | | |
| DRAWING TITLE | DATE | |
| Tree Constraints Plan | 17/03/21 | |
| JOB NUMBER | REVISION | SCALE |
| P2007656 | 01 | 1/500 @A3 |

Appendix B - Temporary Welfare Unit Plan



GROUND FLOOR PLAN



VAULT PLAN
(WITH STEEL GRILLAGE SHOWN OVER)

GENERAL NOTES

- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS (BOP), ENGINEERS (WATES AND AECOM) AND SERVICES (AECOM) DRAWINGS & SPECIFICATIONS
- THE WORKS DESCRIBED AND SPECIFIED ON THIS DRAWING AND ASSOCIATED DRAWINGS SHALL BE UNDERTAKEN IN ACCORDANCE WITH ALL CURRENT HEALTH AND SAFETY LEGISLATION. REFERENCE SHALL ALSO BE MADE TO THE PROJECT HEALTH & SAFETY PLAN PREPARED BY THE PLANNING SUPERVISOR FOR THE PROJECT.
- DO NOT SCALE THIS DRAWING - IF IN DOUBT - ASK!
- ALL STEELWORK TO BE GRADE S355
- ALL STEELWORK TO BE SHOT-BLASTED, CLEANED TO SA2.5 AND PRIMED
- ALL BOLTS TO BE M24 GRADE 8.8 U.N.O.
- EXISTING MASONRY CHARACTERISTIC COMPRESSIVE STRENGTH TAKEN AS 3.4N/mm² FOR THE PURPOSES OF THIS SCHEME. TO BE CONFIRMED BY CARRYING OUT TESTING OF BOTH MORTAR AND MASONRY UNIT SAMPLES
- THE ABILITY OF THE EXISTING STRUCTURE TO CARRY THE ADDITIONAL WEIGHT OF THE SITE ACCOMMODATION IS TO BE DEVELOPED FURTHER. ALLOWANCE TO BE MADE FOR SUPPLEMENTARY PILES TO BE INSTALLED TO ASSIST WITH LOAD CARRYING AND ADDRESS SETTLEMENT CONCERNS
- ALLOWANCE TO BE MADE FOR REMOVAL OF EXISTING WATERPROOFING LAYER ON TOP OF VAULTS (POSSIBLY ASPHALT) AND THE APPLICATION OF VOLSEAL 200 BY CETCO (DETAILS AND INTERFACE WITH EXISTING WATERPROOFING TO BE DEVELOPED WITH SUPPLIER)
- ALL SPREADER STEELS TO BE LEVELED, SHIMMED AND FULLY GROUTED UNDER WITH FIVE STAR GROUT BY WEBER
- PROPOSALS SHOWN ARE TO BE COORDINATED WITH BOTH EXISTING AND PROPOSED BELOW GROUND DRAINAGE WHICH COULD ULTIMATELY AFFECT THE GENERAL ARRANGEMENT
- PROPOSALS SHOWN ARE BASED ON FOUNDATION LOADS SUPPLIED BY ASHBY & CROFT WHICH WERE ISSUED FOR 'INFORMATION' ONLY AND CONSIDER A FOUR STOREY SITE ACCOMMODATION SET-UP. SHOULD AN ADDITIONAL STOREY BE REQUIRED THE SOLUTION WILL NEED TO BE RE-ENGINEERED ACCORDINGLY
- PROPOSALS DO NOT ACCOUNT FOR THE LOCATION AND NATURE OF ACCESS STAIRS WHICH WOULD REQUIRE ADDITIONAL MEANS OF SUPPORT

| P01 | 17.06.20 | CL | For Information | - |
|-----|----------|----|-----------------|-----|
| REV | DATE | BY | DESCRIPTION | CHK |

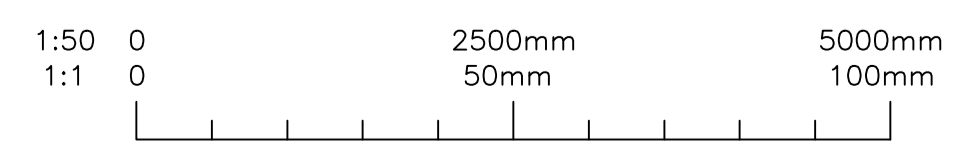
CLIENT:
PARLIAMENTARY ESTATES

Wates House
Station Approach
Leatherhead
Surrey.
KT22 7SW
T +44 (0) 1372 861000
www.wates.co.uk

PROJECT TITLE:
NORMAN SHAW NORTH

DRAWING TITLE:
**SITE ACCOMMODATION
STEEL GRILLAGE G.A.**

| | | | | |
|-----------|------------------------------------|-----------------|--------|----------|
| DATE: | STATUS: | SECURITY GRADE: | DRAWN: | CHECKED: |
| 17/6/20 | S2 | - | CJL | |
| SCALE: | DRAWING No.: | | Rev: | |
| 1:50 @ A1 | 00NSN-4216-WTS-90-ZZ-W-XX-DR-60000 | | P01 | |

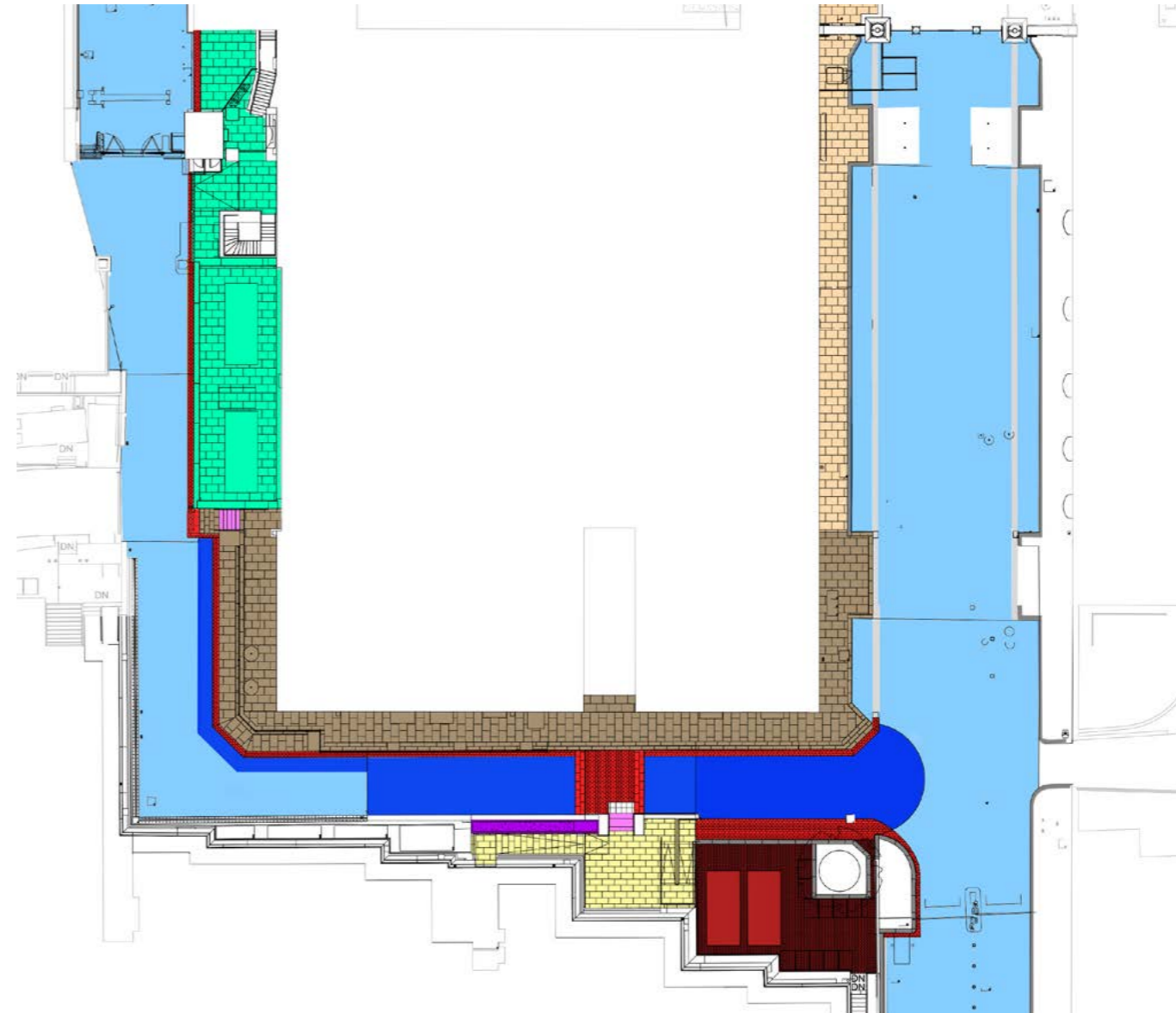


Appendix C - Hard Landscape Strategy

Proposed Hard Landscape Strategy

4.2.2.1 The diamond paving pattern is inspired by Portcullis House and the Palace of Westminster ground floor path paving design. It will provide a visual link between NSS, Portcullis House and the Palace of Westminster.

6.5.9.1 Two large sandstone paving types with sandstone banding threads through the ground floor plane provide elegant hard landscape environment which although is divided into different areas by functionality, still reads as connected spaces.



Ground floor hard landscape diagram

Paving type

| | | | | | | | | |
|---|---|--|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Existing Asphalt | Proposed Asphalt | Proposed silver Granite paving slab 600x900mm | Silver grey Granite steps | Existing Granite setts cleaned and relaid 250x150mm (assumed size) | Existing Granite setts cleaned and relaid 100x100mm (assumed size) | Existing Concrete paver relaid to new levels where required 450x450mm (assumed size) | Existing Yorkstone paving cleaned and relaid | Proposed concrete pavers to match existing |

Appendix D - Table 1 of BS5837:2012

Cascade chart for tree quality assessment

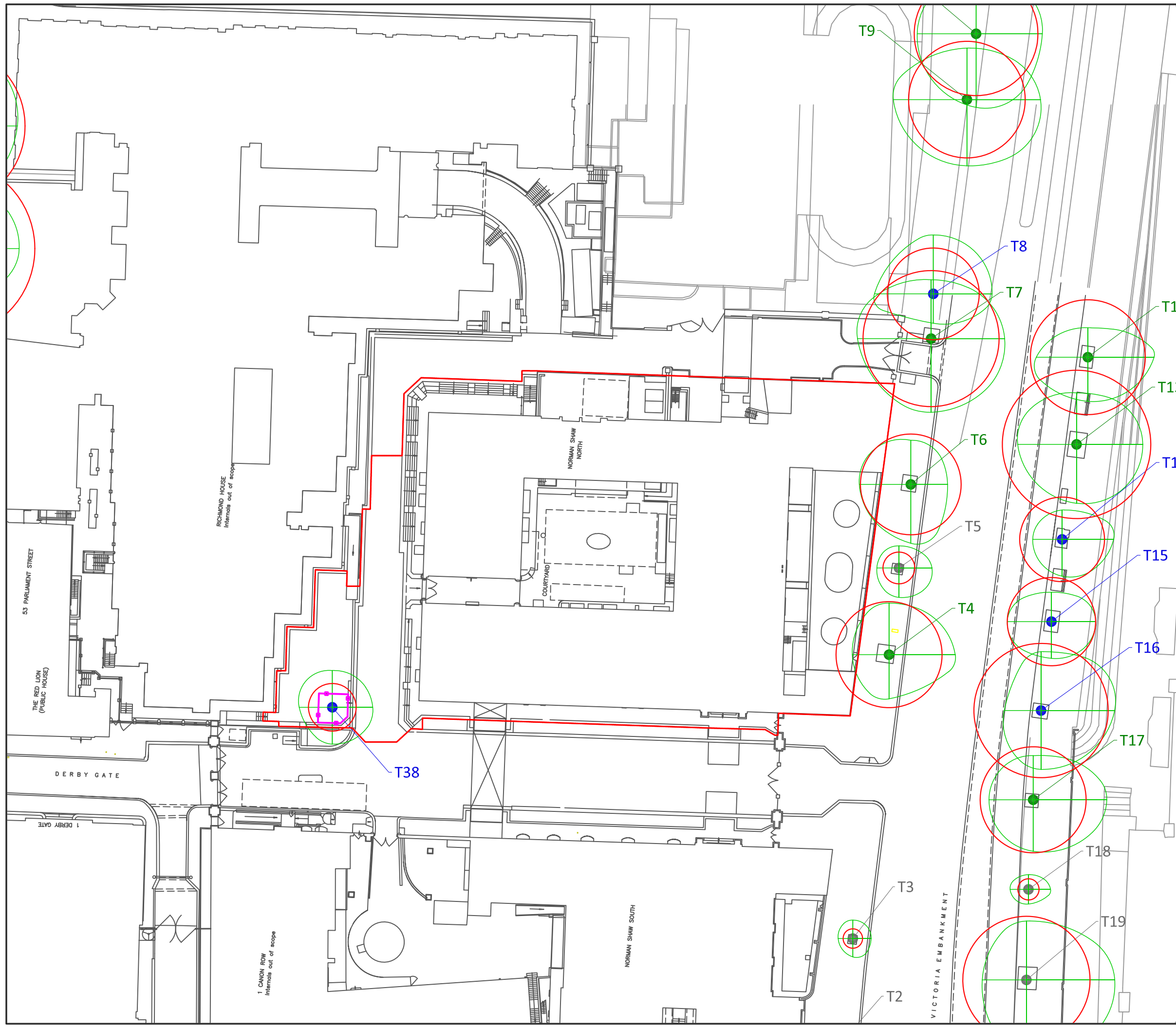
| Category and definition | Criteria (including subcategories where appropriate) | | |
|--|--|--|--|
| Trees unsuitable for retention (see note) | | | |
| <p>Category U</p> <p>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p> | <ul style="list-style-type: none"> • Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other U category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality <p>Note – <i>Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p> | | |
| | 1 Mainly arboriculture qualities | 2 Mainly landscape qualities | 3 Mainly cultural values, including conservation |
| Trees to be considered for retention | | | |
| <p>Category A</p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p> | <p>Trees that are particularly good examples of their species, especially if rare or unusual, or those that are essential components of groups or formal or semi-formal arboriculture features (e.g. the dominant and/or principal trees within an avenue)</p> | <p>Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features</p> | <p>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood pasture)</p> |
| <p>Category B</p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p> | <p>Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and minor storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation</p> | <p>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</p> | <p>Trees with material conservation or other cultural value</p> |
| <p>Category C</p> <p>Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm</p> | <p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p> | <p>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</p> | <p>Tree with no material conservation or other cultural value</p> |

Appendix E - Tree Protection Plan

BDP SHALL HAVE NO RESPONSIBILITY FOR ANY USE MADE OF THIS DOCUMENT OTHER THAN FOR THAT WHICH IT WAS PREPARED AND ISSUED.
 ALL DIMENSIONS SHOULD BE CHECKED ON SITE.
 DO NOT SCALE FROM THIS DRAWING.
 ANY DRAWING ERRORS OR DIVERGENCES SHOULD BE BROUGHT TO THE ATTENTION OF BUILDING DESIGN PARTNERSHIP AT THE ADDRESS SHOWN BELOW

Legend

- A - Trees of high quality
- B - Trees of moderate quality
- C - Trees of low quality
- U - Trees of poor quality
- Root Protection Area (RPA)
- Crown spreads
- Tree Protection Fencing
- Site boundary



11 Ducie Street
 P.O. Box 85, Piccadilly Basin
 Manchester M60 3JA
 United Kingdom
 T +44 (0)161 828 2200
 F +44 (0)161 828 2235
 www.bdp.com



| | | |
|------------------------------|----------|-----------|
| PROJECT | | |
| Norman Shaw North Standalone | | |
| DRAWING TITLE | DATE | |
| Tree Protection Plan | 17/03/21 | |
| JOB NUMBER | REVISION | SCALE |
| P2007656 | 01 | 1/500 @A3 |

Appendix F - Site Notice for Tree Protective Fencing



TREE PROTECTION AREA KEEP OUT!

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND ARE SUBJECTS OF A
TREE PRESERVATION ORDER
(TOWN & COUNTRY PLANNING ACT 1990)

CONTRAVENTION OF TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:-

- THE PROTECTIVE FENCING MUST NOT BE REMOVED
- NO PERSON SHALL ENTER THE PROTECTED AREA
- NO MACHINE OR PLANT SHALL ENTER THE PROTECTED AREA
- NO MATERIALS SHALL BE STORED IN THE PROTECTED AREA
- NO SPOIL SHALL BE DEPOSITED IN THE PROTECTED AREA
- NO EXCAVATION SHALL OCCUR IN THE PROTECTED AREA

**ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY**

Appendix G - Glossary of Terms

The following terms are concurrent with best Arboricultural practice and within the guidelines set by the International Society of Arboriculture (ISA), the Arboricultural Association (AA) and the British Standards Institute (BSI).

Dbh: Diameter at Breast Height is measured at 1.5m and recorded in millimetres. Where a tree becomes multi-stemmed below 1.5m the diameter of each stem is measured at 1.5m and added together. Where a tree has low branching or has swelling, the stem is measured at the narrowest point below.

Height: Height was estimated and recorded in metres.

Age Range: Age is site specific and categorised:

| | |
|-------------------|---|
| Young (Y) | Out-planted trees that have not yet established. |
| Semi-Mature (SM) | Established trees up to 1/3 of expected height and crown. |
| Early Mature (EM) | Between 1/3 and 2/3 of expected height and crown. |
| Mature(M) | Between 2/3 and full expected height and crown. |
| Fully Mature (FM) | Full expected height and crown. |
| Over Mature (OM) | Crown beginning to break-up and decrease in size. |
| Senescent (S) | Crown in advanced stage of break-up. |

Crown Spread: Measured in metres at the four cardinal points N, E, S & W.

Crown Clearance: Measured in metres from the ground to the first branch tip on development side only.

Condition - Assessment of current physiological condition and structural morphology incorporating vigour and vitality and categorised:

- A - Tree needing little, if any attention
- B - Tree with minor, but rectifiable defects, or in the early stages of physiological stress
- C - Tree with significant structural and physiological flaws and/or extremely stressed
- D - Tree that is dead, biologically/physically moribund or dangerous

Desirability To Retain – As Outlined in Table 1 of BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (see Appendix A).

Definition of Physiological & Morphological Terms

Adaptive Growth - The process whereby wood formation is influenced both in quantity and in quality by the action of gravitational force and mechanical stresses on the cambial zone.

Bifurcation – Forked or divided union.

Brown Rot - Form of decay where cellulose is degraded, while lignin is only modified.

Cankers (target or tumorous) - A localised area of dead bark and cambium on a stem or branch, caused by fungal or bacterial organisms, characterised by woundwood development on the periphery. This may be annual or perennial.

Cavity - An open wound, characterised by the presence of extensive decay and resulting in a hollow.

Chlorotic Leaf - Lacking in chlorophyll, typically yellow in colour.

Compartmentalisation - The physiological process that creates the chemical and mechanical boundaries that act to limit the spread of disease and decay organisms.

Coppicing - Is an ancient form of woodland management that involves repetitive felling on the same stump, near to ground level, and allowing the shoots to re-grow from that main stump. (Also known as the coppice stool).

Crack - Longitudinal split in stem or branch, involving bark and/or underlying wood. These may be vertically and horizontally orientated.

Decay - Process of degradation of woody tissues by fungi and bacteria through decomposition of cellulose and lignin.

Deadwood - Deadwood is often present within the crown or on the stems of trees. In some instances this may be an indication of ill health, however, it may also indicate natural growth processes. If a target is present beneath the tree, deadwood may fall and cause injury or damage and should be removed, otherwise deadwood can remain intact for conservation purposes (insects, fungi, birds etc.).

End Weight - The concentration of foliage at the distal ends of stems and deficient in secondary branches.

Girdling Root - Root which circles and constricts the stem or roots causing death of phloem and/or cambial tissue.

Hazard Beam - An upwardly curved branch in which strong internal stresses may occur without the compensatory formation of extra wood (longitudinal splitting may occur in some cases).

Included Bark Union - Pattern of development at branch junctions where bark is turned inward rather than pushed out. Potential weakness due to a lack of a woody union.

Ivy Growth - Ivy growth may ascend into the tree's crown, increasing wind resistance, concealing potential defects and reducing the tree's photosynthetic capacity. Ivy growth is often acceptable in woodland areas as a conservation benefit.

Live Crown Ratio - The relative proportion of photosynthetic mass (leaf area) to overall tree height.

Reaction Wood - Specialised secondary xylem, which develops in response to a lean or similar mechanical stress, attempting to restore the stem to the vertical.

Root Plate Lift - The physical movement of the rooting plate causing soils to shift and crack. May occur during adverse weather conditions. Trees may become unstable.

Structural Defect - Internal or external points of weakness, which reduce the stability of the tree.

Suppressed - Trees which are dominated by surrounding vegetation and whose crown development is restricted from above.

Topping - A highly disfiguring practise, likely to cause severe xylem dysfunction and decay in major structural parts of the wood.

White Rot - Form of decay where both cellulose and lignin are degraded.

Wound - Any injury, which induces a compartmentalisation response.

Woundwood - Wood with atypical anatomical features, formed in the vicinity of a wound and a term to describe the occluding tissues around a wound as opposed to the ambiguous term "callus".

Woodland Structure - The vertical and horizontal arrangement of trees within a group or woodland i.e. Dominant - trees with a crown above the upper layer of the canopy, Co-dominant trees that define the general upper edge of the canopy, Intermediate trees that have been largely overgrown by others, Suppressed trees that have been overgrown and occupy an under storey position and grow slowly, often severely asymmetrical.

Note: The definitions described above, may not necessarily be included within the Arboricultural Survey Data.