



# SJ Stephens Associates

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Planning Ref: APP/21/00405

## Arboricultural Impact Assessment

- Tree Survey
- Tree Protection Plan
- Arboricultural Method Statement

### At:-

Langstone Technology Park  
2B Langstone Road  
Havant  
PO9 1SA

### On behalf of:-

XLB Property Ltd  
Silver House  
2<sup>nd</sup> Floor  
31-35 Beak Street  
London W1F 9DP

### Prepared by:

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### Approved by:

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Survey Date: 7<sup>th</sup> June 2021  
Report Date: 11<sup>th</sup> June 2021  
Project no: 1746

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## **1 BACKGROUND**

- 1.1** This Arboricultural Impact Assessment has been instructed by Barton Willmore, on behalf of XLB Property Ltd to specify tree protection measures and to assess the arboricultural impact of an S73 application (Ref: APP/21/00405) for variation of Conditions 2, 3, 8, 19, 22 and 25 of Planning Permission APP/19/00703, relating to the erection of flexible use industrial units in the southwestern corner of the site (Phase 1).
- 1.2** Trees were surveyed, with findings shown in the Tree Schedule in Appendix B and plotted on the Tree Protection Plan in Appendix A. This also shows tree protection measures, which are specified in the Arboricultural Method Statement in section 5 below. The arboricultural impact is assessed in section 6, which assumes that these measures are followed.
- 1.3** The tree survey was undertaken, and this report has been prepared, by Catherine Fforde HND Hort, Dip Arb L4(ABC), MCIHort, MArborA and approved by Simon Stephens MA Oxon, Dip Arb (RFS), MArborA, C Env, MICFor a Registered Consultant with the Arboricultural Association, with over 20 years relevant experience.

1.4 This survey and report have been prepared in accordance with the recommendations of BS 5837:2012, Trees in relation to design, demolition and construction - Recommendations.

1.5 Documentation supplied:

- Topographical Survey
- PRC, Proposed Overall Site Plan: drawing no: PL 004 A
- PRC, Car Park Layouts: drawing no: PL 050
- Havant Borough Council, Decision Notice, Ref: APP/19/00703, dated 22 July 2020
- Bernie Harverson, Tree Constraints Plan, dwg no: BJH 01/02
- Bernie Harverson, Tree Protection Plan, dwg no: BJH 03/04
- Bernie Harverson, Arboricultural Method Statement, Ref no: 1087.bjh.Sept19

## 2 SURVEY DETAILS AND SCOPE

2.1 The site survey included trees and shrubs, within and immediately adjacent to the red line boundary, with a stem diameter over 75mm at 1.5m height, as shown located on the Tree Protection Plan, included as Appendix A.

2.2 Tree inspection took place from ground level with the use of binoculars, sounding hammer and metal probe using the Visual Tree Assessment method (Mattheck & Breloer 1994). The presence and condition of bark and stem wounds, cavities, decay, fungal fruiting bodies and any structural defects that could increase the risk of structural failure were noted.

2.3 Tree diameters were measured using a girthing tape and tree heights were measured using a hypsometer. Where use of a tape was restricted by site factors, diameters were estimated, with the diameter recorded in the tree schedule preceded by the word "est".

2.4 At the time of the survey, the weather was fine with no restrictions to visibility. Broadleaf trees were in leaf. In places, fencing restricted access to trees.

2.5 Tree details are shown on the Tree Protection Plan included as Appendix A. Tree locations have been taken from the topographical survey provided. Where not included on the topographical survey, they have been determined by measuring distances from features shown on the plan, using a laser measuring device. The following information was recorded for each tree, and is shown in the Tree Schedule included as Appendix B:

- **Number:** an identity number for each tree, prefixed with a "T", which cross references locations shown on the plan with the schedule in Appendix B. Where a number of trees are located close together and are similar in character and management requirements, they have been treated as a Group under a single number, prefixed with a "G".
- **Species:** common name.
- **Tree height:** approximate height in metres.

- **Stem diameter:** diameter in millimetres, taken at 1.5m above ground. Where there are a number of stems, stem diameters are recorded in the condition column.
- **Branch spread:** approximate spread in metres to N,S,E and W of the trunk. The approximate branch spread is drawn on the plan.
- **Canopy clearance:** approximate height of the canopy above ground. Where a significant, low lateral branch is present, its height and direction of growth is included in the Condition column.
- **Age class:** Young, Semi-mature, Early mature, Mature, Over-mature, Veteran.
- **Condition:** features that affect the safe useful life expectancy and amenity of the tree, including the presence of decay or any physical defect.
- **Management Recommendations:** recommendations to ensure the health and safety of the tree, within the future development.
- **Estimated Remaining Contribution:** <10 years, 5-15 years, 10-20 years, 15-30 years, 20-40 years, >40 years.
- **Category grading:** tree classification taken from BS 5837:2012, Trees in relation to design, demolition and construction (see Appendix C for details), as follows:
  - Category U: Unsuitable for retention, trees with less than 10 years life expectancy, normally recommended for removal (Red)
  - Category A: high quality trees, able to make a substantial contribution for at least 40 years, normally retained unless there is an over-riding reason for removal and appropriate mitigation. (Green)
  - Category B: moderate quality trees, able to make a significant contribution for at least 20 years, normally retained. (Blue)
  - Category B/C: an intermediate category between categories B and C (not specifically described in BS5837). Trees, which should be retained wherever possible, providing retention does not unreasonably constrain the layout. (Blue)
  - Category C: low quality, in adequate condition to remain for at least 10 years, or young trees <150mm stem diameter. Trees which can be removed to allow the desired layout or new planting. (Grey)

For category A, B and C trees, a subcategory has been allocated, providing information on the reasons for selection of a specific category, as follows:

- Subcategory 1: mainly arboricultural values.
- Subcategory 2: mainly landscape values.
- Subcategory 3: mainly cultural values, including conservation.
- Trees have been classified irrespective of the possible proximity to future construction. The BS 5837 category is colour coded, as indicated above, on the plan included as Appendix A.
- **Protection Distance:** the protection distance in metres required to provide the Root Protection Area recommended in BS 5837, assuming a circular area centred on the tree.
- **Root Protection Area (RPA):** the area in m<sup>2</sup>, as recommended in BS 5837, to provide sufficient rooting area to ensure tree survival and which, in most

situations, should be fenced off to prevent root damage from construction activities.

### **3 SURVEY LIMITATIONS**

- 3.1 No internal decay devices, or other invasive tools to assess tree condition, were used.
- 3.2 No soil excavation or root inspection was carried out.
- 3.3 This survey has not considered the effect that trees or vegetation may have on the structural integrity of future building through subsidence or heave.
- 3.4 The tree survey has been undertaken for planning purposes. Although any obvious structural defects have been noted, a Tree Hazard Assessment has not been carried out. Mature trees close to highly populated areas or public highways should normally be checked for safety annually, by a suitably qualified person.

### **4 LEGAL PROTECTION OF TREES**

- 4.1 The Havant Borough Council My Maps web page was viewed on 11-06-2021, which showed that the development site areas do not contain any Tree Preservation Orders, nor does the site fall within a Conservation Area. The presence of Planning Conditions currently attached to the site, was not checked.

## **5 ARBORICULTURAL METHOD STATEMENT**

### **5.1 Site Overview**

- 5.1.1 The proposal is for variation of conditions relating to approved planning permission APP19/00703 relating to the erection of the flexible use industrial units in the southwestern corner of the site (Phase 1). The proposed site plan is included as Appendix F and has been added to the survey drawing, along with tree details, to create the Tree Protection Plan attached as Appendix A.
- 5.1.2 The original application, APP/19/00703 was for part demolition of Building 1000 and associated works, the erection of new flexible use industrial units; and a new parking layout with associated works to layout and access and felling of two trees subject to a Tree Preservation Order.
- 5.1.3 Work on site has commenced with part demolition of Building 1000. Trees in the surrounding area are protected by Tree Protection Fencing. This fencing prevented access for close survey of the trees. The Norway maple referred to above as protected by a Tree Preservation Order, are identified as T51 and T52 in the Tree Schedule attached as Appendix B. Both trees are in situ and are protected by fencing. The Havant Borough Council website does not show a Tree Preservation Order in place on these trees. It is assumed that as there is extant permission for their removal that the Tree Preservation Order has been removed.
- 5.1.4 Trees within the site are exhibiting signs of water stress, most markedly where trees are exposed to wind in locations that are unprotected by buildings or shelterbelts. In some cases foliage damage is so great that the natural life expectancy of the trees has been significantly reduced.
- 5.1.5 Retained trees which are within influencing distance of the proposals include G25, T46, T58, T59, T60 and T61. Photos are included in Appendix E, and protection measures for the trees are set out in the Arboricultural Method Statement.

## **5.2 Tree Work**

- 5.2.1 Details of proposed tree works are included in the Tree Schedule included as Appendix B.
- 5.2.2 Forty-seven trees and four groups are proposed for removal, as detailed in section 6.1 below. There is extant permission for removal of the trees, planning ref: APP/19/00703.
- 5.2.3 In addition, directional pruning of one tree from G25 is required to provide clearance to a new building.
- 5.2.4 All tree work must be undertaken to the standards set out in BS 3998:2010 Tree work – Recommendations.

## **5.3 Root Protection Areas**

- 5.3.1 Root Protection Areas are shown for all trees in the tree schedule included as Appendix B. They are also shown for all retained trees, as circular areas centred on the trunk, on the Tree Protection Plan included as Appendix A. Where there are physical obstructions to root growth the Root Protection Area should be shown as an equivalent area that is more likely to reflect actual root growth. The Root Protection Area shows the area around a tree in which all construction activity must normally be excluded, unless appropriate protection measures are implemented.

## **5.4 Tree Protection Fencing**

- 5.4.1 Tree Protection Fencing must be erected where shown on the Tree Protection Plan, included as Appendix A. This will provide full protection of the Root Protection Areas of all retained trees, other than for:
  - areas hatched in blue on the Tree Protection Plan, where No-Dig Construction must be used, as described in section 5.5 below, to protect underlying roots.
  - areas shaded and hatched cyan on the Tree Protection Plan, indicating Ground Protection Areas, where roots must be protected, as described in section 5.6 below.
  - areas shaded red on the Tree Protection Plan, where there will be excavation at the edge of Root Protection Areas, but where hand excavation and supervised excavation must be used, as described in section 5.7, to minimise potential root damage.

- 5.4.2 Tree works can be completed before Tree Protection Fencing is erected, however no contractors plant or vehicles must be allowed to track within the Root Protection Areas unless ground protection panels are laid or they are protected by areas of existing hard surfacing.
- 5.4.3 Tree Protection Fencing must be from weldmesh panels, at least 2m high, securely fixed, with wire or scaffold clamps, to a rigid framework. This framework must be constructed from scaffold tubes with vertical tubes, at a maximum interval of 3m and driven into the ground at least 0.6m. The structure must be well braced to resist impacts, constructed as per Figure 2 of BS5837:2012, which is reproduced in Appendix D. Alternatively, weldmesh panels can be supported on blocks, providing the blocks are pinned to the ground with road pins, or similar, and the panels are braced, as per Figure 3 of BS5837:2012, which is also reproduced in Appendix D.
- 5.4.4 Tree Protection Fencing must initially be erected around the outer perimeter of the No-Dig areas, where indicated "D"/"G" on the drawing while demolition/ground work is undertaken, then moved to where indicated "C", before construction of the No-Dig surface starts or hand dig excavation begins.
- 5.4.5 After erection of Tree Protection Fencing and installation of ground protection, two days' notice must be given to the Local Planning Authority before demolition or construction, including any ground work, starts on site.
- 5.4.6 Tree Protection Fencing must be maintained and retained for the duration of the works, or until such time as agreed in writing with the Local Planning Authority.
- 5.4.7 Weatherproof notices must be fixed to the Tree Protection Fencing, and maintained, stating:-

**TREE PROTECTION AREA  
KEEP OUT**

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS  
CONTRAVENTION MAY LEAD TO CRIMINAL PROSECUTION  
THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:

- The Protection Fence must not be moved
- No person or machine must enter the area
- No materials or spoil must be deposited
- No excavation must be permitted

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

## 5.5 No-Dig Construction Areas

- 5.5.1 The No-Dig Construction areas, are shown hatched blue on the Tree Protection Plan included as Appendix A. These cover areas within Root Protection Areas where new hard surfacing is to be constructed on existing soft areas.
- 5.5.2 Where existing soft areas within No-Dig Construction areas are to be replaced by new hard surfacing, they must be constructed without excavation apart from the removal of turf/organic matter, which must be carried out by hand. Engineering details must avoid localised compaction, using both a two dimensional geogrid, and a three dimensional cellular confinement system as integral components of the sub-base. A typical section is shown on the Tree Protection Plan included as Appendix A. As well as being fit for purpose, the design and methodology must protect tree roots, by ensuring the following:-
- topsoil/turf can be removed carefully by hand to a maximum of 50mm, but less if roots are found nearer the surface.
  - following leveling with soil or sand, a permeable, non-woven geotextile membrane, must be laid.
  - a suitable two dimensional geogrid, such the TriAx Geogrid supplied by Tensar International ([www.tensar.co.uk](http://www.tensar.co.uk)), or the Biaxial Geogrid supplied by Geosynthetics Ltd ([www.geosyn.co.uk](http://www.geosyn.co.uk)), must be laid over the entire area and underneath the edging.
  - Kerb stones must be laid on top of the geotextile and geogrid. If required steel reinforcing rods can be driven to provide additional anchorage for kerb stones.
  - a suitable cellular confinement system must then be laid to manufacturers instructions on top of the geogrid. Products that might be considered include Geoweb, supplied by Greenfix ([www.greenfix.co.uk](http://www.greenfix.co.uk)) or Cellweb, supplied by Geosynthetics Ltd ([www.geosyn.co.uk](http://www.geosyn.co.uk)). The depth of the system must be adequate to take the maximum axle weight, as per manufacturers guidance.
  - the cellular confinement system must be filled with clean (no fines), washed angular, 20/40mm, stone to provide load support, while allowing air and moisture to permeate to the root zone.
  - a further permeable, non-woven geotextile membrane, such as TreetexT300, or an alternative approved product which has similar oil trapping qualities, must be laid over the cellular confinement system.
  - a porous, surfacing material, free from contaminants, must then be laid. Either sand bedding and block paving, gravel or permeable tarmac would be suitable.
  - removed turf/topsoil can be used to grade surrounding ground levels.

- 5.5.3 Site traffic, including pedestrians, must not be allowed on the No-Dig areas until roots are protected by the No-Dig surfacing, or unless suitable ground protection has been laid. If access is required across No-Dig areas for plant, before the No-Dig surfacing is laid, ground protection panels must be laid. Either Trakmats (supplied by the Marwood Group, [www.marwoodgroup.co.uk](http://www.marwoodgroup.co.uk)), Groundtrax panels (see [www.groundtrax.com](http://www.groundtrax.com)), Ground-Guards, as supplied by Greentek ([www.greentek.org.uk](http://www.greentek.org.uk)), or a similar approved product, must be used, laid on top of a compressible layer of sand or woodchips, laid onto a geotextile. If access is required for pedestrians, 25mm plywood or side butting scaffold boards must be laid, on top of a compressible layer of sand or woodchips, laid onto a geotextile.
- 5.5.4 No-Dig construction will result in an increase in levels. This must be fully taken account of in all other aspects of the design.

## **5.6 Ground Protection Areas**

- 5.6.1 The Ground Protection Areas, which are hatched cyan on the Tree Protection Plan, contain hard surfacing which is protecting any underlying roots. No excavation must be permitted beneath the base course within these areas other than that specifically described in section 5.7 below.
- 5.6.2 An excavator must only be used for the removal of the existing hard surfacing within the Root Protection Area of G25, if it can work only from areas of hard standing, or from outside the Root Protection Area. A banksman must be present during this operation and excavation must go no deeper than the existing base course and must cease immediately if roots are found. Once hard surfacing has been removed, the area outside the foundation trench line for the new building must be protected by ground protection. Trakmats, as supplied by either the Marwood Group, ([www.marwoodgroup.co.uk](http://www.marwoodgroup.co.uk)) or Ground-Guards, ([www.ground-guards.co.uk](http://www.ground-guards.co.uk)) or a similar approved product, must be used, laid on a compressible layer of sand or woodchips, laid onto a geotextile, with adjacent panels held together with connectors. The section of the foundation trench within the Root Protection Area of G25 can then be hand dug, as specified in section 5.7 below.

## **5.7 Hand Dig Areas**

- 5.7.1 The Hand Dig foundation trench within the Root Protection Area of G25, shown shaded red on the Tree Protection Plan, must be dug to a depth of 1m by hand, using only hand tools or an air spade, neatly severing any roots found, using secateurs or a hand saw. Any further excavation required, either to a greater depth or outside the hand dug trench, can be carried out with an excavator, since it is unlikely that significant live roots will be found.
- 5.7.2 Heavy-duty polythene must be used to line the side of the trench adjacent to the trees, before concrete is poured, to avoid the toxic effects of cement on tree roots.
- 5.7.3 On no account must use of an excavator be used in the top 1m of the Hand Dig area, which would rip roots and cause unnecessary damage.
- 5.7.4 An air spade must be used together with vacuum extraction equipment to remove the soil within the Root Protection Areas of T59, T60 and T61, in the area shown shaded red on the Tree Protection Plan. This work must be carried out under the supervision of the retained arboricultural consultant. To facilitate the works the grassed area must first be closely mown and then the top 25mm of turf removed using a mechanically operated turf cutter. Sufficient soil must be then removed to enable construction of the car parking area and to allow construction of a retaining structure to the east side of the car park spaces and, if necessary, along the south side.
- 5.7.5 Soil extraction, as specified above, will also expose roots belonging to removed trees, T62 and T63. Once the roots of T62 and T63 have been fully exposed these can be cut and removed.
- 5.7.6 During breaks in excavation works, and before completion of the new car parking spaces and retaining structure, exposed roots must be covered by damp hessian to prevent damage from frost or desiccation.
- 5.7.7 Excavation works, specified in section 5.7.4 above, should preferably be carried out during winter dormancy, when water and nutrient demand is low, to minimise stress on the trees.

## **5.8 General measures**

- 5.8.1 No construction activity whatsoever, including routing of underground services, storage of materials or on-site parking, must be allowed within Root Protection Areas, other than that specifically described above.
- 5.8.2 No mixing or storage of cement, concrete, oil, fuel, bitumen or other chemicals must be permitted within 10m of the trunk of any retained trees, nor in any position where the slope of the ground could lead to contamination of the Root Protection Area.
- 5.8.3 Fires must not be lit in a position where their flames could extend to within 10m of foliage, branches or trunk.
- 5.8.4 Landscape works carried out within Root Protection Areas must be undertaken with great care so as not to damage shallow roots. Tractor mounted rotovators or other heavy mechanical cultivation must not be used within the Root Protection Areas.
- 5.8.5 If any tree shown for retention is removed, uprooted or destroyed, another tree must be planted in the same location, at a size and species to be agreed in writing with the Local Planning Authority.
- 5.8.6 A copy of this report and the Tree Protection Plan must be kept on site and must be fully understood by the Site Agent.

## **5.9 Bat roosts**

- 5.9.1 The current legislation makes it a criminal offence to disturb, damage or destroy any bat roost or hibernation area. Contractors must be reminded of their responsibilities and should contact the relevant authorities if any signs of bats are found.

## **5.10 Birds**

- 5.10.1 The current legislation makes it a criminal offence to disturb nesting birds. The nesting season is generally assumed to be from 1<sup>st</sup> March to 31<sup>st</sup> July, however this can vary depending on species and location. During these months a careful inspection must be made before work commences and works must be postponed if active nests are found.

## 5.11 Arboricultural Supervision

5.11.1 A qualified Arboricultural Consultant must be retained during the period of construction to carry out the following:

- to meet with/ liaise with the contractor, prior to construction, demolition or ground work starting on site, to ensure this Arboricultural Method Statement is fully understood and can be complied with in full. If any revisions are required, a revised Arboricultural Method Statement must be approved by the Local Planning Authority, prior to construction or demolition starting on site.
- to inspect Tree Protection Fencing, prior to construction, demolition or ground work starting on site.
- to supervise excavation within the Root Protection Areas of T59, T60 & T61.
- as necessary, to advise on any issues at the request of the local planning authority, the developer, architect or contractor.

The details of each site visit must be recorded using a site visit proforma, with copies circulated to the contractor, developer and the local authority Tree Officer within 3 working days of the visit.

## 6 ARBORICULTURAL IMPACT ASSESSMENT

6.1 The following trees / groups, categorized as per BS 5837 (see Appendix C for details), are proposed for removal:

- Category U – unsuitable for retention: Fourteen trees – T6, T8, T9, T10, T11, T17, T18, T20, T21, T28, T39, T44, T53 and T54.
- Category C – low quality: Twenty-one trees – T1, T2, T7, T15, T19, T29, T30, T31, T32, T33, T34, T35, T38, T40, T41, T42, T47, T48, T49, T50 and T55, and four groups – G26, G43, G45 and section of G57.
- Category B/C – between categories B and C: Five trees – T27, T37, T52, T62 and T63.
- Category B – moderate quality: Seven trees:
  - T4 – a 7m, semi-mature lime.
  - T5 – a 7.5m, semi-mature lime.
  - T12 – a 6.5m, semi-mature lime.
  - T13 – a 7m, semi-mature lime.
  - T14 – a 7.5m, semi-mature lime.
  - T16 – an 8m, semi-mature lime.
  - T51 – an 11m, mature Norway maple.

- 6.2** There is extant permission for removal of the trees, planning reference APP/19/00703. New tree planting is proposed to mitigate the loss of trees. It is recommended that all new trees are fitted with an irrigation system, that sufficient soil volume is provided to allow trees to grow to maturity, and that selected species are appropriate for the local conditions.
- 6.3** Protection measures have been specified to protect the Root Protection Area of all retained trees, other than for:-
- G25 where there will be excavation with root loss of approximately 23.5m<sup>2</sup>, or 8% of the Root Protection Area.
  - T59, where there will be excavation within approximately 124m<sup>2</sup>, or 19% of the Root Protection Area.
  - T60, where there will be excavation within approximately 56.5m<sup>2</sup>, or 10% of the Root Protection Area.
  - T61, where there will be excavation within approximately 50.8m<sup>2</sup>, or 6.8% of the Root Protection Area.
- 6.4** All excavation work within Root Protection Areas is to be carried out using only hand tools to minimise the amount of root loss and to prevent unnecessary wounding. There is extant permission for the works within the Root Protection Areas of T59, T60 and T61. G25 was not previously shown on the Tree Protection Plan however the amount of projected root loss is unlikely to cause any noticeable adverse impact on the trees. All the trees should be re-surveyed following completion of the works, and at regular intervals thereafter as part of a tree safety management programme for the site, to check for signs of dieback, decay or structural issues.
- 6.5** Provided the recommendations in this report are followed, the arboricultural impact of this development on existing trees is considered acceptable. Arboricultural supervision has been included to assist with tree protection measures.

## **7 REFERENCES**

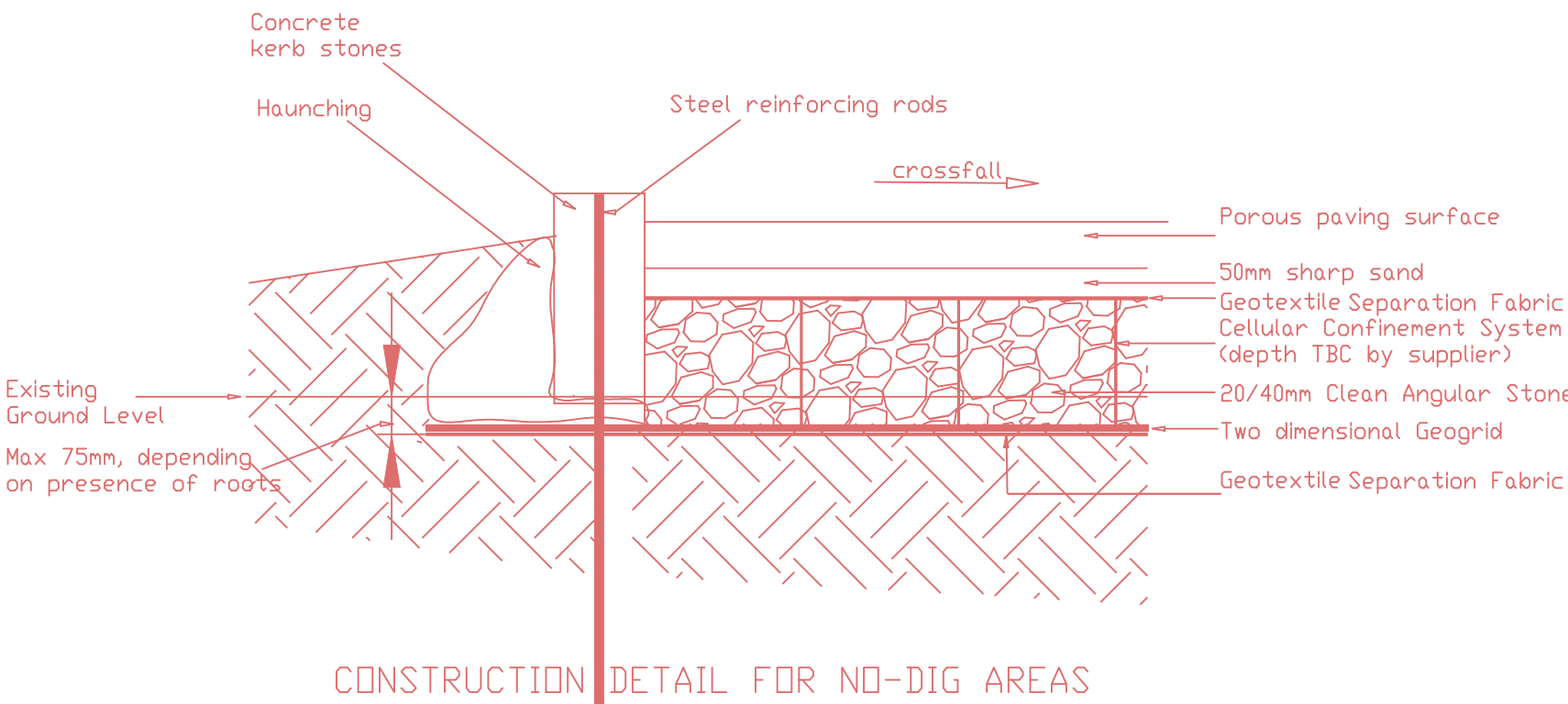
- *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.*
- *BS3998:2010 Tree Work. Recommendations.*
- *BS8545:2014 Trees: from nursery to independence in the landscape. Recommendations.*
- *The use of Cellular Confinement systems near Trees: a guide to good practice Arboricultural Association Guidance Note 12.*

APPENDIX A

EXTANT CONSENT REF. APP/19/00703. 316 CAR PARKING SPACES PROVIDED AS PART OF EXTANT CONSENT. REVISED LAYOUT PROVIDES AN ADDITIONAL 18 SPACES, CREATING A TOTAL OF 334 CAR PARKING SPACES.

39 CAR PARKING SPACES FORMED AS PART OF EXTANT CONSENT

EXISTING CAR PARK CONSISTING OF 120 CAR PARKING SPACES RECONFIGURED AND EXTENDED. 143 CAR PARKING SPACES PROVIDED AS PART OF EXTANT CONSENT. REVISED LAYOUT PROVIDES AN ADDITIONAL 2 SPACES, CREATING A TOTAL OF 145 SPACES.



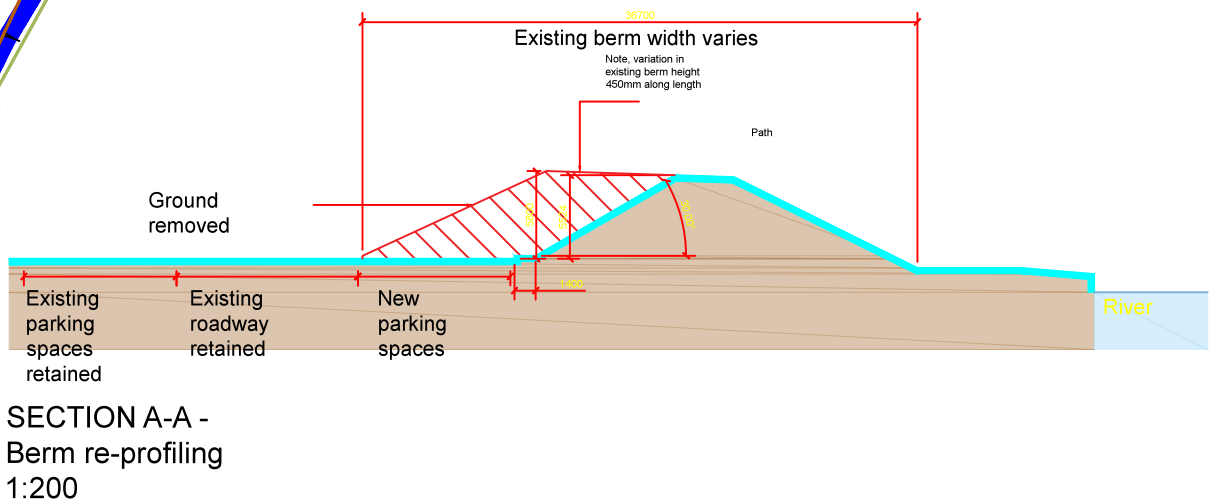
- Key**
- Category U
  - Category A
  - Category B
  - Category C
  - Crown spread: retained trees
  - Trees For Removal
  - Root Protection Area
  - Tree Protection Fence
  - D/G location: demolition/ground work
  - C location: construction
  - No-Dig Construction
  - Ground Protection Area: existing hard surface
  - Hand Dig Area

THERE MUST BE NO EXCAVATION WITHIN THE ROOT PROTECTION AREA OF T58. THE BERM MUST BE RE-PROFILED TO ACCOMMODATE THE RPA, OR IF NECESSARY A RETAINING WALL CAN BE CONSTRUCTED OUTSIDE THE RPA TO SUPPORT THE SOIL.

NEW CAR PARKING SPACES FORMED AS PART OF EXTANT CONSENT. 46 CAR PARKING SPACES WERE NOTED AS PART OF EXTANT CONSENT BUT 47 DRAWN. REVISED LAYOUT REGULARISES THE EXTANT CONSENT FORMING A TOTAL OF 47 CAR PARKING SPACES.

HAND DIG USING AN AIR SPADE AND SOIL VACUUM EXTRACTION UNDER SUPERVISION OF ARBORICULTURAL CONSULTANT, AS SPECIFIED IN THE ARBORICULTURAL METHOD STATEMENT. RETAINING WALL ERECTED TO BACK OF CAR PARK SPACES, USING A STRUCTURE WHICH DOES NOT REQUIRE A STRIP FOUNDATION TRENCH.

PUBLIC FOOTPATH ACCESS MAINTAINED



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JOB TITLE  
LANGSTONE TECHNOLOGY PARK

DRAWING TITLE  
TREE PROTECTION PLAN

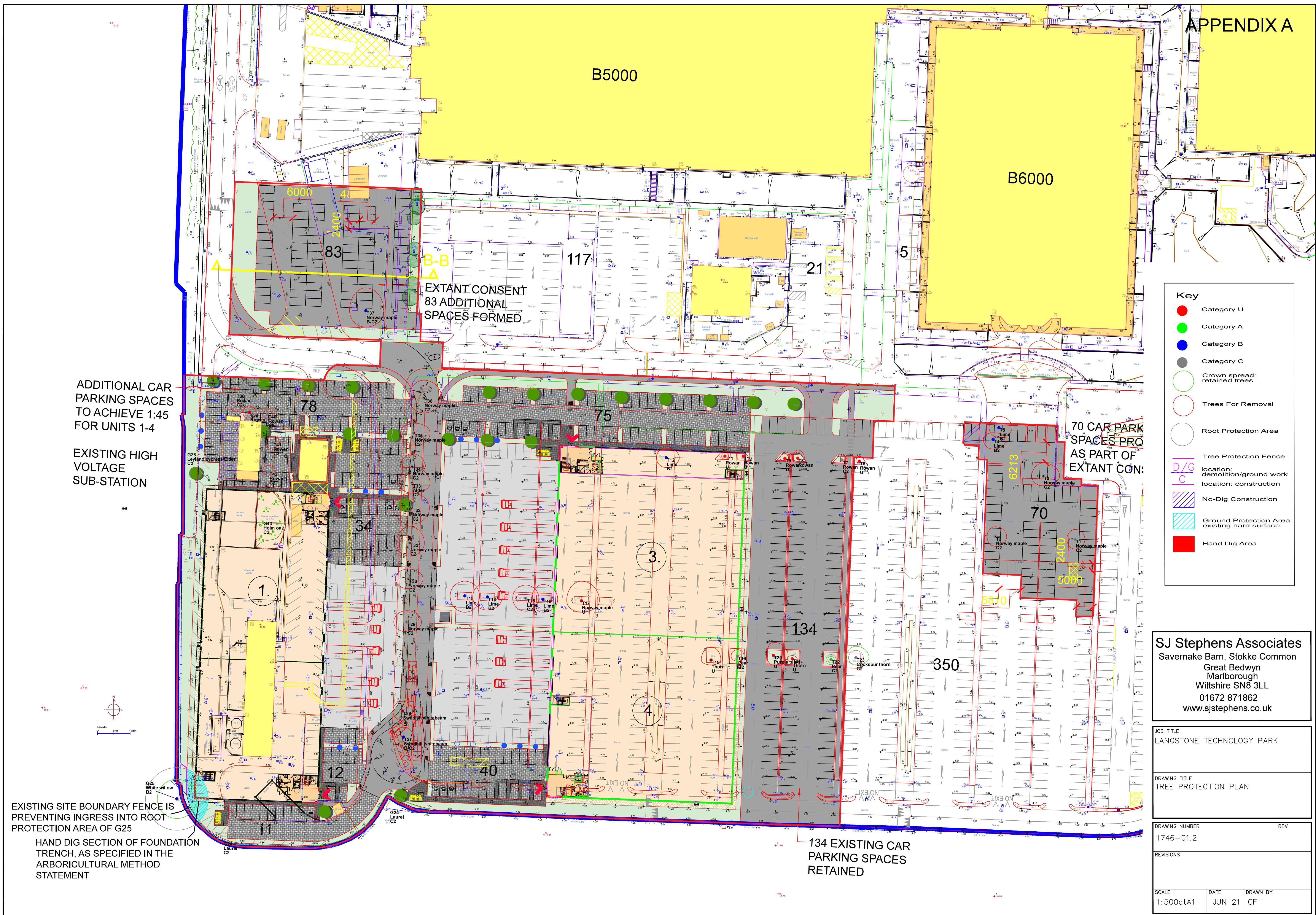
DRAWING NUMBER  
1746-01.1

REVISIONS

SCALE  
1:500atA1

DATE  
JUN 21

DRAWN BY  
CF



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JOB TITLE  
LANGSTONE TECHNOLOGY PARK

DRAWING TITLE  
TREE PROTECTION PLAN

DRAWING NUMBER  
1746-01.2

REVISIONS

| SCALE     | DATE   | DRAWN BY |
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# Langstone Technology Park

## Appendix B BS 5837: 2012 Tree Schedule

| Tree/<br>Group<br>No. | Species      | Height<br>(m) | Stem<br>Diam. at<br>1.5m<br>(mm) | Branch Spread (m) |     |     |     | Canopy<br>Clearance<br>(m) | Age<br>Class    | Observations                                                                                                                         | Management<br>Recommendations   | Estimated<br>Remaining<br>Contribution<br>(years) | BS 5837<br>Category<br>Grading | Protect-<br>ion<br>Distance<br>(m) | Root<br>Protect.<br>Area<br>(m2) |
|-----------------------|--------------|---------------|----------------------------------|-------------------|-----|-----|-----|----------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------|--------------------------------|------------------------------------|----------------------------------|
|                       |              |               |                                  | N                 | S   | E   | W   |                            |                 |                                                                                                                                      |                                 |                                                   |                                |                                    |                                  |
| T1                    | Norway maple | 9.5           | 290                              | 3                 | 3   | 3   | 2.5 | 2.5                        | Early<br>mature | Deadwood throughout low to mid crown. Only moderate vigour.                                                                          | Remove to facilitate devopment. | 10-20                                             | C2                             | 3.5                                | 38                               |
| T2                    | Norway maple | 8             | 260                              | 3                 | 3   | 3.5 | 2.5 | 2                          | Early<br>mature | Small areas of dieback. Leaf scorch.                                                                                                 | Remove to facilitate devopment. | 10-20                                             | C2                             | 3.1                                | 31                               |
| T3                    | Norway maple | 11            | 420                              | 4                 | 3   | 5   | 3.5 | 3.0                        | Early<br>mature | Extensive foliage damage.                                                                                                            | Remove to facilitate devopment. | 5-15                                              | C2                             | 5.0                                | 80                               |
| T4                    | Lime         | 7             | 240                              | 2                 | 3   | 4   | 3   | 1.5                        | Semi-<br>mature | Main stem bifurcates at 2.5m with stems growing together to 3m - poor structure. Low limbs removed. Leaf scorch.                     | Remove to facilitate devopment. | 15-30                                             | B2                             | 2.9                                | 26                               |
| T5                    | Lime         | 7.5           | 230                              | 3.5               | 3   | 4   | 3   | 1.1                        | Semi-<br>mature | Low limbs removed. Foliage damaged.                                                                                                  | Remove to facilitate devopment. | 15-30                                             | B2                             | 2.8                                | 24                               |
| T6                    | Rowan        | 3             | 100                              | 1.5               | 0.5 | 1.5 | 1   | 1.8                        | Semi-<br>mature | Dieback throughout crown. Foliage damage.                                                                                            | Remove.                         | <10                                               | U                              | 1.2                                | 5                                |
| T7                    | Rowan        | 3.5           | 110                              | 1.5               | 1   | 1.5 | 0.5 | 1.8                        | Semi-<br>mature | Low vigour. Pruning wound at 0.5m, with stem shoots.                                                                                 | Remove to facilitate devopment. | 5-15                                              | C2                             | 1.3                                | 5                                |
| T8                    | Rowan        | 4             | 150                              | 2.5               | 1   | 2   | 1.5 | 2                          | Semi-<br>mature | Slight lean to north. Dieback in upper crown.                                                                                        | Remove.                         | <10                                               | U                              | 1.8                                | 10                               |
| T9                    | Rowan        | 3.5           | 90                               | 1.5               | 1   | 1   | 1.5 | 2                          | Semi-<br>mature | Low vigour and minor deadwood throughout crown. Foliage damage.                                                                      | Remove.                         | <10                                               | U                              | 1.1                                | 4                                |
| T10                   | Rowan        | 2.5           | 70                               | 0                 | 0   | 0   | 0   | 0                          | Dead            | Ringbarked. Dead.                                                                                                                    | Remove.                         | <10                                               | U                              | 0.8                                | 2                                |
| T11                   | Rowan        | 3             | 100                              | 1.5               | 1   | 1   | 1   | 2                          | Semi-<br>mature | Stem decayed. Extensive dieback.                                                                                                     | Remove.                         | <10                                               | U                              | 1.2                                | 5                                |
| T12                   | Lime         | 6.5           | 270                              | 3                 | 3   | 4   | 3   | 3                          | Semi-<br>mature | Pruning wound at 1.1m to west, with decay entering. Crown lifted. Foliage damage. Lighting column through southern edge of crown.    | Remove to facilitate devopment. | 15-30                                             | B2                             | 3.2                                | 33                               |
| T13                   | Lime         | 7             | 330                              | 4.5               | 5   | 4.5 | 4.5 | 2.5                        | Semi-<br>mature | Awkward crown structure. Old pruning wounds. Leaf damage.                                                                            | Remove to facilitate devopment. | 15-30                                             | B2                             | 4.0                                | 49                               |
| T14                   | Lime         | 7.5           | 340                              | 4.5               | 4   | 4.5 | 4.5 | 2                          | Semi-<br>mature | Awkward crown structure. Congested.                                                                                                  | Remove to facilitate devopment. | 15-30                                             | B2                             | 4.1                                | 52                               |
| T15                   | Lime         | 6             | 270                              | 4                 | 4   | 4   | 4   | 2                          | Semi-<br>mature | Sparse crown. Foliage damage. Pruning wounds - some with decay.                                                                      | Remove to facilitate devopment. | 5-15                                              | C2                             | 3.2                                | 33                               |
| T16                   | Lime         | 8             | 320                              | 4.5               | 4   | 4.5 | 3.5 | 2                          | Semi-<br>mature | Awkward crown structure. Low limbs removed. Reasonable vitality.                                                                     | Remove to facilitate devopment. | 20-40                                             | B2                             | 3.8                                | 46                               |
| T17                   | Norway maple | 8.5           | 450                              | 6                 | 3.5 | 5.5 | 4.5 | 3                          | Early<br>mature | Two main stems from 2.5m, with further stem removed from centre of union. Low limbs removed. Extensive foliage damage. Sparse crown. | Remove.                         | <10                                               | U                              | 5.4                                | 92                               |

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Appendix B  
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| Tree/<br>Group<br>No. | Species               | Height<br>(m) | Stem<br>Diam. at<br>1.5m<br>(mm) | Branch Spread (m) |     |     |     | Canopy<br>Clearance<br>(m) | Age<br>Class | Observations                                                                                                                                                                    | Management<br>Recommendations                                                                                                      | Estimated<br>Remaining<br>Contribution<br>(years) | BS 5837<br>Category<br>Grading | Protect-<br>ion<br>Distance<br>(m) | Root<br>Protect.<br>Area<br>(m2) |
|-----------------------|-----------------------|---------------|----------------------------------|-------------------|-----|-----|-----|----------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------|------------------------------------|----------------------------------|
|                       |                       |               |                                  | N                 | S   | E   | W   |                            |              |                                                                                                                                                                                 |                                                                                                                                    |                                                   |                                |                                    |                                  |
| T18                   | Thorn                 | 4.5           | 390                              | 4                 | 1.5 | 3   | 3   | 2                          | Mature       | Three stems from base, 6 at 1.5m, average 160mm. Two decayed stems. Very low vigour. Leaf scorch.                                                                               | Remove.                                                                                                                            | <10                                               | U                              | 4.7                                | 69                               |
| T19                   | Pear                  | 6             | 160                              | 2                 | 1.5 | 2   | 2   | 2                          | Early mature | Foliage damage. Low vigour.                                                                                                                                                     | Remove to facilitate devopment.                                                                                                    | 5-15                                              | C2                             | 1.9                                | 12                               |
| T20                   | Purple plum           | 5             | 200                              | 4                 | 3   | 4.5 | 2   | 1.8                        | Early mature | Crown break at 1.4m, four stems - 70, 70, 80 & 150mm. Dieback through crown. Foliage scorched.                                                                                  | Remove.                                                                                                                            | <10                                               | U                              | 2.4                                | 18                               |
| T21                   | Thorn                 | 3.5           | 150                              | 1                 | 1   | 1.5 | 1.5 | 1.7                        | Early mature | Paul's Scarlet'. Two stems from 1.2m - 95 & 110mm. 7 stems removed. Very low vigour. Foliage scorched.                                                                          | Remove.                                                                                                                            | <10                                               | U                              | 1.8                                | 10                               |
| T22                   | Pear                  | 5.5           | 130                              | 1                 | 1   | 1   | 1   | 2                          | Semi-mature  | Scorched foliage.                                                                                                                                                               | Remove to facilitate devopment.                                                                                                    | 5-15                                              | C2                             | 1.6                                | 8                                |
| T23                   | Cockspur thorn        | 3.5           | 190                              | 3.5               | 2   | 4   | 3   | 1.6                        | Early mature | Two stems from 1.4m - 110 & 160mm. Low vigour and foliage scorch.                                                                                                               | Remove to facilitate devopment.                                                                                                    | 5-15                                              | C2                             | 2.3                                | 16                               |
| G24                   | Laurel                | 3 - 4         | 75                               |                   |     |     |     | 0                          | Mature       | Growing to back of chainlink boundary fence. Less vigorous towards western end, with bramble, ivy and self sown saplings growing through.                                       |                                                                                                                                    | 10-20                                             | C2                             | 0.9                                | 3                                |
| G25                   | White willow          | 19            | est 800                          | 6                 | 6   | 6   | 6   | 4.5                        | Mature       | Group of offsite trees. No access to survey. Multiple stems. Reasonable vigour. Minor deadwood.                                                                                 | Cut back section of crown overhanging site boundary only as necessary to provide 1.2m clearance for construction the new building. | 15-30                                             | B2                             | 9.6                                | 289                              |
| G26                   | Leyland cypress/Elder | 4 - 7         | est 75 - 250                     |                   |     |     |     | 0                          | Mature       | To back of mesh fence - no close access to survey. Line of Leyland cypress, previously topped, with dead trees in central section. Self sown elder and bramble growing through. | Remove to facilitate devopment.                                                                                                    | 5-15                                              | C2                             | 3.0                                | 28                               |
| T27                   | Swedish whitebeam     | 5             | 450                              | 3                 | 3   | 3   | 3   | 1.8                        | Mature       | Seven main stems from 1m, average 170mm. Previously crown reduced leaving small dumpy tree. Minor leaf scorch. Good vitality.                                                   | Remove to facilitate devopment.                                                                                                    | 10-20                                             | B-C2                           | 5.4                                | 92                               |
| T28                   | Swedish whitebeam     | 5             | 450                              | 3                 | 3   | 3   | 3   | 1.8                        | Mature       | Approx 9 stems from 1.5m, average 150mm. Previously crown reduced. Sparse crown with dieback to north side.                                                                     | Remove.                                                                                                                            | <10                                               | U                              | 5.4                                | 92                               |
| T29                   | Norway maple          | 8.5           | 290                              | 3.5               | 3   | 4.5 | 4   | 2                          | Early mature | Foliage damage.                                                                                                                                                                 | Remove to facilitate devopment.                                                                                                    | 10-20                                             | C2                             | 3.5                                | 38                               |
| T30                   | Norway maple          | 8             | 450                              | 3                 | 3   | 4.5 | 4   | 3.5                        | Mature       | Previously reduced. Two thirds of crown very sparse. East side with better vitality.                                                                                            | Remove to facilitate devopment.                                                                                                    | 5-15                                              | C2                             | 5.4                                | 92                               |

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| Tree/<br>Group<br>No. | Species      | Height<br>(m) | Stem<br>Diam. at<br>1.5m<br>(mm) | Branch Spread (m) |     |     |     | Canopy<br>Clearance<br>(m) | Age<br>Class | Observations                                                                                                                                          | Management<br>Recommendations   | Estimated<br>Remaining<br>Contribution<br>(years) | BS 5837<br>Category<br>Grading | Protect-<br>ion<br>Distance<br>(m) | Root<br>Protect.<br>Area<br>(m2) |
|-----------------------|--------------|---------------|----------------------------------|-------------------|-----|-----|-----|----------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------|--------------------------------|------------------------------------|----------------------------------|
|                       |              |               |                                  | N                 | S   | E   | W   |                            |              |                                                                                                                                                       |                                 |                                                   |                                |                                    |                                  |
| T31                   | Norway maple | 9.5           | 490                              | 5                 | 4   | 4.5 | 4   | 3.5                        | Mature       | West side of crown scorched. Multiple stems from 1.9m. Minor deadwood. Previously reduced.                                                            | Remove to facilitate devopment. | 5-15                                              | C2                             | 5.9                                | 109                              |
| T32                   | Norway maple | 8.5           | 580                              | 4.5               | 5   | 5.5 | 5.5 | 3                          | Mature       | Four stems from 1.7m, and one removed. Cavity at base to southeast with decay entering. Foliage damage.                                               | Remove to facilitate devopment. | 5-15                                              | C2                             | 7.0                                | 152                              |
| T33                   | Alder        | 13            | 710                              | 5                 | 3   | 5.5 | 4   | 3                          | Mature       | West side of crown scorched. Previously reduced.                                                                                                      | Remove to facilitate devopment. | 10-20                                             | C2                             | 8.5                                | 228                              |
| T34                   | Norway maple | 8             | 410                              | 4                 | 0   | 4   | 3.5 | 3.5                        | Early mature | Leaning to north. West side of crown scorched. Three-way fork at 1.6m. Poor form.                                                                     | Remove to facilitate devopment. | 5-15                                              | C2                             | 4.9                                | 76                               |
| T35                   | Norway maple | 8             | 510                              | 3                 | 4   | 5   | 4   | 3                          | Mature       | West side of crown scorched. Previously reduced.                                                                                                      | Remove to facilitate devopment. | 10-20                                             | C2                             | 6.1                                | 118                              |
| T36                   | Norway maple | 8             | 530                              | 5.5               | 4.5 | 5.5 | 4.5 | 3                          | Mature       | Large stem wound, north side, with heartwood exposed. West side of crown scorched.                                                                    | Remove to facilitate devopment. | 10-20                                             | C2                             | 6.4                                | 127                              |
| T37                   | Norway maple | 8.5           | 490                              | 7                 | 5   | 5.5 | 5   | 2                          | Mature       | Crown break at 1.8m. Leaf scorch to west but reasonable vigour. Previously reduced. Old pruning wounds and one tear out wound to low lateral to east. | Remove to facilitate devopment. | 15-30                                             | B-C2                           | 5.9                                | 109                              |
| T38                   | Rowan        | 4             | 130                              | 1.5               | 1.5 | 1.5 | 1.5 | 1.8                        | Semi-mature  | Basal stems removed. Low limbs removed. Low vigour.                                                                                                   | Remove to facilitate devopment. | 5-15                                              | C2                             | 1.6                                | 8                                |
| T39                   | Rowan        | 5             | 180                              | 2                 | 2   | 2   | 2   | 1.8                        | Semi-mature  | Basal stems removed. Dieback at branch extremities. Low limbs removed. Ivy over stem.                                                                 | Remove to facilitate devopment. | <10                                               | U                              | 2.2                                | 15                               |
| T40                   | Rowan        | 4.5           | 90                               | 1                 | 1.5 | 1.5 | 1.5 | 1.7                        | Semi-mature  | Basal stems removed. Low limbs removed. Low vigour.                                                                                                   | Remove to facilitate devopment. | 5-15                                              | C2                             | 1.1                                | 4                                |
| T41                   | Rowan        | 4             | 180                              | 2                 | 2   | 2   | 2   | 1                          | Semi-mature  | Nine stems from base, average 60mm. Minor deadwood. Reasonable vigour but poor form.                                                                  | Remove to facilitate devopment. | 10-20                                             | C2                             | 2.2                                | 15                               |
| T42                   | Rowan        | 4.5           | 130                              | 2                 | 1   | 2   | 2   | 1.2                        | Semi-mature  | Dieback in upper crown.                                                                                                                               | Remove to facilitate devopment. | 5-15                                              | C2                             | 1.6                                | 8                                |
| G43                   | Holm oak     | 5             | est 450                          | 0                 | 0   | 0   | 0   | 0                          | Early mature | Dense thicket.                                                                                                                                        | Remove to facilitate devopment. | 10-20                                             | C2                             | 5.4                                | 92                               |
| T44                   | Box elder    | 6             | 280                              | 4                 | 2   | 4   | 2   | 2.5                        | Over mature  | Almost dead.                                                                                                                                          | Remove.                         | <10                                               | U                              | 3.4                                | 35                               |
| G45                   | Shrubs       | 0. - 2        | 25 - 100                         | 0                 | 0   | 0   | 0   | 0                          | Mature       | Species including ceanothus, weigela, cordylina, jasmine, buddleja. Overgrown with weeds.                                                             | Remove to facilitate devopment. | 5-15                                              | C2                             | 1.2                                | 5                                |

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| Tree/<br>Group<br>No. | Species      | Height<br>(m) | Stem<br>Diam. at<br>1.5m<br>(mm) | Branch Spread (m) |     |     |     | Canopy<br>Clearance<br>(m) | Age<br>Class | Observations                                                                                                                                                                                                    | Management<br>Recommendations                                               | Estimated<br>Remaining<br>Contribution<br>(years) | BS 5837<br>Category<br>Grading | Protect-<br>ion<br>Distance<br>(m) | Root<br>Protect.<br>Area<br>(m2) |
|-----------------------|--------------|---------------|----------------------------------|-------------------|-----|-----|-----|----------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------|--------------------------------|------------------------------------|----------------------------------|
|                       |              |               |                                  | N                 | S   | E   | W   |                            |              |                                                                                                                                                                                                                 |                                                                             |                                                   |                                |                                    |                                  |
| T46                   | Silver maple | 12.5          | est 620                          | 7                 | 7   | 7   | 7   | 1.8                        | Mature       | In fenced off area - no access. Sparse foliage over crown - may be as a result of exposure to wind following demolition of adjacent building. Previously reduced. Large pruning wounds. Attractive crown shape. | Re-inspect in 12 months to assess whether adapted to changed wind dynamics. | 15-30                                             | B2                             | 7.4                                | 174                              |
| T47                   | Rowan        | 3             | 120                              | 1.2               | 1   | 1.2 | 1.2 | 1.8                        | Semi-mature  | Two stems from 1m - 70 & 100mm. Poor structure. Low vigour.                                                                                                                                                     | Remove to facilitate devopment.                                             | 5-15                                              | C2                             | 1.4                                | 7                                |
| T48                   | Lime         | 6             | 270                              | 3                 | 3   | 3   | 3   | 1.8                        | Semi-mature  | Stem wound at 1.1m to west, with decay entering. Crown break at 2.5m with area of disrupted bark. Previously reduced. Poor structure.                                                                           | Remove to facilitate devopment.                                             | 10-20                                             | C2                             | 3.2                                | 33                               |
| T49                   | Copper beech | 6.5           | 120                              | 2                 | 2   | 2   | 3   | 1.8                        | Semi-mature  | Attractive tree. Good vitality.                                                                                                                                                                                 | Remove to facilitate devopment.                                             | >40                                               | C2                             | 1.4                                | 7                                |
| T50                   | Rowan        | 5             | 230                              | 2                 | 3   | 3.5 | 2.5 | 2                          | Early mature | Previously reduced with decay in some pruning wounds.                                                                                                                                                           | Remove to facilitate devopment.                                             | 5-15                                              | C2                             | 2.8                                | 24                               |
| T51                   | Norway maple | 11            | est 600                          | 6                 | 6   | 7   | 5   | 2                          | Mature       | In fenced off area - no access. Minor deadwood.                                                                                                                                                                 | Remove to facilitate devopment.                                             | 15-30                                             | B2                             | 7.2                                | 163                              |
| T52                   | Norway maple | 12            | est 620                          | 6                 | 6   | 6   | 5   | 2                          | Mature       | In fenced off area - no access. Crown sparse to southwest. Minor deadwood.                                                                                                                                      | Remove to facilitate devopment.                                             | 10-20                                             | B-C2                           | 7.4                                | 174                              |
| T53                   | Ash          | 7             | est 250                          | 3.5               | 3.5 | 4   | 2.5 | 3                          | Early mature | Fenced off - no access. Dying back. Extensive areas of decay.                                                                                                                                                   | Remove.                                                                     | <10                                               | U                              | 3.0                                | 28                               |
| T54                   | Cherry       | 8             | est 720                          | 7.5               | 6   | 6   | 7.5 | 2.5                        | Over mature  | No access - fenced off area. Large fungal brackets of <i>Laetiporus sulphureus</i> on main stem and low limb, signifying areas of underlying decay.                                                             | Remove.                                                                     | <10                                               | U                              | 8.6                                | 234                              |
| T55                   | Whitebeam    | 3.5           | est 100                          | 2                 | 1.5 | 1.5 | 1.5 | 1.8                        | Semi-mature  | Leaning to east. Poor form. No access - fenced off area.                                                                                                                                                        | Remove.                                                                     | 5-15                                              | C2                             | 1.2                                | 5                                |
| T56                   | Thorn        | 6             | 230                              | 4                 | 4   | 4   | 4   | 1.8                        | Early mature | On steep bank. Approx 8 stems at 1.5m, average 80mm.                                                                                                                                                            |                                                                             | 15-30                                             | B-C2                           | 2.8                                | 24                               |
| G57                   | Shrubs       | 1 - 1.2       | 25 - 125                         |                   |     |     |     | 0                          | Early mature | Isolated, tightly clipped shrubs. Species including hazel, thorn, berberis, rose and cherry plum. All low quality.                                                                                              | Remove as required to facilitate re-profiling of earth bank.                | 5-15                                              | C2                             | 1.5                                | 7                                |
| T58                   | Norway maple | 13            | 810                              | 7                 | 8   | 8   | 6.5 | 2.5                        | Mature       | Four main stems from 1.2m - 350, 410, 420 & 430mm, with further decaying stem 180mm. Decay point at 1.2m to east. Occasional deadwood and foliage damage but a reasonable tree.                                 |                                                                             | 15-30                                             | B2                             | 9.7                                | 297                              |
| T59                   | White willow | 20.5          | 1200                             | 9.5               | 7   | 8   | 8   | 3                          | Mature       | Multiple stems from 2m. Minor deadwood throughout crown, showing some sign of decline but potential to reduce and maintain by pollarding.                                                                       | Remove section of ivy from base. Re-inspect within 18 months.               | 20-40                                             | B2-3                           | 14.4                               | 651                              |

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| Tree/<br>Group<br>No. | Species      | Height<br>(m) | Stem<br>Diam. at<br>1.5m<br>(mm) | Branch Spread (m) |     |     |     | Canopy<br>Cleara-<br>nce<br>(m) | Age<br>Class    | Observations                                                                                                                                                                      | Management<br>Recommendations                                                     | Estimated<br>Remaining<br>Contribution<br>(years) | BS 5837<br>Category<br>Grading | Protect-<br>ion<br>Distnce<br>(m) | Root<br>Protect.<br>Area<br>(m2) |
|-----------------------|--------------|---------------|----------------------------------|-------------------|-----|-----|-----|---------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------|-----------------------------------|----------------------------------|
|                       |              |               |                                  | N                 | S   | E   | W   |                                 |                 |                                                                                                                                                                                   |                                                                                   |                                                   |                                |                                   |                                  |
| T60                   | White willow | 16            | 1110                             | 4.5               | 3.5 | 6   | 4.5 | 3                               | Mature          | Stems leans to east. A number of large stems previously broken out but now with fresh growth. Dieback in upper crown but good vitality below.                                     | Re-inspect within 18 months.                                                      | 20-40                                             | B2-3                           | 13.3                              | 557                              |
| T61                   | White willow | 14            | 1280                             | 6                 | 6   | 7   | 6   | 4                               | Mature          | Multiple stems from 2.5m. Large stem removed from 2m to southeast, with large area of decay extending down to base. Previously crown reduced. One main stem reduced to approx 6m. | Re-inspect within 18 months.                                                      | 15-30                                             | B3                             | 15.4                              | 741                              |
| T62                   | Lime         | 9.5           | 480                              | 4.5               | 4   | 4.5 | 4.5 | 2                               | Early<br>mature | Four stems from 0.6m - 200, 230, 250 & 270mm - tight forks. Crossing fused stems. Poor form and structure. Low limbs removed.                                                     | Remove to facilitate devopment by felling to ground level and grinding out stump. | 15-30                                             | B-C2                           | 5.8                               | 104                              |
| T63                   | Lime         | 13.5          | 530                              | 5                 | 5   | 5   | 5   | 2.5                             | Early<br>mature | Three stems from 0.9m - 270, 300 & 350mm. Low limbs removed with badly executed pruning cuts. Poor basal structure.                                                               | Remove to facilitate devopment by felling to ground level and grinding out stump. | 15-30                                             | B-C2                           | 6.4                               | 127                              |

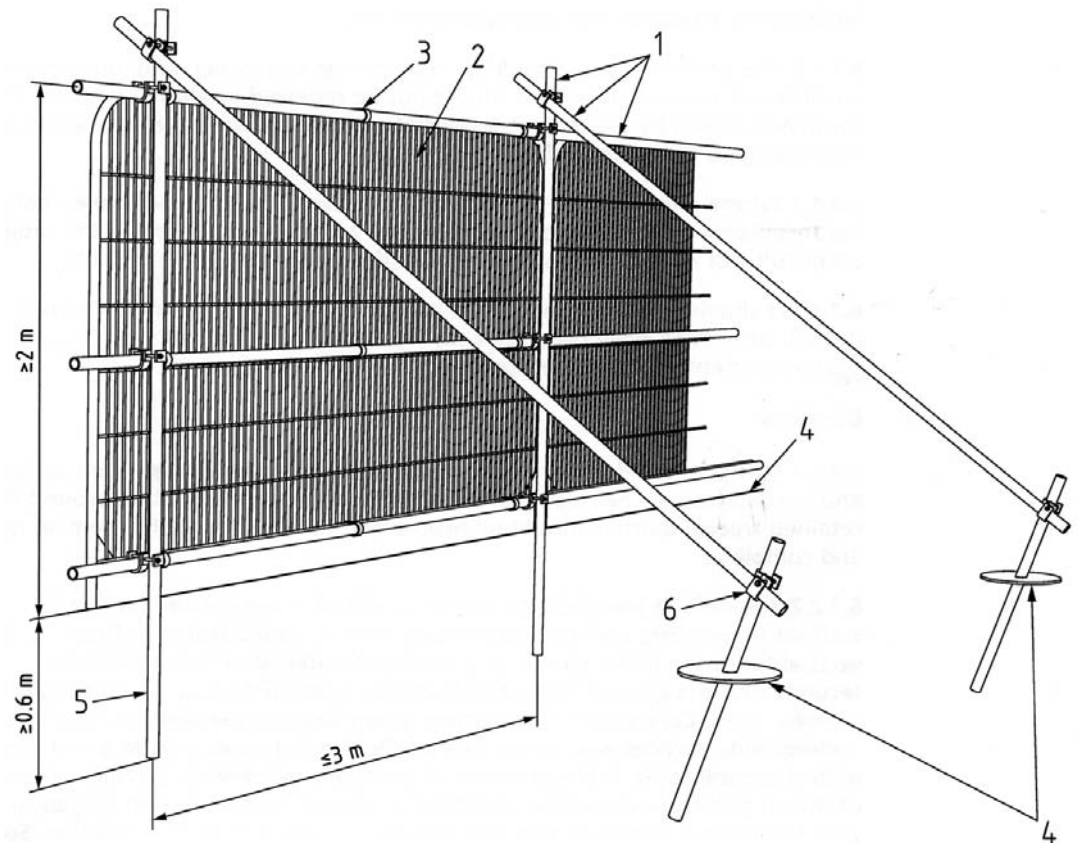
BS 5837:2012, Table 1 Cascade chart for tree quality assessment

| Category and definition                                                                                                                                                   | Criteria (including subcategories where appropriate)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                   |                                                                                                                                       | Identification on plan |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Trees unsuitable for retention (see Note)                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                   |                                                                                                                                       |                        |
| <b>Category U</b><br>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 | <ul style="list-style-type: none"><li>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 category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)</li><li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li><li>Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality</li></ul> <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p> |                                                                                                                                                                                                                                                                   |                                                                                                                                       | See Table 2            |
|                                                                                                                                                                           | 1 Mainly arboricultural qualities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2 Mainly landscape qualities                                                                                                                                                                                                                                      | 3 Mainly cultural values, including conservation                                                                                      |                        |
| Trees to be considered for retention                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                   |                                                                                                                                       |                        |
| <b>Category A</b><br><b>Trees of high quality</b> with an estimated remaining life expectancy of at least 40 years                                                        | Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features                                                                                                                                                            | Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture) | See Table 2            |
| <b>Category B</b><br><b>Trees of moderate quality</b> with an estimated remaining life expectancy of at least 20 years                                                    | 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 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                                                                                                                                                                                                                                                                                                                                                                                                            | Trees present in numbers, usually growing 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 | Trees with material conservation or other cultural value                                                                              | See Table 2            |
| <b>Category C</b><br><b>Trees of low quality</b> with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm       | Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 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                                                              | Trees with no material conservation or other cultural value                                                                           | See Table 2            |

Figure 2

**Key**

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



**Examples of above-ground stabilising systems**

Figure 3a

Stabiliser strut with base plate secured with ground pins

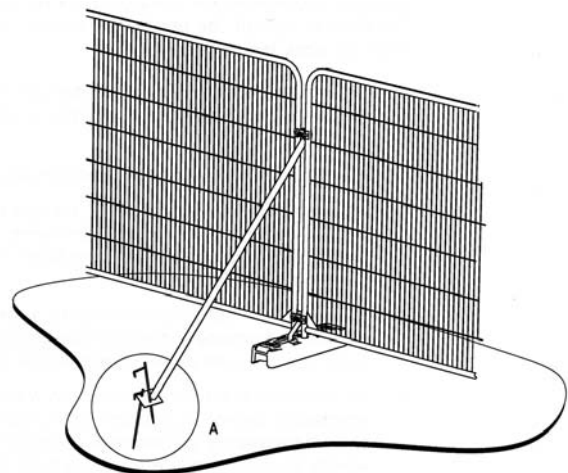
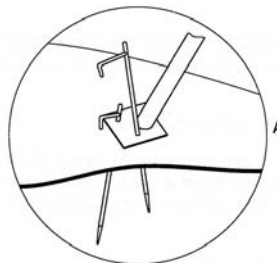
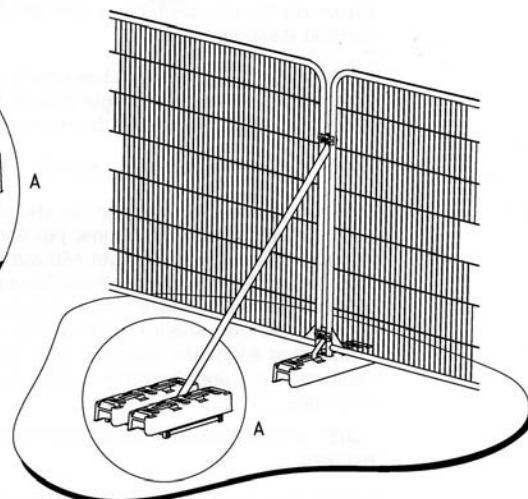


Figure 3b

Stabiliser strut mounted on block tray

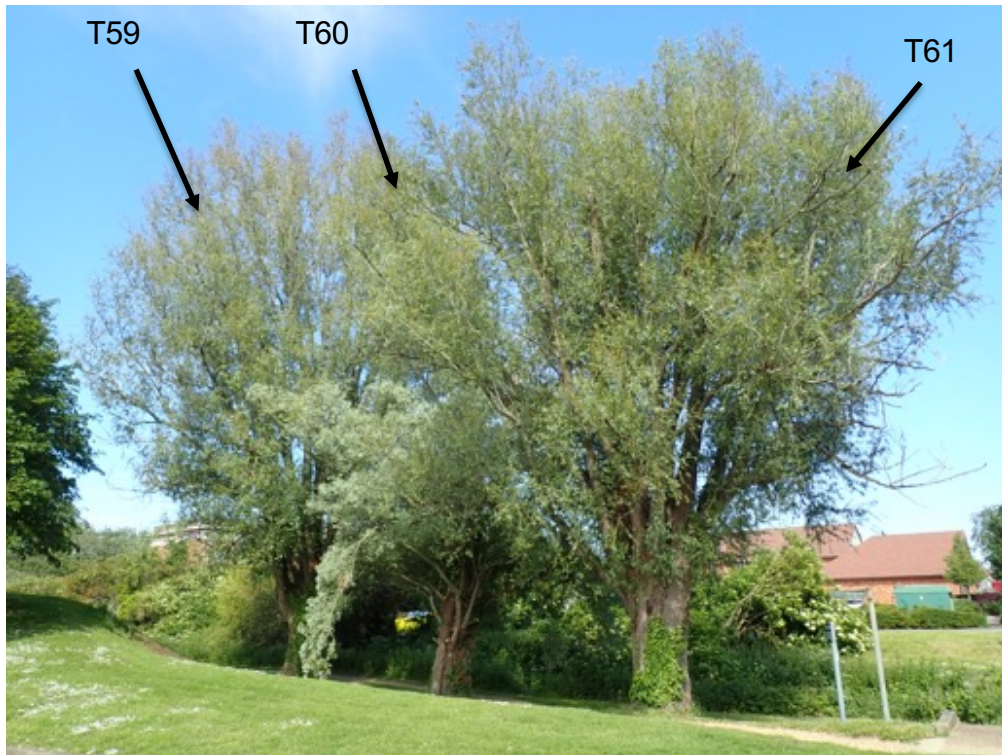




G25, White willow, growing outside site, with roots likely to be extending beneath existing hard surfacing. Hand dig excavation has been specified for the part of the new building foundation within the projected root protection area.



Overhanging branches from trees within G25 are of generally small diameter. Pruning work has been specified to provide clearance for construction of the new building.



White willow, alongside footpath. Roots are projected to spread into the area where the car park is to be extended.



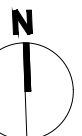
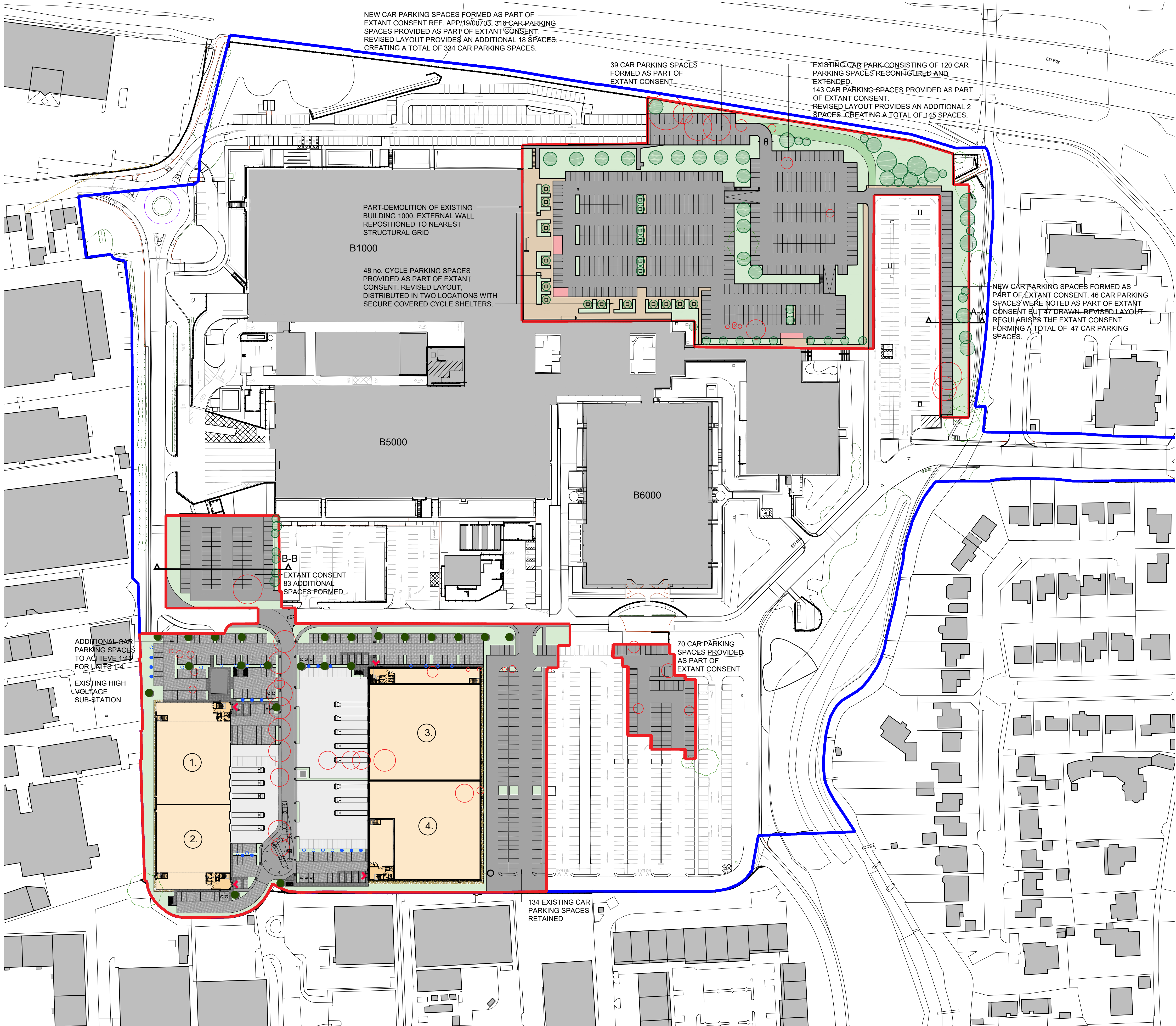
View to north along existing berm. The berm is to be excavated back and re-profiled to allow extension of the car park. Lime trees T62 and T63 to be removed. Within the root protection area of T59, T60 and T61, in the area indicated in red, there must be hand dig excavation and the cut back area of the berm must be retained by a supporting structure, rather than re-profiled.



Silver maple, T46, to be retained. Foliage growth in mid to upper crown is stunted. Possibly wind damaged following recent removal of building to west side.



Norway maple, T58, alongside footpath, to east side of berm.



|    | GIA (m²) |       |        |    | GEA (m²) |       |        |
|----|----------|-------|--------|----|----------|-------|--------|
|    | Gnd      | First | Total  |    | Gnd      | First | Total  |
| 1. | 1,912    | 337   | 2,249  | 2. | 1,580    | 279   | 1,859  |
| 3. | 3,184    | 434   | 3,618  | 4. | 2,822    | 348   | 3,170  |
| T. | 9,498    | 1,398 | 10,896 |    |          |       | 11,290 |

PHASE 1 DEVELOPMENT AREA: 3.11 Hectares

- KEY
- APPLICATION AREA
  - SOFT LANDSCAPE
  - TARMACADAM SURFACING
  - BRUSHED CONCRETE SERVICE YARD
  - NATURAL BLOCK PAVING TO VEHICLE AREAS
  - CHARCOAL BLOCK PAVING TO PEDESTRIAN AREAS
  - WELL CONSOLIDATED GRAVEL
  - CYCLE HOOPS AND SHELTER
  - TWO TIER CYCLE STORAGE AND SHELTER
  - EXISTING SUBSTATION RETAINED
  - NEW ELECTRIC SUBSTATION
  - ACCESS BARRIER/ PLATE CONTROL
  - ELECTRIC VEHICLE CHARGING POINTS/ DUCTS FOR FUTURE POINT
  - CAR SHARE PARKING SPACES
  - DROP KERB
  - PROPOSED TREES
  - EXISTING TREES TO BE REMOVED

PARKING PROVISIONS:

Extant planning consent proposed to remove 815 no. existing car parking spaces to build 12 units with 287 new car parking spaces provided at 1 per 45sqm of floor area.

Revised layout proposes to remove 688 no. existing car parking spaces while retaining 134, to build 4 units with 250 new car parking spaces provided at 1 per 45sqm of floor area.

Extant consent also proposed to provide 70 new car parking spaces to the East of the site, replacing 9 existing, and 83 new spaces to the North West replacing 16 existing.

Proposal for part demolition of existing Building 1000 as part of extant consent proposes to provide 540 new car parking spaces replacing 120 existing. Car parking has been revised.

Client:  
XLB PROPERTY LTD &  
HAVANT S.a.r.l. (Luxembourg)



Project:  
LANGSTONE TECHNOLOGY PARK  
HAVANT

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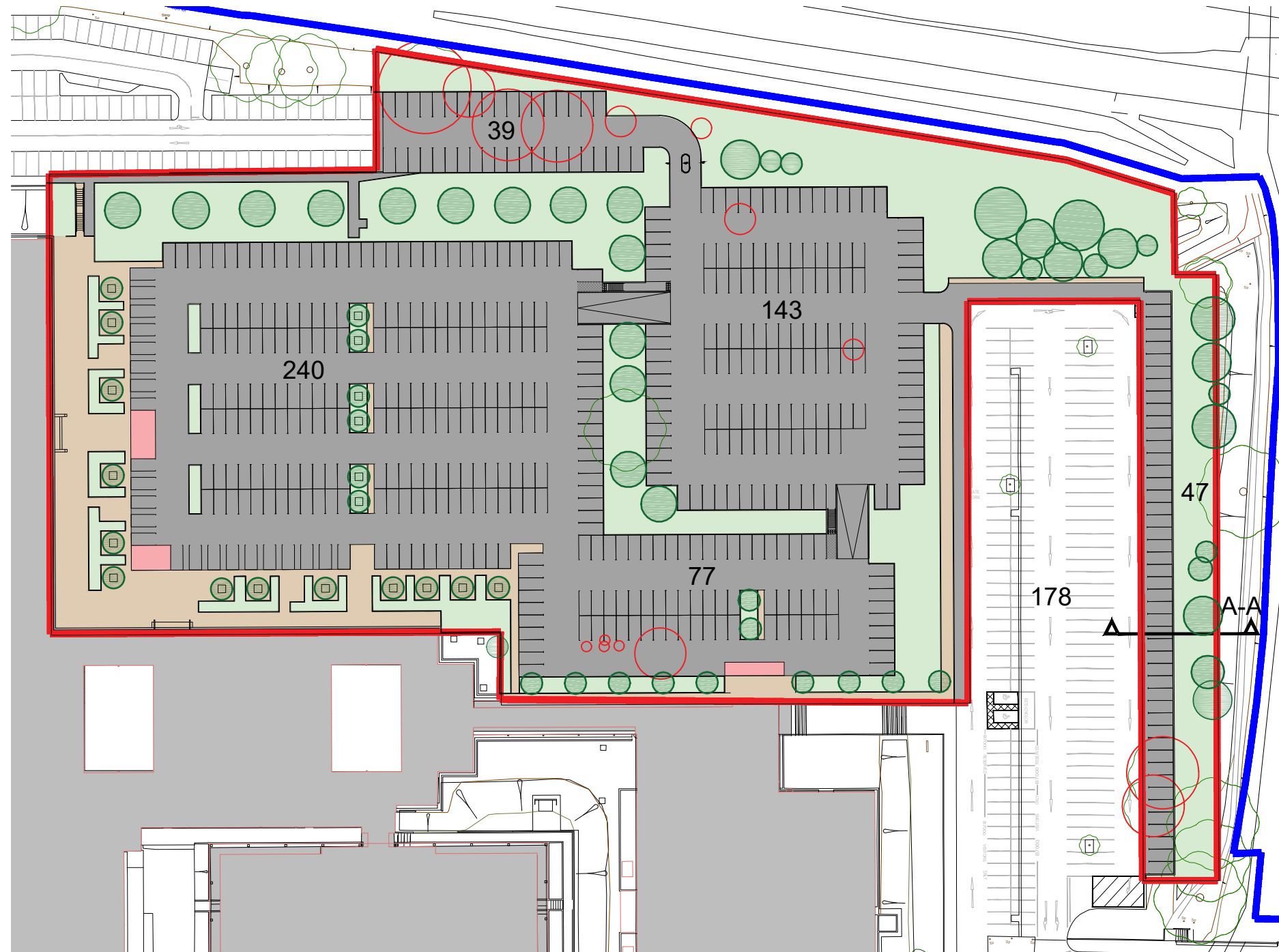
info@prc-group.com  
www.prc-group.com

Drawing Title:  
PROPOSED  
OVERALL SITE PLAN

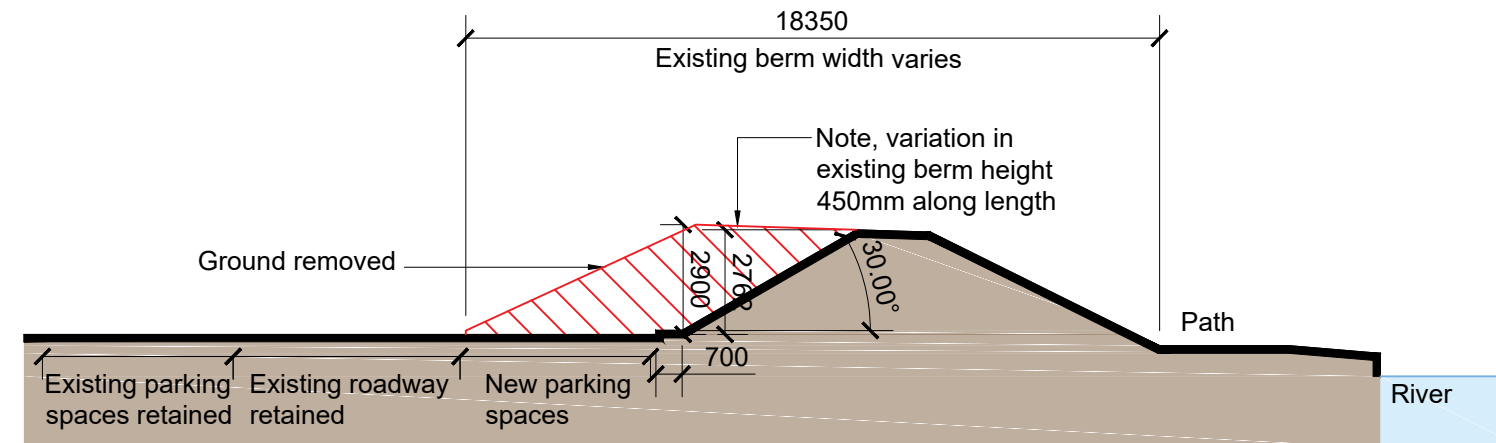
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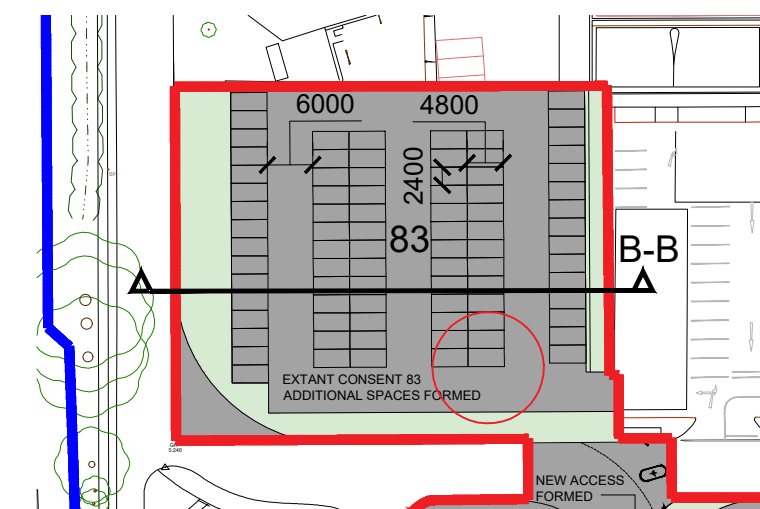
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Information ☐ Approval ☐  
Tender ☐  
Working London  
Milton Keynes  
Warsaw



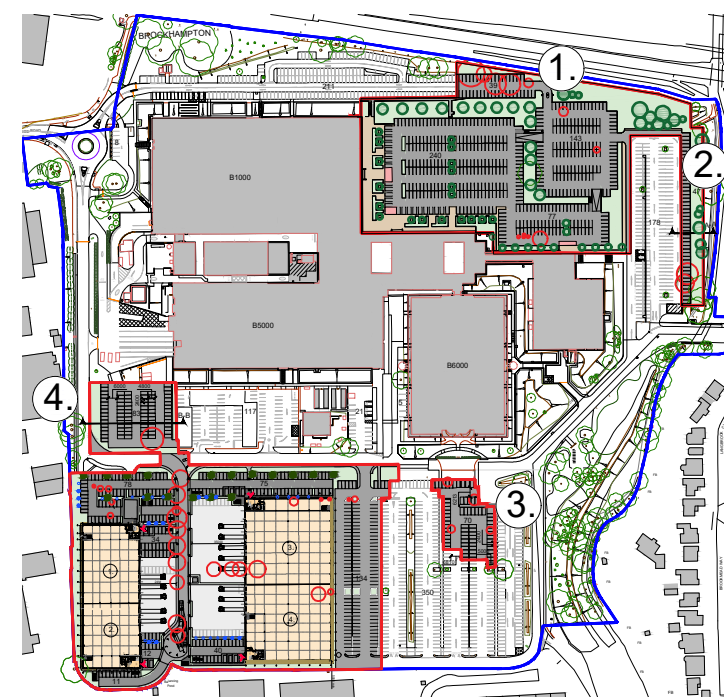
Car Park 1 & 2



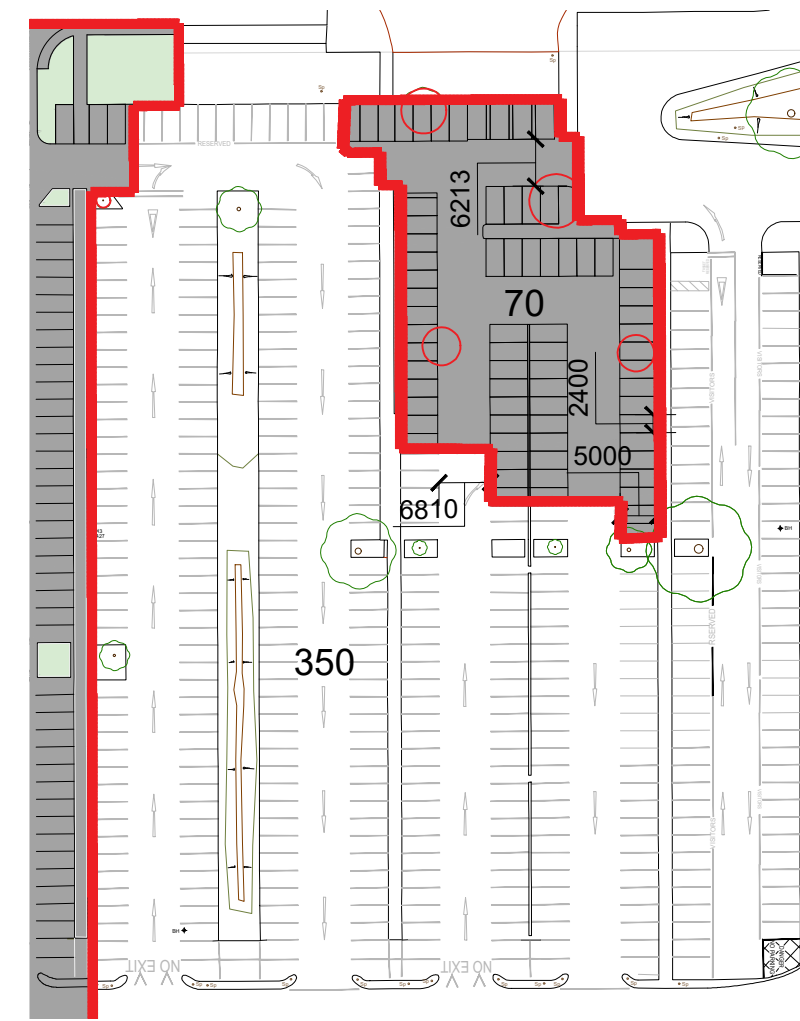
SECTION A-A - Berm re-profiling  
1:200



Car Park 4



Key Plan 1:5000



Car Park 3

- KEY**
- APPLICATION AREA
  - SOFT LANDSCAPE
  - TARMACADAM SURFACING
  - ACCESS BARRIER / PLATE CONTROL
  - EXISTING TREE REMOVED
  - EXISTING TREE RETAINED

Client:  
XLB PROPOERTY LTD &  
HAVANT S.a.r.l. (Luxembourg)



Project:  
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Drawing Title:  
CAR PARK  
LAYOUTS

Scale @ A2: 1:200/1000/5000  
Checked by: ME  
Date: MAR 21

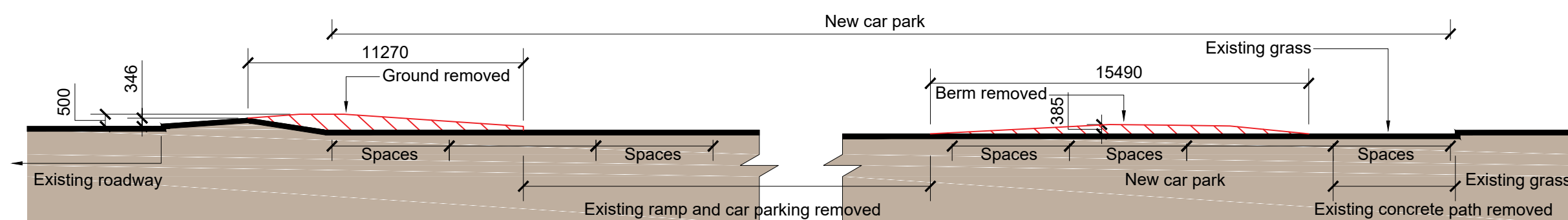
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Stage: PL 050  
Drawing No: \*  
Rev: \*

Issue Status:  
Construction ☐ Preliminary ☐  
Information ☐ Approval ☐  
Tender ☐

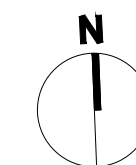
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SECTION B-B - Berm re-profiling  
1:200



0 10 20 30 40 50 100m  
Scale 1:1000