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Arboricultural Impact Assessment

- Tree Survey
- Tree Protection Plan
- Arboricultural Method Statement

At:-

Langstone Technology Park
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On behalf of:-

XLB Property Ltd
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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 the proposed phased demolition of existing buildings and the erection of new flexible use employment floorspace (use Classes E(g)(ii)/E(g)(iii)/B2/B8 and ancillary uses (Use Classes E(b) and E(d); and associated works. All matters reserved except Access.
- 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
- SJ Stephens Associates, Arboricultural Impact Assessment, dated 11.06.21
- PRC, Indicative Master Plan: drawing no: PL 005

2 SURVEY DETAILS AND SCOPE

2.1 The site survey included trees and shrubs, within influencing distance of the proposed development, 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 overcast with rain showers, but with no restrictions to visibility. Broadleaf trees were not in leaf. In places, dense undergrowth restricted access and dense ivy restricted visibility of tree stems.

2.5 The suitability of trees for inclusion in the future development was considered, in particular considering the safe useful life expectancy, and sustainability, of trees on the site after development is completed.

2.6 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 m², 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 website was viewed on 17.11.2021, which showed that there are Tree Preservation Orders on a group of trees in the northwest corner of the site and on individual trees alongside a public footpath to the southwest of the site. The site is not within a Conservation Area. The presence of Planning Conditions currently attached to the site, was not checked.
- 4.2 Once planning permission has been granted, provided the application clearly shows any trees to be removed or pruned, this overrides protection provided by Tree Preservation Orders, provided the work is necessary to implement the approved development. If not essential, a separate tree work application will need to be submitted for trees protected by a Tree Preservation Order.

5 ARBORICULTURAL METHOD STATEMENT

5.1 Site Overview

- 5.1.1 The proposal is for the demolition of existing buildings and erection of new flexible use employment floorspace and ancillary uses and associated works, with all matters reserved except access. The indicative master 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 Trees are located across the site, within car parks and in soft landscape areas around buildings and the site periphery. For the most part, trees within the car park areas are of small size and low quality. Trees along the eastern site boundary are contributing in a more significant way to landscape greening, which is further enhanced by the presence of a grassed earth bund.
- 5.1.3 When surveyed during the summer trees within the site were 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 was so great that the natural life expectancy of the trees was considered to have been significantly reduced.
- 5.1.4 Many of the more mature trees have been subject to crown reduction works to check growth and maintain at a more compact size.
- 5.1.5 Alongside the western site access road is a line of eucalyptus and Leyland cypress trees. The stems of the trees are located to the back of a concrete structure. It is not known what impact this structure may have on the root spread of the trees. At the northern end of the tree line trees have been damaged by a fire. The fire damage is likely to necessitate their future removal. A tree hazard assessment has been recommended to investigate the extent of the damage and to consider future management for safe retention of other trees.
- 5.1.6 Public footpaths are located alongside the northern and eastern site boundaries. The grassed earth bund running north to south along the eastern boundary is providing site screening from the footpath.

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 Sixty trees and nine tree groups are proposed for removal, as detailed in section 6.1 below.
- 5.2.3 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 within the site, other than for areas hatched cyan on the Tree Protection Plan, indicating Ground Protection Areas, where roots must be protected, as described in section 5.5 below.
- 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 working from areas of existing hard surfacing or unless ground protection panels are laid over unsurfaced areas.
- 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.
- 5.4.4 Tree Protection Fencing must initially be erected where indicated "D"/"G" on the drawing while removal of existing hard surfacing is undertaken, then moved to where indicated "C", before construction starts.
- 5.4.5 After erection of Tree Protection Fencing 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 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 Ground Protection Areas

5.5.1 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.

5.5.2 An excavator must only be used for the removal of the existing hard surfacing within the Root Protection Areas of T59, T60, T61, T62, T63, T82, and T85, if it can work only from areas of hard standing, or from outside the Root Protection Areas. 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 areas must immediately be topsoiled using good quality topsoil supplied to BS3882:2015. Tree Protection Fencing must then immediately be erected where indicated "C" on the Tree Protection Plan around the outer edges of the Root Protection Areas of T82 and T85, and ground protection must be laid over the Root Protection Areas of T59, T60, T61, T62 and T63. Trakmats, as supplied by either the Marwood Group, (www.marwoodgroup.co.uk) or Ground-Guards, (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.

5.5.3 Ground protection must be laid before any construction starts on site and must be maintained in good condition until all construction operations have been completed. Ground protection must be fit for purpose and be replaced with an alternative product if panels start to move or any sign of ground compaction is seen.

5.6 General measures

- 5.6.1 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.
- 5.6.2 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.
- 5.6.3 Fires must not be lit in a position where their flames could extend to within 10m of foliage, branches or trunk.
- 5.6.4 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.
- 5.6.5 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.
- 5.6.6 A copy of this report and the Tree Protection Plan must be kept on site and must be fully understood by the Site Agent.

5.7 Bat roosts

- 5.7.1 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.

5.8 Birds

- 5.8.1 The current legislation makes it a criminal offence to disturb nesting birds. The nesting season is generally assumed to be from 1st March to 31st 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.

5.9 Arboricultural Supervision

5.9.1 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 or demolition 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 or demolition starting on site.
- 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 three working days of the visit.

6 ARBORICULTURAL IMPACT ASSESSMENT

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

- Category U – unsuitable for retention: Seventeen trees – T6*, T8*, T9*, T20*, T21*, T44*, T53*, T54*, T71, T78, T98, T99, T116, T120, T121, T126, T128, and two groups – G95 and G102.
- Category C – low quality: Twenty-six trees – T1*, T2*, T3*, T7*, T22*, T23*, T47*, T48*, T49*, T50*, T55*, T67, T68, T69, T76, T77, T83, T84, T86, T87, T96, T97, T115, T117, T118 and T124, and eight groups – G45*, G57*(section), G72, G75, G79, G125, G129 and G136.
- Category B/C – between categories B and C: Two trees:
 - T37* – an 8.5m, mature Norway maple.
 - T52* – a 12m, mature Norway maple.
- Category B – moderate quality: Fourteen trees:
 - T4* – a 7m, semi-mature lime.
 - T5* – a 7.5m, semi-mature lime.
 - T51* – an 11m, mature Norway maple.
 - T64 – a 12m, early mature lime.
 - T65 – a 6m, semi-mature pear.
 - T66 – a 7m, semi-mature pear.
 - T70 – an 8m, early mature Norway maple.
 - T73 – a 7m, early mature Norway maple.
 - T74 – a 7.5m, early mature Norway maple.
 - T105 – a 13m, mature Norway maple.
 - T114 – a 10m, mature cherry.
 - T119 – a 7.5m, semi-mature lime.
 - T130 – a 13.5m, mature Norway maple.
 - T131 – an 11.5m, mature Norway maple.
- Category A – good quality: One tree:
 - T46 – a 12.5m, mature silver maple.

Trees marked with an asterisk have extant permission for removal under a previously consented scheme.

- 6.2** The proposed tree removals include 24 trees and two tree groups previously approved for removal under extant permission, ref: APP/21/00405. The only tree of any significance proposed for removal within this application is the silver maple, T46. T46 is an attractive tree in a prominent location within the site. The tree is visible from the public footpath which runs just outside the northern site boundary however it is not readily visible from other public spaces due to the presence of earth bunds which provide site screening. Photos are included in Appendix E. Retention of the tree is incompatible with the significant redevelopment works that are proposed, which include alteration to ground levels. New tree planting proposals are indicative only at this stage however there is potential to include a select number of large growing trees in places around the site periphery where there is sufficient space for these to develop into specimen trees. Although removal of T46 would result in some loss of amenity value, in time, as new tree planting matures, the loss can be adequately mitigated.
- 6.3** The existing arboricultural landscape within the central site area is generally poor, containing a relatively small number of trees across a large hard landscape area. The indicative master plan shows a significant increase on the existing canopy cover which will provide environmental benefits as well as a more attractive work place. As the majority of new tree planting is to be within the car park areas it is essential for tree health and development that sufficient soil volume is provided for optimal root growth. To achieve this, it will be necessary to use a structural soil system that extends beneath adjacent areas of hard surfacing together with an appropriate system of irrigation.
- 6.4** Provided the recommendations in this report are followed, the arboricultural impact of this development on retained trees is considered acceptable. Arboricultural supervision has been included to assist with tree protection measures and a landscape plan, including new tree planting, tree planting specification and post planting management can be conditioned.

7 REFERENCES

- *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.*
- *BS3998:2010 Tree Work. Recommendations.*