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Arboricultural Implications Report

Proposed re-development at

Northfleet Embankment West

Harbour Village Sales Site

Temporary Access Road

Reserved Matters

March 2022

Ref. SJA air 21259-01

SUMMARY

S1. On the basis of our assessment, we conclude that the arboricultural impact of this scheme is of negligible magnitude, as defined according to the categories set out in ***Table 1*** of this report.

S2. Our assessment of the impacts of the proposals on the existing trees concludes that no additional trees are to be removed beyond those trees previously shown to be removed as part of the approved planning application for Ebbsfleet Development Platform (ref: EDC/20/0147). As such, the proposals do not result in any additional alteration to the arboricultural character of the site and will not have an adverse impact on the arboricultural character and appearance of the local landscape.

S3. No trees will require pruning to facilitate the proposals.

S4. The incursions into the Root Protection Areas of trees to be retained are moderate, and subject to implementation of the above soil design recommended on the Tree Protection Plan and set **out at** Appendix 1, no significant or long-term damage to their root systems or rooting environments will occur.

S5. As the proposed re-development will not result in the removal of trees which contribute to local character and sense of place or which conserve and enhance the overall landscape character of the surrounding area, it complies with Policies CS12 and CS19 of the Gravesham Borough Council Local Plan Core Strategy.

CONTENTS

1. INTRODUCTION AND BACKGROUND INFORMATION 4

2. METHODOLOGY 8

3. THE TREES 15

4. TREES TO BE REMOVED 17

5. TREES TO BE PRUNED 18

6. ROOT PROTECTION AREA INCURSIONS 19

7. CONCLUSIONS 22

APPENDICES

1. **Outline arboricultural method statement**
2. **Tree survey schedule (SJA tss 21259-01)**
3. **Tree protection plan (SJA TPP 21259-041)**

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1. INTRODUCTION AND BACKGROUND INFORMATION

1.1. Instructions

1.1.1. SJAtrees has been instructed by Bellway Homes Limited (Thames Gateway) to visit the area which comprises the Harbour Village Sales Site (as identified edged in red on the Tree Protection Plan at **Appendix 3**) of the wider Northfleet Embankment West scheme and to survey the trees growing on or immediately adjacent to this site.

1.1.2. We are further asked to identify which trees are worthy of retention within a proposed re-development of the site; to assess the implications of the development proposals on these specimens, and to advise how they should be protected from unacceptable damage during construction.

1.2. Scope of report

1.2.1. This report and its appendices reflect the scope of our instructions, as set out above. It is intended to accompany a Reserved Matters application to be submitted to the Ebbsfleet Development Corporation (the LPA), and complies with local validation requirements, and with the recommendations of British Standard BS 5837:2012, *Trees in relation to design, demolition and construction – Recommendations* ('BS 5837').

1.2.2. The proposed development comprises the temporary access and associated landscaping and parking for the sales suite at the Northfleet Embankment West site.

1.2.3. This report summarises and sets out the main conclusions of the baseline data collected during the tree survey and identifies those trees or groups of trees whose removal could result in a significant adverse impact on the character or appearance of the local area (Section 3). It then details and assesses the impacts of the proposed development on individual trees and groups of trees, including those to be removed (Section 4), those to be pruned (Section 5), and those which might incur root damage that might threaten their viability (Section 6). A summary and conclusions, with regard to local planning policy, are presented in Section 7.

1.3. Site inspection

1.3.1. A site visit and tree inspection were undertaken by Anthony Harte and James Bradford of SJAtrees on Tuesday the 7th of April 2020. Weather conditions at the time were clear, dry and bright. Deciduous trees were in partial leaf.

1.3.2. The survey included all the trees growing within and adjacent to the area incorporated by the full site ownership boundary.

1.3.3. Subsequent site visits were undertaken by Simon Jones on Wednesday the 17th of March 2021, and by Anthony Harte on Wednesday the 26th of May 2021. Weather conditions in March were overcast with intermittent rain; deciduous trees were not in leaf. Weather conditions in May were overcast and dry; deciduous trees were in full leaf.

1.4. Site description

1.4.1. The site (as delineated by the red line in ***Figure 1*** below) is 0.1ha in size and is located within the southwest corner of the Northfleet Embankment West development scheme (as delineated by the blue line in ***Figure 1*** below).

1.4.2. The north boundary abuts the curtilage of an adjacent residential property. The south boundary adjoins Warwick Place whilst the west boundary adjoins College Road. The east boundary is contiguous with the surrounding land comprising the former cement works in which the scheme is situated.

1.4.3. The site within the wider ownership boundary is located on land that is significantly higher than the ground adjacent to the River Thames to the north, with the overall ground level having been artificially built up as part of the development of the cement works, resulting in boundaries defined by steeply sloping elevations. The ground within the site is relatively level and forms part of the former cement works, since abandoned and subsequently recolonised with grasses and wild plants. Most of the site consists of areas of hard standing, partially broken up and fractured by vegetation freely regenerating in the interstices and cracks of the surfacing, whilst household waste and detritus are found scattered throughout.

Figure 1: Site location shown on Google Earth image (the site boundary is delineated by the red line; the blue line indicates the extent of the residential masterplan boundary for the Northfleet Embankment West approved outline planning permission for mixed use development. It is shown here for context only)

1.5. Soil type

1.5.1. The British Geological Survey Solid and Drift Geology map of the area indicates the site lies on superficial deposits of sand and gravel above a bedrock of chalk.

1.5.2. The British Geological Survey map suggests that the soil is unlikely to be particularly susceptible to compaction.

1.6. Statutory controls

1.6.1. At the time of writing none of these trees are covered by a tree preservation order (TPO).

1.6.2. The site is not within a conservation area, and therefore there are no constraints relating to existing trees in this regard.

1.6.3. There are no hedgerows on site that could meet the criteria to be deemed "Important" in the context of the landscape and wildlife criteria of the Hedgerows Regulations, 1997[1].

1.7. Non-statutory designations

1.7.1. There are no woodlands within or abutting the site that are classified as 'Ancient'. Ancient woodland is defined as "any area that's been wooded continuously since at least 1600 AD" and is considered an important and irreplaceable habitat.

1.7.2. There are no trees within or abutting the site that can be classified as 'Ancient' or 'Veteran'. Ancient and veteran trees are also considered to be irreplaceable habitats, and contribute to a site's biodiversity, cultural and heritage value, and the National Planning Policy Framework (see below) states that development resulting in the loss or deterioration of ancient or veteran trees should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.

[1] The Hedgerows Regulations 1997; STATUTORY INSTRUMENTS 1997 No. 1160.

2. METHODOLOGY

2.1. National policy context

2.1.1. Under Section 197 of the Town and Country Planning Act 1990, local authorities have a statutory duty to consider the protection and planting of trees when considering planning applications. The effects of proposed development on trees are therefore a material consideration, and this is normally reflected in local planning policies.

2.1.2. The National Planning Policy Framework (NPPF) (July 2021) sets out the Government's planning policies for England and how these should be applied in both plan and decision-making. Paragraph 2 makes it clear that the NPPF is itself a material consideration in the determination of planning application. Paragraph 11 states that "**Plans and decisions should apply a presumption in favour of sustainable development.**"

2.1.3. In paragraph 130, within Section 12 "Achieving well-designed places" the NPPF states: "**Planning policies and decisions should ensure that developments:**

a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;

b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;

c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);

d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;

e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and

f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience."

2.1.4. Paragraph 131 in this section states: "**Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users.**"

2.1.5. The section titled Planning for climate change states at paragraph 153: "**Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure."**

2.1.6. In paragraph 174, within Section 15 "Conserving and enhancing the natural environment" the NPPF states: "**Planning policies and decisions should contribute to and enhance the natural and local environment by:**

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;…

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;

2.1.7. In paragraph 180, under the 'Habitats and biodiversity' section, the NPPF states: "**When determining planning applications, local planning authorities should apply the following principles:**

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists…."

2.2. Local policy context

2.2.1. Whilst the local planning authority for this area is the Ebbsfleet Development Corporation, the relevant local planning policies are contained in the Gravesham Borough Council Local Plan Core Strategy (2014).

2.2.2. The relevant sections of Policy CS12: Green Infrastructure, of the Local Plan Core Strategy state:

2.2.3. **"5.7.25. Where a negative impact on protected or priority habitats/species cannot be avoided on development sites and where the importance of the development is considered to outweigh the biodiversity impact, compensatory provision will be required either elsewhere on the site or off-site, including measures for ongoing maintenance.**

2.2.4. **5.7.26. The overall landscape character and valued landscapes will be conserved, restored and enhanced….."**

2.2.5. The relevant sections of Policy CS19: Development and Design Principles, of the Local Plan Core Strategy state:

2.2.6. **"5.15.14. New development will be visually attractive, fit for purpose and locally distinctive. It will conserve and enhance the character of the local built, historic and natural environment, integrate well with the surrounding local area and meet anti-crime standards. The design and construction of new development will incorporate sustainable construction standards and techniques, be adaptable to reflect changing lifestyles, and be resilient to the effects of climate change. This will be achieved through the criteria set out below:**

Using the collaborative approach advocated in Building for Life 12 and in line with the guidance set out in Kent Design, the design, layout and form of new development will be derived from a robust analysis of local context and character and will make a positive contribution to the street scene, the quality of the public realm and the character of the area. Account will be taken of the scale, height, building lines, layout, materials and other architectural features of adjoining buildings. Account will also be taken of the wider site context, including strategic views, site topography, the significance of heritage assets and features of townscape and landscape value which contribute to local character and sense of place."

2.3. Neighbourhood policy context

2.3.1. At the time of writing there is no Neighbourhood Plan covering the area within which the site is found.

2.4. Tree survey and baseline information

2.4.1. We surveyed individual trees with trunk diameters of 75mm and above[2], trees with trunk diameters of 150mm and above growing in groups or woodlands, and shrub masses, hedges and hedgerows[3] growing within or immediately adjacent to the site; and recorded their locations, species, dimensions, ages, condition, and visual importance in accordance with BS 5837 recommendations.

2.4.2. The baseline information collected during the site survey was recorded on site using a hand-held digital device. This information was then imported into an Excel spreadsheet and used to produce the tree survey schedule at **Appendix 2**. The

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[2] BS 5837, paragraph 4.2.4 b), recommends that all trees over 75mm stem diameter should be included in a pre-planning land and tree survey.

[3] Ibid, 4.4.2.7

numbers assigned to the trees in the tree survey schedule correspond with those shown on the appended tree protection plan.

2.4.3. We surveyed trees as groups where they have grown together to form cohesive arboricultural features, either aerodynamically (trees that provide companion shelter), visually (e.g., avenues or screens) or culturally[4]. However, where it might be necessary to differentiate between specific trees within these groups, we also surveyed these individually.

2.4.4. We inspected the trees from the ground only, aided by binoculars as appropriate, but did not climb them. We took no samples of wood, roots or fungi. We did not undertake a full hazard or risk assessment of the trees, and therefore can give no guarantee, either expressed or implied, of their safety or stability.

2.4.5. We have categorised the trees in accordance with BS 5837, and details of the criteria used for this process can be found in the notes that accompany the tree survey schedule.

2.4.6. We have applied this methodology in line with the NPPF's presumption in favour of sustainable development, giving greater weighting to the contribution of a tree to the character and appearance of the local landscape, to amenity, or to biodiversity, where its removal might have a significant adverse impact on these factors.

2.5. Tree constraints

2.5.1. The 'Root Protection Areas' (RPAs)[5] of the trees identified for retention were calculated in accordance with Section 4.6 of BS 5837; and were assessed taking account of factors such as the likely tolerance of a tree to root disturbance or damage, the morphology and disposition of roots as influenced by existing site conditions

[4] Ibid, 4.4.2.3

[5] The minimum area around a retained tree "deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority." BS 5837, paragraph 3.7.

(including the presence of existing roads or structures), as well as soil type, topography and drainage.

2.5.2. Based on these principles and recommendations, the tree survey and assessment of suitability for retention informed the production of a tree constraints plan (TCP) which indicates the most suitable trees for retention, and their associated below-ground and above-ground constraints.

2.5.3. As a design tool, the TCP also indicates how close to those trees selected for retention the proposed development could be positioned, in terms of two key criteria:

a). avoidance of unacceptable root damage;

b). avoidance of the necessity for unacceptable pruning works.

2.6. Arboricultural impact assessment and tree protection plan

2.6.1. Once finalised, we assessed the arboricultural impacts of the proposed layout, by overlaying it onto the TCP, and produced the tree protection plan (TPP) presented at **Appendix 3.** This is based on the proposed site layout by RLT Engineering Consultants Ltd, drawing no. 1803/05/1046

2.6.2. The TPP shows those trees to go that have already been approved as part of the planning application for the Ebbsfleet Development Platform (planning ref: EDC/20/0147). These trees are identified on the TPP by **purple canopy outlines and hatch**.

2.6.3. Where applicable, the TPP identifies the additional trees which will be removed to accommodate the proposed development, either because they are situated within the footprints of proposed structures or surfaces, or because in our judgment they are too close to these structures or surfaces to enable them to be retained. Where applicable, these are shown by means of **red crosses** on the TPP. In this case, no additional trees are to be removed as part of this application.

2.6.4. The TPP shows how trees to be retained will be protected from damage during construction, and the measures identified are set out and described at **Appendix 1** to this report. The implementation of, and adherence to, these measures can readily be secured by the imposition of appropriate planning conditions.

2.6.5. For the trees shown to be retained, all measurements for pruning specifications, percentage estimates of RPA incursions and shading issues have been calculated using AutoCAD software.

2.6.6. Details of the impacts identified within these categories, and our assessment of their respective significance, are analysed in Sections 4 to 6 below.

2.6.7. Based on these findings, we have assessed the magnitude of the overall arboricultural impact of the proposals according to the categories defined in ***Table 1*** below.

Impact	Description
High	Total loss of or major alteration to main elements/ features/ characteristics of the baseline, post-development situation fundamentally different
Medium	Partial loss of or alteration to main elements/ features/ characteristics of the baseline, post-development situation will be partially changed
Low	Minor loss of or alteration to main elements/ features/ characteristics of the baseline, post-development changes will be discernible but the underlying situation will remain similar to the baseline
Negligible	Very minor loss of or alteration to main elements/ features/ characteristics of the baseline, post-development changes will be barely discernible, approximating to the 'no change' situation

Table 1: Magnitude of impacts[6]

[6] Determination of magnitude based on DETR (2000) Guidance on the Methodology for Multi-Modal Studies, as modified and extended.

3. THE TREES

3.1. Survey findings

3.1.1. There are thirty-one individuals and two groups of trees growing within or immediately adjacent to the site. Their details can be found in the tree survey schedule at **Appendix 2**.

3.1.2. Additional trees and groups growing beyond the site boundary were included in the survey of the entire Northfleet Embankment West scheme but as these do not pertain to the site they have been excluded from the following assessment.

3.1.3. The arboricultural character of the site encompassed by the Embankment West scheme is defined primarily by self-seeded broadleaved specimens that have recolonised the land following its dereliction. As a result, the trees are not particularly large or old with most being no more than semi-mature in age. Most of the trees are located along the site boundaries where they grow in shallow ‘scrubby’ belts, often tight against perimeter walls and fences. Collectively these provide limited screening of views into the site from the surrounding landscape.

3.1.4. Overall, the site displays significantly low arboricultural quality consistent with the post-industrial character of the local landscape.

3.2. Assessment of suitability for retention

3.2.1. As noted above in Section 2.2, local planning policies require the retention of trees that conserve and enhance **“overall landscape character and valued landscapes”** and which **“contribute to local character and sense of place.”** We consider none of the trees as having sufficient arboricultural quality or prominence in the landscape as to meet these criteria.

3.2.2. Five of the individual trees (nos. 43, 44, 46, 47 and 63) have been assessed as category 'U'.

3.2.3. There are no category ‘A’ trees and one category 'B' specimen (sycamore tree no. 36).

3.2.4. The remaining twenty-five trees and both groups of trees (G21 and G22) have been assessed as category ‘C’, being either of low quality, very limited merit, only low landscape benefits, no material cultural or conservation value, or only limited or short-term potential; or young trees with trunk diameters below 150mm; or a combination of these.

4. TREES TO BE REMOVED

4.1. Details

4.1.1. Although all twenty-six individual trees growing on site will need to be removed to accommodate the proposed development, these individuals were shown to be removed on plans approved by the previous planning permission pertaining to the Ebbsfleet Development Platform (ref: EDC/20/0147), and therefore their removal has not been included in the following assessment (see SJA air + apps 21355-01 for further details).

4.1.2. No additional trees or groups of trees are to be removed to facilitate the proposed development.

4.2. Assessment

4.2.1. As no additional trees are to be removed, the proposals will not have any additional impact on the character and appearance of the local landscape, or on its amenity or biodiversity; and as such there will be no further alteration to the local character and appearance of the site.

5. TREES TO BE PRUNED

5.1. Details

5.1.1. None of the trees to be retained are to be pruned to facilitate implementation of the proposals.

5.2. Assessment

5.2.1. There will be adequate working space for construction close to trees, and a reasonable margin of clearance from the proposed dwellings for future growth.

6. ROOT PROTECTION AREA INCURSIONS

6.1. Details

6.1.1. Parts of the proposed hard surfacing and drainage will encroach within the RPAs of two trees to be retained. These are shown in ***Table 2*** below.

Tree no.	Species	Incursion	Extent of incursion	% of RPA
36	Sycamore	Proposed drainage, parking spaces and access road	95.2m^2	34.4%
61	Monterey cypress	Proposed drainage and parking spaces	7.6m^2	16.5%

Table 2: Proposed incursions within RPAs

6.2. Assessment

6.2.1. The incursions by parts of the proposed parking spaces, access road and drainage into the RPAs of the two trees listed at ***Table 2*** equate to up to 34.5% of individual RPAs. Any potential adverse impacts of these incursions can be satisfactorily mitigated as set out below.

6.2.2. Subject to proposed levels, the incursions by the proposed drainage into the RPAs of trees nos. 36 and 61 will require some degree of excavation. To minimise impacts on these specimens, excavation within the RPAs will be undertaken manually, under the direct control and supervision of an appointed arboricultural consultant, so that any over dig into the RPAs is avoided, and any roots encountered can be treated appropriately.

6.2.3. As excavation for the proposed drainage within the RPAs of trees nos. 36 and 61 equate to 1.3% and 1.4% of the incursions listed at ***Table 2***, respectively, the extent of encroachment is therefore sufficiently minor such that any potential root severance or disturbance is unlikely to have a long-term adverse impact on the health or stability of either tree.

6.2.4. It should be noted that tree no. 61 forms part of an off-site group of cypress trees planted in a single line which previously extended into the site by one individual tree which has since been felled back to the site boundary. The competition for nutrients and water formerly exerted by this tree's root system is likely to have inhibited

tree no. 61 from fully spreading its roots into the site. It would therefore be reasonable to surmise that tree no. 61 is favourably rooting in the soft landscaping to the north and south and consequently, any potential impacts on tree no. 61 arising either through severance of roots due to excavation, or by the potential reduction in access to nutrients and water by the proposed hard surfacing, are likely to be less than what would otherwise have been the case.

6.2.5. The remaining incursions into the RPAs of trees nos. 36 and 61 are by areas of proposed hard surfacing. Whilst within the RPA of tree no. 61 this area extends to no more than 15%, and hence does not exceed the 20% maximum incursion into currently unsurfaced ground recommended in BS 5837[7], in the case of tree no. 36 the extent of hard surfacing (33.1%) is somewhat more substantial.

6.2.6. However, despite this, the proposed hard surfacing is unlikely to result in significant adverse impacts to the long-term health of either tree, for the following reasons.

6.2.7. Taking account of existing ground levels and likely proposed levels of these areas (at least 17.54 above datum and 17.80 above datum respectively), these will allow for design and construction of the new surfaces to be entirely above existing soil level, and accordingly no excavation will be required.

6.2.8. Furthermore, the new surfaces have been designed to incorporate an appropriate cellular confinement system, filled and finished with suitable porous materials, to minimise soil compaction. To ensure no damage occurs to the roots or rooting environments of the relevant trees, installation will be undertaken under the control and supervision of the arboricultural consultant.

6.2.9. As noted at Section 1.5 above, the site overlies deposits of sand and gravel, above a bedrock of chalk. This means it will tolerate compaction better than a clay soil, and so compaction caused by the above-soil surfacing is less likely to be severe or damaging to the trees in the long-term.

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[7] BS 5837, paragraph 7.4.2.3.

6.2.10. The areas lost to encroachment within the RPAs of trees nos. 36 and 61 can be compensated for in the areas to the north and west of the trees, where there is existing soft landscaping suitable for root growth, contiguous to the RPAs. Therefore, there will be no net loss of suitable rooting area, and no foreseeable risk of future cumulative impacts; and as there is likely to be sufficient remaining soil for the ingress of water and nutrients to existing roots below, there is no reason to suggest that either of the trees would become unviable following installation of the proposed hard surfacing.

6.2.11. Implementation of measures to prevent other incursions into the RPAs of retained trees and to protect them during construction can be assured by the erection of appropriate protective fencing or site hoarding as shown on the TPP at **Appendix 3**.

6.2.12. Accordingly, subject to implementation of the above measures, and considering the ages, current physiological condition and tolerance of disturbance of these retained trees, no significant or long-term damage to their root systems or environments will occur as a result of the proposed development.

7. CONCLUSIONS

7.1. Summary

7.1.1. Our assessment of the impacts of the proposals on the existing trees concludes that no additional trees are to be removed beyond those trees previously shown to be removed as part of the approved planning application for Ebbsfleet Development Platform (ref: EDC/20/0147). As such, the proposals do not result in any additional alteration to the arboricultural character of the site and will not have an adverse impact on the arboricultural character and appearance of the local landscape.

7.1.2. No trees will require pruning to facilitate the proposals.

7.1.3. The incursions into the Root Protection Areas of trees to be retained are moderate, and subject to implementation of the above soil design recommended on the Tree Protection Plan and set out at **Appendix 1**, no significant or long-term damage to their root systems or rooting environments will occur.

7.2. Compliance with national planning policy

7.2.1. As the proposals will not result in the removal of any additional trees, the site's arboricultural attractiveness, history and landscape character and setting will be maintained, thereby complying with Paragraph 127 of the National Planning Policy Framework.

7.2.2. As the proposals will not result in the loss or deterioration of any ancient woodland or any ancient or veteran trees, they comply with paragraph 180 of the NPPF.

7.3. Compliance with local planning policy

7.3.1. As the proposed re-development will not result in the removal of trees which contribute to local character and sense of place or which conserve and enhance the overall landscape character of the surrounding area, it complies with Policies CS12 and CS19 of the Gravesham Borough Council Local Plan Core Strategy.

7.4. Conclusion

7.4.1. On the basis of our assessment, we conclude that the arboricultural impact of this scheme is of negligible magnitude, as defined according to the categories set out in ***Table 1*** of this report.

APPENDIX 1

Outline Arboricultural Method Statement

Outline arboricultural method statement

A1.1. Tree Protection Plan

A1.1.1. The TPP at **Appendix 3** shows the general and specific provisions to be taken during construction of the proposed development, to ensure that no unacceptable damage is caused to the root systems, trunks or crowns of the trees identified for retention. These measures are indicated by coloured notations in areas where construction activities are to occur either within, or in proximity to, retained trees, as described in the relevant panels on the drawing.

A1.2. Pre-start meeting

A1.2.1. Prior to the commencement of any site clearance, ground preparation or construction works the developer will convene a pre-start site meeting. This shall be attended by the developer's contract manager or site manager, the fencing/boarding contractor, the groundwork contractor(s) and the arboricultural consultant. The LPA tree officer will be invited to attend. If appropriate, the tree felling/surgery contractor should also attend. At that meeting contact numbers will be exchanged, and the methods of tree protection shall be fully discussed, so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications to the TPP required as a result of the meeting shall be circulated to all attendees.

A1.3. Site clearance

A1.3.1. No clearance of trees or other vegetation shall be undertaken until after the pre-start meeting and after the erection of the tree protection fencing (see below). If any vegetation clearance is required behind the line of the protection fencing this will be made clear at the pre-start meeting and arrangements will be made to do this prior to the fencing's erection, under the supervision of the arboricultural consultant, who will ensure it doesn't cause any soil compaction or damage to the roots of trees to be retained.

A1.3.2. Except where within the RPAs of trees to be retained, all trees and other vegetation to be removed may be cut down or grubbed out as appropriate; but within

the RPAs of trees to be retained, trees and vegetation will be cut by hand to ground level and stumps will be either left in place or ground out with a lightweight self-powered stump grinding machine. No excavators, tractors or other vehicles will enter the RPAs.

A1.4. Ground preparation

A1.4.1. No ground preparation or excavation of any kind, including topsoil stripping or ground levelling, shall be undertaken until after the pre-start meeting and after the erection of the tree protection fencing (see below).

A1.5. Tree protection fencing

A1.5.1. The protection of the RPAs of the off-site trees will be enforced by the erection of protective site hoarding that is to be erected prior to the commencement of works on site and retained in place throughout construction. The site hoarding is to comprise timber / metal hoarding, of at least 2.4m in height. Supporting posts are to be fit for purpose and installed carefully so as to minimise damage to significant existing tree roots. "TREE PROTECTION ZONE - KEEP OUT" or similar notices to be attached at appropriate intervals.

A1.5.2. Within the Construction Exclusion Zones (CEZs), safeguarded by the protective site hoarding, there will be no changes in ground levels, **no soil stripping**, and no plant, equipment, or materials will be stored. Oil, bitumen, diesel, and cement will not be stored or discharged within 10m of any trees. Areas for the storage or mixing of such materials will be agreed in advance and be clearly marked. No notice boards, or power or telephone cables, will be attached to any of the trees. No fires will be lit within 10m of any part of any tree.

A1.6. Manual excavation within RPAs

A1.6.1. The first 750mm depth of excavations required within the RPAs of the trees to be retained (as shown by **bold orange lines** on the TPP) will be dug by hand, using a compressed air soil pick if appropriate, and under on-site arboricultural supervision, to safeguard against the possibility of unacceptable root damage being caused to these specimens. Any roots encountered of over 25mm diameter will be cut back

cleanly to the face of the dig nearest to the tree, using a sharp hand saw or secateurs, and their cut ends covered with hessian to prevent desiccation.

A1.7. Proposed hard surfaces within RPAs

A1.7.1. Unacceptable damage to the roots and rooting environments of the trees to be retained during the construction of proposed hard surfaces that encroach within RPAs will be avoided by building them above existing soil level, to avoid digging and thus severing of roots; and an appropriate ground covering will be used beneath the sub-base, to prevent or minimise compaction of the soil. This will be done in accordance with Section 7.4 of BS 5837. The locations where these measures will be required are marked by **red cross-hatching** on the TPP.

APPENDIX 2

Tree Survey Schedule

ARBORICULTURAL PLANNING CONSULTANTS

17 CROSS ROAD
TADWORTH
SURREY KT20 5ST

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Principal: Simon R. M. Jones Dip. Arb. (RFS), F. Arbor. A.,
Arboricultural Association Registered Consultant
Frank P. S. Spooner BSc (Hons), MArborA, TechCert (ArborA)

Tree Survey Schedule

Harbour Village Sales Suite car park and access, Ebbsfleet

May 2021

SJA Ref: 21259-01

Tree Survey Schedule: Explanatory Notes

Harbour Village Sales Suite car park and access, Ebbsfleet

This schedule is based on a tree inspection undertaken by Anthony Harte of SJAtrees (the trading name of Simon Jones Associates Ltd.), on Wednesday the 26th May 2021. Weather conditions at the time were overcast and dry. Deciduous trees were in full leaf.

The information contained in this schedule covers only those trees that were examined, and reflects the condition of these specimens at the time of inspection. We did not have access to the trees from any adjacent properties; observations are thus confined to what was visible from within the site and from surrounding public areas.

The trees were inspected from the ground only and were not climbed, and no samples of wood, roots or fungi were taken. A full hazard or risk assessment of the trees was not undertaken, and therefore no guarantee, either expressed or implied, of their safety or stability can be given.

Trees are dynamic organisms and are subject to continual growth and change; therefore the dimensions and assessments presented in this schedule should not be relied upon in relation to any development of the site for more than twelve months from the survey date.

1. Tree no.
Given in sequential order, commencing at "27".

2. Species.
'Common names' are given, taken from MITCHELL, A. (1978) A Field Guide to the Trees of Britain and Northern Europe.

3. Height.
Estimated with the aid of a hypsometer, given in metres.

4. Trunk diameter.
Trunk diameter measured at approx. 1.5m above ground level; or where the trunk forks into separate stems between ground level and 1.5m, measured at the narrowest point beneath the fork. Given in millimetres.

5. Radial crown spread.
The linear extent of branches from the base of the trunk to the main cardinal points, rounded up to the closest half metre, unless shown otherwise. For small trees with reasonably symmetrical crowns, a single averaged figure is quoted.

6. Crown break.
Height above ground and direction of growth of first significant live branch.

7. Crown clearance.
Distance from adjacent ground level to lowest part of lowest branch, in metres.

8. Age class.
Young: Age less than 1/3 life expectancy
Semi-mature: 1/3 to 2/3 life expectancy
Mature: Over 2/3 life expectancy
Over-mature: Mature, and in a state of decline
Veteran: Mature, with a large trunk diameter for the species; but showing signs of ancientness, irrespective of actual age, with decay or hollowing, and a crown that has undergone some retrenchment and has a structure characteristic of the latter stages of life.
Ancient: Beyond the typical age range and with a very large trunk diameter for species; with extensive decay or hollowing; and a crown that has undergone retrenchment and has a structure characteristic of the latter stages of life.

9. Physiology.
Health, condition and function of the tree, in comparison to a normal specimen of its species and age.

10. Structure.
Structural condition of the tree – based on both the structure of its roots, trunk and major stems and branches, and on the presence of any structural defects or decay.
Very good: No significant physiological or structural defects, an upright and reasonably symmetrical structure; a particularly good example of its species.
Good: No significant physiological or structural defects, and an upright and reasonably symmetrical structure.
Moderate: No significant pathological defects, but a slightly impaired physiological structure; however, not to the extent that the tree is at immediate or early risk of collapse.
Indifferent: Significant physiological or pathological defects; but these are either remediable or do not put the tree at immediate or early risk of collapse.
Poor: Significant and irremediable physiological or pathological defects, such that there may be a risk of collapse.
Hazardous: Significant and irremediable physiological or pathological defects, with a risk of imminent collapse.

11. Comments.
Where appropriate comments have been made relating to:
-Health and condition
-Safety, particularly close to areas of public access
-Structure and form
-Estimated life expectancy or potential
-Visibility and impact in the local landscape

12. Category.
Based on the British Standard "Trees in relation to design, demolition and construction - Recommendations", BS 5837: 2012, Table 1, adjusted to give a greater weighting to trees that contribute to the character and appearance of the local landscape, to amenity, or to biodiversity.

Category U: Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
• 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).
• Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.
• Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality.

Category A: Trees of high quality with an estimated remaining life expectancy of at least 40 years.
(1) Trees that are particularly good examples of their species, especially if rare or unusual.
(2) Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.
(3) Trees, groups or woodlands of significant conservation, historical, commemorative or other value.

Category B: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
(1) Trees that might be included in category 'A', but are downgraded because of impaired condition (e.g. presence of significant though remediable defects including unsympathetic past management and minor storm damage) such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category 'A' designation.
(2) Trees present in numbers, usually growing as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals; or trees present in numbers but situated so as to make little visual contribution to the wider locality.
(3) Trees with material conservation or other cultural value.

Category C: Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.
(1) Unremarkable trees of very limited merit or of such impaired condition that they do not qualify in higher categories.
(2) 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 landscape benefits.
(3) Trees with no material limited conservation or other cultural value.

TREE SURVEY SCHEDULE

Harbour Village Sales Suite car park and access, Ebbsfleet

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
27	Ash	15m	600mm est. 240mm	N 7.5m NE 8.2m E 6m S 8.6m SW 9.7m W 4m	N 4m	N 4m SW 2.5m	Mature	Below average	Indifferent	Self-seeded specimen; prominent buttress roots spreading to N by up to 1m and to E by up to 1.8m consistent with adaptation to growth in uneven ground; sub-dominant stem to W; trunk ivy-covered to 10m which obscures main unions; broad spreading but asymmetrical crown as suppressed to W by adjacent trees, some of which have been felled thereby leaving individual partially wind exposed; crown shows slightly sparser than average foliage, possibly indicative of incipient infection with ash dieback disease; readily visible from Warwick Place road to S and adjacent residential properties; significant component of group in which it stands.	C (2)
28	Sycamore	19m	450mm est.	N 5m NE 5.4m E 6m S 7m SW 8.1m W 4m	SW 2.5m	N 9m SW 3m	Semi-mature	Average	Indifferent	Self-seeded specimen; twin-stemmed from 2.5m with compression fork, included bark and 'elephant ear' reaction wood which extends for 500mm and projects out by up to 50mm either side of the union; N stem partially ivy-covered to 7m; mutually suppressed to E by adjacent specimens resulting in asymmetric crown; adjacent trees to N since felled leaving specimen partially wind exposed; contributes to screening of S site boundary; visible in views from Warwick Place road to S; significant component of group in which it stands but of somewhat impaired structure.	C (2)
30	Sycamore	15m	215mm 280mm 325mm ivy 195mm	N 7.2m NE 4m E 3.5m S 6m W 4.8m	NE 3m	N 6m	Semi-mature	Average	Indifferent	Self-seeded specimen; four-stemmed from base with compression forks; S crown extent shows slightly sparser than average foliage consistent with suppression by adjacent trees to N since felled thereby leaving individual partially wind exposed; locally dominant crown; visible in views from Warwick Place road to S; significant component of group in which it stands.	C (2)
36	Sycamore	18m	600mm 500mm both est.	N 8.5m E 8.5m S 8.8m W 8m	S 3.5m	S 3m	Mature	Average	Indifferent	Off-site tree; twin-stemmed from 0.5m with compression fork; tensile main unions; broad, balanced crown; of moderate quality and moderate value as significant component of local landscape. Of long-term potential.	B (2)
37	Monterey cypress	19m	420mm	N 1m E 7.2m SE 2m S 1m W 5m	E 2.5m	E 2.5m	Semi-mature	Average	Indifferent	Member of row of trees planted to form hedge since lapsed, resulting in drawn-up, mutually suppressed form; formerly suppressed by adjacent tree growing to N, since felled resulting in N-side of trunk exposed and bare of significant lateral limbs; crown visible in views from College Road to W.	C (2)
38	Monterey cypress	19m	370mm ivy	N 1m E 7.2m SE 6m S 1m W 4.3m	E 2.5m	E 3m	Semi-mature	Average	Indifferent	Partially ivy-covered; member of row of trees planted to form hedge since lapsed, resulting in drawn-up, mutually suppressed form; crown visible in views from College Road to W.	C (2)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio -logy	Structure	Comments	Cate gory
39	Monterey cypress	17m	340mm ivy	N 1m E 2.3m S 1.5m SW 3m W 5m	W 3m	E 9m	Semi-mature	Below average	Indifferent	Partially ivy-covered; member of row of trees planted to form hedge since lapsed, resulting in drawn-up, mutually suppressed form; overtopped by neighbouring trees; crown visible in views from College Road to W.	C (2)
40	Monterey cypress	18m	355mm ivy	N 1m E 7.1m SE 4m S 1.8m W 5m	E 2.5m	E 3m	Semi-mature	Below average	Indifferent	Partially ivy-covered; member of row of trees planted to form hedge since lapsed, resulting in drawn-up, mutually suppressed form; crown visible in views from College Road to W.	C (2)
41	Monterey cypress	16m	345mm ivy	N 1m E 3.8m S 1m SW 2m W 5m NW 2m	E 2.5m	E 2.5m	Semi-mature	Below average	Indifferent	Partially ivy-covered; member of row of trees planted to form hedge since lapsed, resulting in drawn-up, mutually suppressed form; overtopped by neighbouring trees; crown visible in views from College Road to W.	C (2)
42	Monterey cypress	18m	335mm ivy	N 1m E 4.6m S 2m W 5m	SE 2.5m	SE 2m	Semi-mature	Average	Indifferent	Partially ivy-covered; member of row of trees planted to form hedge since lapsed, resulting in drawn-up, mutually suppressed form; crown visible in views from College Road to W.	C (2)
43	Monterey cypress	7m	190mm	N 1m E 3.5m S 3m W 2.5m	S 1.5m	E 2m	Young	Below average	Poor	Stunted, suppressed crown as overtopped by adjacent specimens; inessential component of group in which it stands.	U
44	Sycamore	7m	130mm 100mm both est.	N 1m E 0m S 0m W 4m NW 7m	W 2.5m	W 2.5m	Young	Below average	Poor	Small self-seeded specimen; twin-stemmed from base; E stem dead; W stem overtopped and suppressed resulting in etiolated form; inessential component of group in which it stands.	U
45	Sycamore	10m	180mm 210mm 170mm all est.	N 2m E 1.7m S 4m W 4m	W 2.5m	E 2m	Young	Average	Indifferent	Small self-seeded specimen; three-stemmed from base; asymmetrical crown as suppressed by adjacent trees; unremarkable tree of limited merit.	C (2)
46	Ash	6m	150mm est.	N 0.7m E 0.5m S 4m SW 3m W 1m	S 2.5m	N 4m	Young	Below average	Poor	Plotted in different location from that shown on topographical survey; small self-seeded specimen; heavily suppressed crown as overtopped by adjacent trees; inessential component of group in which it stands.	U

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
47	Ash	8m	95mm	N 2m E 1.2m S 1m W 4m	3m	NW 2.5m	Young	Below average	Indifferent	Plotted in different location from that shown on topographical survey; small self-seeded specimen; asymmetrical crown as suppressed by adjacent trees; upper crown shows some dieback resulting in occasional small-diameter 'twiggy' deadwood scattered throughout.	U
48	Sycamore	11m	210mm 250mm both ivy est.	N 1m E 2.1m SE 4m S 6m SW 4m W 2.2m	S 3m	N 3m	Semi-mature	Below average	Indifferent	Self-seeded specimen; twin-stemmed from base with compression fork; stems covered in dead ivy; asymmetrical crown as formerly suppressed by adjacent specimens since felled.	C (2)
49	Sycamore	14m	225mm ivy	N 1.5m E 1.8m S 2m SW 3m W 1.8m	9m	N 11m	Semi-mature	Average	Indifferent	Self-seeded specimen; trunk partially covered in both live ivy and dead ivy; formerly suppressed by surrounding trees since felled resulting in drawn-up trunk, with Height/Diameter ratio greater than 50: at risk of failure if companion shelter removed; trunk clear of lateral limbs until crown break.	C (2)
50	Sycamore	14m	230mm ivy	N 2.5m E 1.5m S 1m W 1.5m	N 8m	N 9m	Semi-mature	Average	Indifferent	Self-seeded specimen; trunk covered in dead ivy; formerly suppressed by surrounding trees since felled resulting in drawn-up trunk, clear of lateral limbs until crown break.	C (2)
51	Ash	13m	225mm ivy	N 0.5m E 1.5m SE 4m S 6m SW 4m W 2m	S 4m	N 6m	Semi-mature	Below average	Indifferent	Self-seeded specimen; trunk partially covered in dead ivy; formerly suppressed by adjacent specimen to N, since felled resulting in stem kinking out to S at 5m and self-correcting at 7m; asymmetrical crown with slightly sparser than average foliage.	C (2)
52	Ash	13m	235mm	N 1.6m E 2.6m S 6m SW 4m W 1m	S 4m	N 8m	Semi-mature	Average	Indifferent	Self-seeded specimen; main stem partially covered in dead ivy; formerly suppressed by adjacent specimen to N, since felled resulting in stem kinking out to S at 2m and self-correcting at 4m; asymmetrical crown.	C (2)
54	Sycamore	14m	180mm	N 0.5m E 1m S 4.5m W 2.2m	S 2.5m	N 4.5m S 3m	Young	Average	Indifferent	Plotted in different location from that shown on topographical survey; small self-seeded specimen; trunk shows strips of metal at 1.5m and 2m partially engulfed; drawn-up and mutually suppressed; overtopped by no. 55; unremarkable tree of limited merit.	C (2)
55	Ash	15m	255mm 240mm	N 2.8m E 1.5m S 6m W 3.6m	N 6m	N 12m	Semi-mature	Below average	Indifferent	Plotted in different location from that shown on topographical survey; self-seeded specimen; twin-stemmed from 0.5m with tight compression fork and included bark; drawn-up and mutually suppressed; crown shows dieback resulting in small-diameter 'twiggy' deadwood scattered occasionally throughout.	C (2)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
56	Holly	6m	120mm	N 1.5m E 1.5m S 1.5m W 2m	1.5m	NW 1.75m	Young	Average	Indifferent	Plotted in different location from that shown on topographical survey; small self-seeded specimen; suppressed crown as overtopped by adjacent specimens; unremarkable tree of limited merit.	C (2)
57	Sycamore	14m	205mm	N 2m E 2.5m S 3m W 1.8m	5m	N 8m	Semi-mature	Average	Indifferent	Self-seeded specimen; three-stemmed from 4.5m with tensile union; formerly suppressed by surrounding trees since felled resulting in drawn-up trunk, clear of lateral limbs until crown break.	C (2)
58	Ash	13m	170mm	N 0.8m E 1m S 4m SW 5m W 2m	SW 3m	N 11m SW 3m	Young	Below average	Indifferent	Self-seeded specimen; three-stemmed from 3m with tensile union; one of the stems has snapped out but is still attached; formerly suppressed by adjacent specimens since felled resulting in asymmetrical crown and drawn-up form with Height/Diameter ratio greater than 50: at risk of failure if companion shelter removed; crown shows dieback resulting in small-diameter 'twiggy' deadwood scattered occasionally throughout.	C (2)
59	Sycamore	15m	330mm est.	N 2m E 3.3m S 6m SW 5m W 2.7m	S 3m	N 12m	Semi-mature	Average	Indifferent	Self-seeded specimen; ivy-covered; trunk shows girdling wound where barbed wire has historically become engulfed at 0.8m from ground; asymmetrical crown as formerly suppressed by adjacent specimens since felled; slightly sparser than average foliage consistent with historic suppression; significant component of group in which it stands.	C (2)
60	Hawthorn	7m	3 stems @ 200mm est.	N 5m E 5m S 5m W 1m	3m	N 3m	Semi-mature	Average	Indifferent	Three-stemmed from base with compression forks; parts of stems make bark to bark contact to 3m; suppressed crown as overtopped by adjacent specimens.	C (2)
61	Monterey cypress	19m	320mm est.	NE 5.5m SE 1m SW 4.6m NW 1m	6m	NE 6m	Semi-mature	Below average	Indifferent	Off-site tree; formerly suppressed by adjacent tree to E within same row, since felled; E side of trunk bare of significant lateral limbs as a result; drawn-up and mutually suppressed; above average deadwood in crown consistent with suppression.	C (2)
62	Monterey cypress	18m	320mm est.	NE 5m SE 1m SW 3m NW 1m	NE 3m	NE 6m	Semi-mature	Below average	Indifferent	Off-site tree; drawn-up and mutually suppressed; above average deadwood in crown consistent with suppression.	C (2)
63	Monterey cypress	17m	150mm est.	NE 2m SE 0.5m SW 1m NW 0.5m	0m	0m	Young	Dead	Indifferent	Off-site tree; dead tree.	U
64	Monterey cypress	18m	320mm est.	NE 3m SE 1m SW 7m NW 1m	SE 2.5m	SW 3m	Semi-mature	Average	Indifferent	Off-site tree; drawn up and mutually suppressed.	C (2)

Root Protection Areas (RPAs)

Root Protection Areas have been calculated in accordance with paragraph 4.6.1 of the British Standard 'Trees in relation to design, demolition and construction – Recommendations', BS 5837:2012. This is the minimum area which should be left undisturbed around each retained tree. RPAs are portrayed initially as a circle of a fixed radius from the centre of the trunk; but where there appear to be restrictions to root growth the circle is modified to reflect more accurately the likely distribution of roots.

Tree No.	***Species***	***RPA***	***RPA Radius***
27	Ash	188.9m²	7.8m
28	Sycamore	91.6m²	5.4m
30	Sycamore	121.4m²	6.2m
36	Sycamore	276.0m²	9.4m
37	Monterey cypress	79.8m²	5.0m
38	Monterey cypress	61.9m²	4.4m
39	Monterey cypress	52.3m²	4.1m
40	Monterey cypress	57.0m²	4.3m
41	Monterey cypress	53.8m²	4.1m
42	Monterey cypress	50.8m²	4.0m
43	Monterey cypress	16.3m²	2.3m
44	Sycamore	12.2m²	2.0m
45	Sycamore	47.7m²	3.9m
46	Ash	10.2m²	1.8m
47	Ash	4.1m²	1.1m
48	Sycamore	48.2m²	3.9m
49	Sycamore	22.9m²	2.7m
50	Sycamore	23.9m²	2.8m
51	Ash	22.9m²	2.7m
52	Ash	25.0m²	2.8m
54	Sycamore	14.7m²	2.2m
55	Ash	55.5m²	4.2m
56	Holly	6.5m²	1.4m
57	Sycamore	19.0m²	2.5m
58	Ash	13.1m²	2.0m
59	Sycamore	49.3m²	4.0m
60	Hawthorn	54.3m²	4.2m
61	Monterey cypress	46.3m²	3.8m
62	Monterey cypress	46.3m²	3.8m
63	Monterey cypress	10.2m²	1.8m
64	Monterey cypress	46.3m²	3.8m

APPENDIX 3
TREE PROTECTION PLAN

Arboricultural Impacts: Summary

(For details, see below)

Impact	No. of Trees
Trees to be removed (approved)	26
Additional trees to be removed	0
Additional groups of trees to be removed	0
TPO trees to be removed	0
Trees to be pruned	0
Trees where manual excavation needed within RPAs	2
Trees where above soil surfacing needed within RPAs	2
Trees with proposed underground services within RPAs	0

Trees that require manual excavation within RPAs

No.	Species	Type of structure
36	Sycamore	Proposed drainage
61	Monterey cypress	Proposed drainage

Manual Excavation

Within root protection areas the first 750mm depth of any excavation, whether for proposed foundations, hard surfacing, or underground services shall be undertaken by hand under arboricultural supervision. The soil will be loosened with a pick or fork, and then will be cleared from roots with a compressed air soil pick. All roots will be cut cleanly with a hand saw or secateurs. The edge of the excavation closest to the trees will be covered with hessian sacking to prevent drying out, and if necessary be shuttered with an appropriate material to prevent soil collapse. Where appropriate, the soil beneath this depth may be sheet piled; and deeper excavation may be undertaken by a machine provided it works from outside the root protection areas.

Trees that require above soil surfacing within RPAs

No.	Species	Type of structure
36	Sycamore	Proposed road and parking spaces
61	Monterey cypress	Proposed parking spaces

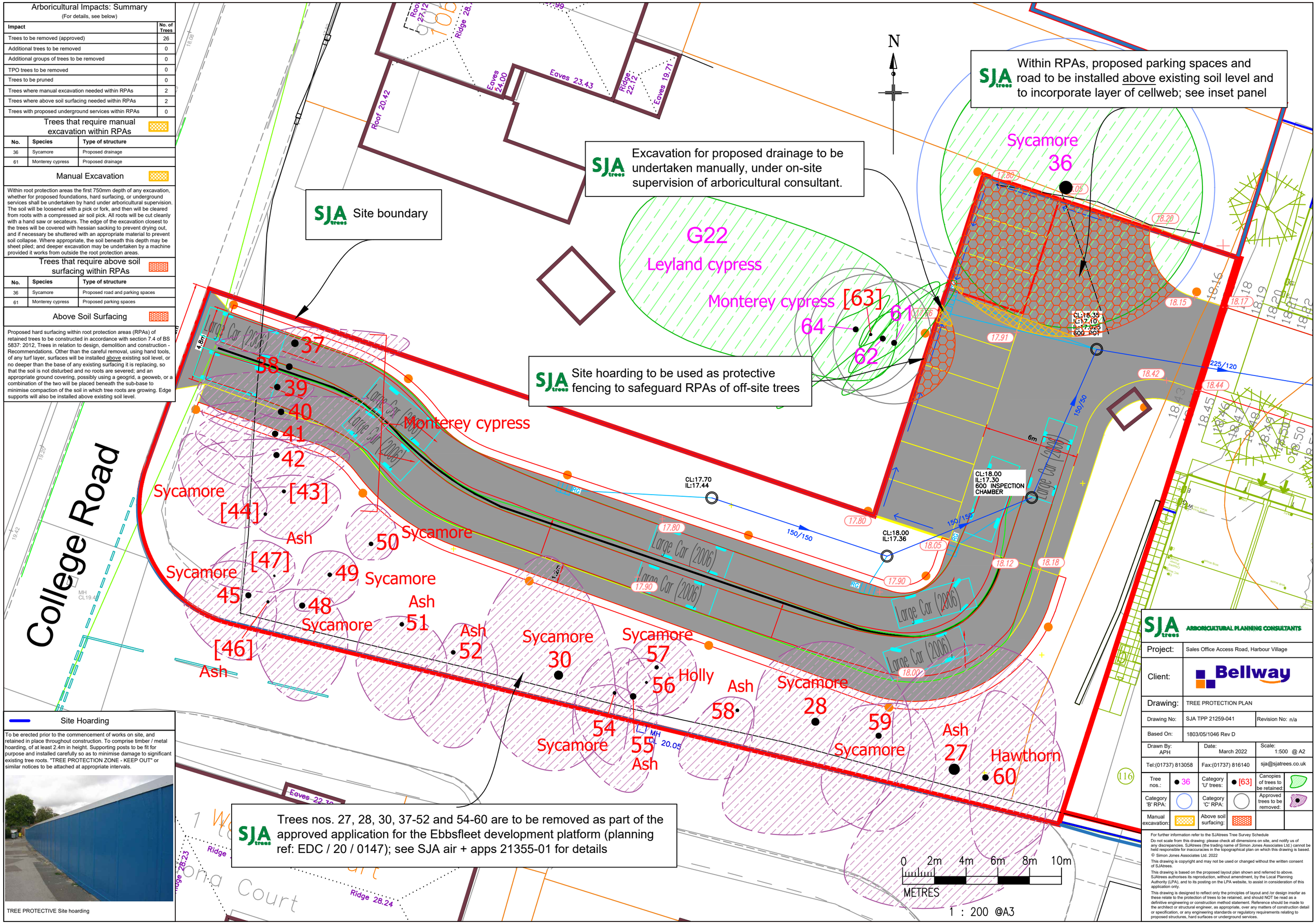
Above Soil Surfacing

Proposed hard surfacing within root protection areas (RPAs) of retained trees to be constructed in accordance with section 7.4 of BS 5837: 2012, Trees in relation to design, demolition and construction - Recommendations. Other than the careful removal, using hand tools, of any turf layer, surfaces will be installed above existing soil level, or no deeper than the base of any existing surfacing it is replacing, so that the soil is not disturbed and no roots are severed; and an appropriate ground covering, possibly using a geogrid, a geoweb, or a combination of the two will be placed beneath the sub-base to minimise compaction of the soil in which tree roots are growing. Edge supports will also be installed above existing soil level.

Site Hoarding

To be erected prior to the commencement of works on site, and retained in place throughout construction. To comprise timber / metal hoarding, of at least 2.4m in height. Supporting posts to be fit for purpose and installed carefully so as to minimise damage to significant existing tree roots. "TREE PROTECTION ZONE - KEEP OUT" or similar notices to be attached at appropriate intervals.

TREE PROTECTIVE Site hoarding



SJA trees ARBORICULTURAL PLANNING CONSULTANTS

Project:	Sales Office Access Road, Harbour Village
Client:	Bellway
Drawing:	TREE PROTECTION PLAN
Drawing No:	SJA TPP 21259-041
Revision No:	n/a
Based On:	1803/05/1046 Rev D
Drawn By:	APH
Date:	March 2022
Scale:	1:500 @ A2
Tel:(01737) 813058	Fax:(01737) 816140
	sja@sjatrees.co.uk

Tree nos.:	● 36	Category 'U' trees:	● [63]	Canopies of trees to be retained:	
Category 'B' RPA:		Category 'C' RPA:		Approved trees to be removed:	
Manual excavation:		Above soil surfacing:			

For further information refer to the SJAtrees Tree Survey Schedule

Do not scale from this drawing: please check all dimensions on site, and notify us of any discrepancies. SJAtrees (the trading name of Simon Jones Associates Ltd.) cannot be held responsible for inaccuracies in the topographical plan on which this drawing is based.

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This drawing is designed to reflect only the principles of layout and /or design insofar as these relate to the protection of trees to be retained, and should NOT be read as a definitive engineering or construction method statement. Reference should be made to the architect or structural engineer, as appropriate, over any matters of construction detail or specification, or any engineering standards or regulatory requirements relating to proposed structures, hard surfaces or underground services.