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**Arboricultural Implications Report
Proposed Development at
Block 4, Union Park
North Hyde Gardens
Hayes**



February 2025

Ref. SJA air 23258-01b

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 mature, ancient, veteran or notable trees, no category 'A' or 'B' trees, and no trees of high landscape or biodiversity value are to be removed. None of the main arboricultural features of the site are to be removed. The proposed removal of individuals and group of trees will represent no alteration to the main arboricultural features of the site, only a minor alteration to the overall arboricultural character of the site and will not have an adverse impact on the arboricultural character and appearance of the local landscape.

S3. The proposed pruning of the two off-site groups of trees (G2 and G5) is confined to the cutting back of understorey scrub and vegetation to the boundary where required to facilitate the proposals and as such is minor in extent, will not detract from the health or appearance of either group of trees, and complies with current British Standards.

S4. The incursions into the Root Protection Areas of off-site trees to be retained are minor, and subject to implementation of the measures recommended on the Tree Protection Plan and set out at **Appendix 4**, no significant or long-term damage to their root systems or rooting environments will occur.

S5. As the proposed development will not result in the removal of any important trees, it complies with Policy EM4 of the London Borough of Hillingdon Council Local Plan

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- 2. Outline arboricultural method statement**
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1. INTRODUCTION AND BACKGROUND INFORMATION

1.1. Instructions

1.1.1. SJAtrees has been instructed by Murdoch Wickham to visit the Former Addison Lee site 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 demolition and 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 planning application to be submitted to the London Borough of Hillingdon Council ("the LPA") and complies with local validation requirements.

1.2.2. It complies also with the recommendations of British Standard BS 5837:2012, *Trees in relation to design, demolition and construction – Recommendations* ('BS 5837'). However, the British Standard is not a Code of Practice that consists of written rules outlining how actions or decision must be taken and it "should not be quoted as if it were a specification¹"; it is a set of recommendations intended to "assist decision-making with regard to existing and proposed trees in the context of design, demolition and construction²". It doesn't form part of planning policy; and it is neither mentioned nor referenced in Policy DMHB 14 of the London Borough of Hillingdon Council Local Plan Part 2 (adopted 2020) or the accompanying text, but it is a material consideration to which weight is likely to be given.

¹ British Standard BS 5837:2012. *Trees in relation to design, demolition and construction – Recommendations*; Foreword. The British Standards Institution.

² Ibid., p.1, Introduction.

1.2.3. The proposed development comprises “**Redevelopment of site to deliver extension to existing Union Park data centre campus consisting of (a) free standing data centre building (b) energy, power, and water infrastructure (c) site access and internal roads (d) site security arrangements (e) hard and soft, green landscaping and (f) other ancillary and auxiliary forms of development.**”

1.2.4. 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 Nigel Kirby and Anthony Harte of SJAtrees on Thursday 20th of July 2023. Weather conditions at the time were clear, dry and bright. Deciduous trees were in full leaf.

1.4. Site description

1.4.1. The site is 1.22ha in size and is located on the north side of North Hyde Gardens and Grand Union Canal Walk, as shown at **Figure 1** below. The east boundary adjoins a site currently undergoing re-development. The north boundary adjoins the railway lines between Hayes and Harlington, and Southall stations.



Figure 1: Site location shown on Google aerial image

1.4.2. The site is on ground that rises by less than 2m from its western end, adjacent to where the Grand Union Canal meets the railway to its eastern end adjacent the site currently undergoing re-development, and currently comprises a warehouse with associated hard standing, including a carpark.

1.4.3. Historical maps and aerial photographs indicate that the site was undeveloped agricultural land until 1935, when the adjacent Creosote works began to expand onto the site with associated railway sidings. In the second half of the 20th century, these sidings were dismantled, although the site has continued to be used for industrial purposes subsequently.

1.5. Soil type

1.5.1. The British Geological Survey Solid and Drift Geology map of the area indicates the site overlies a bedrock of “**London Clay Formation – clay, silt and sand**”.

1.5.2. The class of soil in this area is recorded on the Soilscape (England) maps on the Department for Environment, Food & Rural Affairs ('Defra') Magic website as a “**loamy soil with naturally high groundwater**”.

1.5.3. This is clarified by the Ground Investigation report on the site, undertaken by Colliers and dated 8th March 2024. This shows made ground encountered to depths to 5.5m below ground level, underlain by weathered deposits of Lynch Hill Gravel

Member to 7m below ground level, which in turn is underlain by London Clay Formation. This suggests that the soil is unlikely to be highly 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.

1.7. 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.

2. PLANNING CONTEXT

2.1. Planning history

2.1.1. A review of the planning history of this site on the planning section of the LPA website reveals no previous applications for re-development.

2.2. Planning policy - national

2.2.1. 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.

2.2.2. The National Planning Policy Framework ('NPPF' – December 2024)³ 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.**"

2.2.3. In paragraph 135, 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**

³ The National Planning Policy Framework (NPPF) (December 2024). Department for Levelling Up, Housing & Communities

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.”

2.2.4. Paragraph 136 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.**”

2.2.5. The section titled “Meeting the challenge of climate change, flooding and coastal change” states at paragraph 162: “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 and drought from rising temperatures . Policies should support appropriate measures to ensure the future health and 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.”

2.2.6. In paragraph 187, 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 and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;
- 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; [...]

2.2.7. In paragraph 193, 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....”

2.3. Regional planning policy

2.3.1. Policy G1 ‘Green infrastructure’ of the London Plan⁴ states:

“**A London’s network of green and open spaces, and green features in the built environment, should be protected and enhanced. Green infrastructure should be**

⁴ The London Plan (March 2021); Greater London Authority

planned, designed and managed in an integrated way to achieve multiple benefits.

B Boroughs should prepare green infrastructure strategies that identify opportunities for cross-borough collaboration, ensure green infrastructure is optimised and consider green infrastructure in an integrated way as part of a network consistent with Part A.

C Development Plans and area-based strategies should use evidence, including green infrastructure strategies, to:

- 1) identify key green infrastructure assets, their function and their potential function**
- 2) identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.**

D Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network.”

2.3.2. Policy G7 'Trees and woodlands' of the London Plan states:

“A London's urban forest and woodlands should be protected and maintained, and new trees and woodlands should be planted in appropriate locations in order to increase the extent of London's urban forest – the area of London under the canopy of trees.

B In their Development Plans, boroughs should:

- 1) protect 'veteran' trees and ancient woodland where these are not already part of a protected site¹³⁹**
- 2) identify opportunities for tree planting in strategic locations.**

C Development proposals should ensure that, wherever possible, existing trees of value are retained.¹⁴⁰ If planning permission is granted that necessitates the removal of trees there should be adequate replacement based on the existing value of the benefits of the trees removed, determined by, for example, i-tree or CAVAT or another appropriate valuation system. The planting of additional trees should generally be included in new developments – particularly large-canopied species which provide a wider range of benefits because of the larger surface area of their canopy.

¹⁴⁰ Category A, B and lesser category trees where these are considered by the local planning authority to be of importance to amenity and biodiversity, as defined by BS 5837:2012”.

2.4. Local planning policy

2.4.1. Local planning policies are contained in the London Borough of Hillingdon Council Local Plan Part 2 (adopted January 2020).

2.4.2. The relevant section of Policy DMHB 14: Trees and Landscaping of the local plan states:

“A) All developments will be expected to retain or enhance existing landscaping, trees, biodiversity or other natural features of merit.

B) Development proposals will be required to provide a landscape scheme that includes hard and soft landscaping appropriate to the character of the area, which supports and enhances biodiversity and amenity particularly in areas deficient in green infrastructure.

C) Where space for ground level planting is limited, such as high rise buildings, the inclusion of living walls and roofs will be expected where feasible.

D) Planning applications for proposals that would affect existing trees will be required to provide an accurate tree survey showing the location, height, spread and species of trees. Where the tree survey identifies trees of merit, tree root protection areas and an arboricultural method statement will be required to show how the trees will be protected. Where trees are to be removed, proposals for replanting of new trees on-site must be provided or include contributions to offsite provision.”

2.4.3. The LPA has prepared a Supplementary Planning Document (SPD) dealing with the protection of trees on development sites (Planning Obligations July 2014). The guidance presented in this document has been closely followed in the preparation of this report.

2.5. Neighbourhood planning policy

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

3. THE TREES

3.1. Survey findings

3.1.1. We surveyed 30 individual trees and five groups of trees growing within or immediately adjacent to the site. Their details can be found in the tree survey schedule at **Appendix 3**.

3.1.2. The arboricultural quality of the site is dominated by the off-site trees and groups of trees to the south-west, west and north-west of the site. Most individuals within the site are of low landscape value due to being of small-size, whereas as the off-site belt of trees and scrub adjacent to site contains larger individuals of greater age. All of the trees on and adjacent to site are of broad-leaved species and are of semi-mature age class. With the exception of the on-site hornbeam, Chanticleer pear and Portuguese laurel specimens, all the trees appear to be self, or animal seeded. Up to 53% of the trees surveyed individually are of native species. The most commonly found species is Norway Maple which is consistent with trees in the surrounding area.

3.2. Assessment of suitability for retention

3.2.1. As noted above in Section 2.3, local planning policies requires the retention of “**trees of merit**”. The trees or groups of trees within or adjacent to the site, which we consider meet this criterion are the:

- the off-site group of trees (G2) growing adjacent to the southern boundary, parallel with the Grand Union Canal, but especially the significant and essential components of the group as represented by oak trees nos. 23, 25 and 26; and
- the group of Norway maple trees (G6) growing within the west corner of the site.

3.2.2. One individual tree (goat willow no. 24) is unsuitable for retention, irrespective of the proposals, in that it is in such a condition that it cannot realistically be retained as a living tree in the context of the current land use for longer than 10 years. However, this tree is not shown to be removed as part of the proposals as it is outside the red line boundary and in third-party ownership. This tree is indicated on the accompanying tree protection plan by a **bracketed red** number.

3.2.3. There are no category 'A' trees and 2 category 'B' specimens (Norway maple no. 13 and English oak no. 25). The remaining 27 trees are assessed as category 'C' trees, 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 a combination of these.

3.2.4. Of the groups of trees, one (G6) has been assessed as category 'B', and the remaining four (G1, G2, G3 and G5) as category 'C'.

3.3. Assessment of arboricultural impacts

3.3.1. The arboricultural impacts of the proposed landscape masterplan by Murdoch Wickham Landscape Architects, drawing no. MWL-0474-SEW-ZZ-DR-L-100003 rev P7, have been assessed by overlaying this onto the TCP and are discussed in the following sections of this report and are shown on the tree protection plan (TPP) presented at **Appendix 4**.

3.3.2. The TPP identifies the trees to be removed to accommodate the proposed development because they are situated within the footprints of proposed structures or surfaces. These are shown by means of **red crosses** on the TPP.

3.3.3. The TPP also shows how trees to be retained will be protected from damage during construction, and the measures identified are set out and described in the outline arboricultural method statement at **Appendix 2** of this report. The implementation of, and adherence to, these measures can readily be secured by the imposition of appropriate planning conditions.

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

3.3.5. 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 impacts⁶

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

4. TREES TO BE REMOVED

4.1. Details

4.1.1. To accommodate the proposed development, as shown on the proposed layout plan, seven individual trees (nos.1-7) and one group of trees (G1) are to be removed because they are situated within the footprints of proposed structures or surfaces.

4.1.2. Details of the trees to be removed, including their dimensions, age class and British Standard categorisation, are shown and listed on the TPP and at **Table 2** below.

Tree no.	Species	Height	Trunk diameter	Age class	BS category
1	Hornbeam	6.5m	220mm est.	Semi-mature	C (1)
2	Hornbeam	6.5m	200mm 200mm est.	Semi-mature	C (1)
3	Hornbeam	6.5m	245mm est.	Semi-mature	C (1)
4	Hornbeam	6.5m	230mm est.	Semi-mature	C (1)
5	Goat willow	8.5m	9 stems @ 200mm est.	Semi-mature	C (1)
6	Chanticleer pear	11.5m	275mm	Semi-mature	C (1)
7	Chanticleer pear	10m	295mm	Semi-mature	C (1)
G1	Portuguese laurel	3m	Max 55mm	Semi-mature	C (1)

Table 2: Trees and groups of trees to be removed

4.2. Assessment

4.2.1. All those trees or groups of trees that constitute the main arboricultural features of the site and which make the greatest contribution to the character and appearance of the local landscape, to amenity or to biodiversity (see paragraph 3.2.1), will be retained.

4.2.2. As there are no ancient or veteran trees on site, none will be removed.

4.2.3. None of the trees to be removed are mature specimens of species of large ultimate size: all the trees to be cleared are semi-mature or of small ultimate size, or both. The significance of this is threefold. Firstly, for obvious reasons mature trees

tend to be larger in size and therefore are likely to be more visible and to make a greater contribution to the landscape. Secondly, mature trees are more likely to have formed associations with wildlife and to support other flora or fauna (for example, young trees infrequently contain splits, cracks or cavities that might provide roosting sites for bats); and thirdly, mature trees have a significantly greater capacity than smaller trees to actively sequester and store carbon⁷. Accordingly, the removal of no large mature trees on or adjacent to the site minimises the impacts on the benefits that mature trees provide in relation to smaller ones.

4.2.4. All seven of the trees to be removed have been assessed as category 'C': these are either of low quality, low value, or short-term potential. For these reasons, their removal will have no significant impact on the character or appearance of the area.

4.2.5. The proposals incorporate considerable new and replacement tree planting. This will result in a net increase of trees across the site which will mitigate the proposed removals, improve the age class balance of the on-site trees, enhance the local landscape, and re-establish a framework for the ongoing and long-term character of the site.

4.2.6. In the light of these considerations, and taking account of the numbers, sizes and locations of the trees to be retained, including those that are off-site, the felling of the trees and group identified for removal will represent no alteration to the main arboricultural features of the site.

⁷ Stephenson N. L., Das A. J., Zavala M. A. (2014) Rate of tree carbon accumulation increases continuously with tree size. *Nature*, volume 507.

5. TREES TO BE PRUNED

5.1. Details

5.1.1. Two off-site groups of trees (G2 and G5) to be retained are to be pruned to facilitate implementation of the proposals. These are shown at **Table 3** below.

Tree no.	Species	Age class	Proposed works
G2	Various	Semi-mature	Where necessary, prune overhanging understorey scrub and vegetation back to site boundary to facilitate installation of replacement perimeter security fence.
G5	Various	Semi-mature	Where necessary, prune self-seeded scrub back to site boundary to facilitate re-grading of existing ground.

Table 3: Trees to be pruned to facilitate development

5.2. Assessment

5.2.1. The extent of pruning proposed to the groups of trees listed in **Table 3** is significantly minor. The pruning comprising nothing greater than the cutting back of low-quality understorey scrub and vegetation where these overhang the site boundary and will result in maximum wound sizes no greater than 100mm in diameter; this will have an insignificant effect on the health and physiological condition of the trees or shrubs and complies with the recommendations at paragraph 7.2.4 and at Table 1 of British Standard BS 3998:2010, *Tree work – Recommendations*.

5.2.2. In terms of impact upon the landscape, the proposed pruning is minor in extent, and will be largely screened in views by either the remainder of the trees' canopies, or by the other trees and shrubs growing within or adjacent to the site. It will have a negligible effect on the appearance of either group when viewed from outside the site itself, and accordingly will not detract from the character or appearance of the local area.

5.2.3. The pruning back to the boundary of the groups of understorey scrub and vegetation is consistent with the common law legal right to cut un-protected off-site trees back to one's boundary. Consequently, these works are not required just because of the proposed development: they could legally be undertaken irrespective of this scheme and could be repeated whatever the future use of the site.

6. ROOT PROTECTION AREA INCURSIONS

6.1. Details

6.1.1. Parts of the proposed road and underground service ducts will encroach within the RPAs of four of the trees to be retained. These are shown in **Table 4** below.

Tree no.	Species	Incursion by:	Total RPA	Extent of incursion into RPA	% of RPA
10	Norway maple	Proposed access road	43.8m ²	1.5m ²	3.5%
11	Norway maple	Proposed access road and electricity cable duct	34.2m ²	5.7m ²	16.5%
23	English oak	Proposed electricity cable duct	237.8m ²	9.2m ²	4%
26	English oak	Proposed access road and electricity cable duct	241.8m ²	3.7m ²	1.5%

Table 4: Proposed incursions within RPAs

6.2. Assessment

6.2.1. The incursions by parts of the proposed road and underground service ducts into the RPAs of the four trees listed at **Table 4** equate to no more than 16.5% of individual RPAs. Any potential adverse impacts can be satisfactorily mitigated as set out below.

6.2.2. The incursions into the RPAs of trees nos. 10, 11, 23 and 26 are by parts of a proposed road and underground service ducts and, subject to proposed levels, some degree of excavation will be required. To minimise impacts on these specimens, excavation within these 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. Excavation within the RPAs is highly unlikely to necessitate the severance of all the roots in these areas. This is because all parts of the excavation required within RPAs are located within the footprint of existing hard surfacing which is likely to be restricting gaseous exchange and the ingress of rainwater to the soil below thereby creating a less-than-ideal rooting environment. Additionally, there is a low-level boundary wall along the south boundary and although it is unlikely that its foundations

are sufficiently deep as to pose a rooting barrier, nonetheless, the wall's foundations are also likely to be restricting rooting to some degree.

6.2.4. Accordingly, it is more likely that the trees are rooting favourably in the soft landscaping along the Grand Union Canal thereby significantly diminishing the likelihood of encountering roots during excavation and so minimising the extent of root disturbance or severance likely to occur as a result.

6.2.5. The tree species impacted by incursions into their RPAs have been identified as good to moderate at tolerating root pruning and disturbance⁸, as shown in **Table 5**.

Species	Tolerance
English oak	Moderate
Norway maple	Good to moderate

Table 5: Species tolerance to root pruning and disturbance

6.2.6. In the case of the Norway maple trees (nos. 10 and 11), both specimens are of average physiological condition, and so there is no reason to suggest that they will not be able to tolerate the cutting of roots within these small sections of their RPAs.

6.2.7. Although English oak trees nos. 23 and 26 show reduced physiological condition, the extent of the incursions are minor (significantly so in the case of tree no. 26) and, as discussed above, are unlikely to necessitate any significant root pruning or disturbance owing to restricted rooting activity within the site. As such, both incursions are therefore likely to be tolerated by the trees.

6.2.8. The existing hard surfacing within the RPA of oak tree no. 23 is to be removed and reinstated as soft landscaping to allow for a proposed well-being garden. This equates to an increase in available soft landscaping of 36m² or 15% within the tree's RPA which will not only mitigate the minor area lost to the encroachment by the proposed electricity cable duct but more importantly represents a notable improvement to its rooting environment which will help ensure the tree's long-term health and potential. To help promote new root growth, the newly reinstated soft landscaping and

⁸ MATHENY, N. P. and CLARK, J. R. (1998). Trees and Development. International Society of Arboriculture.

rooting environment within the RPA of this specimen could also be enhanced by de-compaction, aeration, fertilisation or mulching, as appropriate, and this can be ensured by condition.

6.2.9. In the case of trees nos. 10, 11 and 26, as the new road is confined to within the footprint of the existing hard surfacing, it essentially represents no change to the existing extent of hard surfacing within these trees' RPAs and ultimately constitutes a continuation of the *status quo*.

6.2.10. Implementation of measures to prevent other incursions into the RPAs of retained trees and to protect them during demolition and construction can be assured by the erection of appropriate protective fencing, as shown on the TPP at **Appendix 4**.

6.2.11. 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 mature, ancient, veteran or notable trees, no category 'A' or 'B' trees, and no trees of high landscape or biodiversity value are to be removed. None of the main arboricultural features of the site are to be removed. The proposed removal of individuals and group of trees will represent no alteration to the main arboricultural features of the site, only a minor alteration to the overall 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. The proposed pruning of the two off-site groups of trees (G2 and G5) is confined to the cutting back of understorey scrub and vegetation to the boundary where required to facilitate the proposals and as such is minor in extent, will not detract from the health or appearance of either group of trees, and complies with current British Standards.

7.1.3. The incursions into the Root Protection Areas of off-site trees to be retained are minor, and subject to implementation of the measures recommended on the Tree Protection Plan and set out at **Appendix 4**, 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 retain all the main arboricultural features of the site, its arboricultural attractiveness, history and landscape character and setting will be maintained, thereby complying with Paragraph 135 of the National Planning Policy Framework.

7.2.2. Whilst some trees are to be removed, there is no duty in planning policy to retain all existing trees in all circumstances. Paragraph 136 of the NPPF states (*italics added for emphasis*): "**Planning policies and decisions should ensure... that existing trees are retained wherever possible**"; and thereby recognises circumstances in which it might not be possible to retain every tree. Accordingly, the proposed removal of

trees does not mean that this application must thereby be refused; and does not mean it conflicts with this paragraph of the NPPF.

7.2.3. 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 193 (c) of the NPPF.

7.3. Compliance with regional planning policy

7.3.1. As all the existing off-site trees assessed as being features in the existing built environment will be retained, in arboricultural terms the proposed development complies with Policy G1 'Green infrastructure' of the London Plan.

7.4. Compliance with local planning policy

7.4.1. As the proposed development will not result in the removal of any important trees, it complies with Policy EM4 of the London Borough of Hillingdon Council Local Plan.

7.5. Conclusion

7.5.1. 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

Methodology

A1.1. Tree survey and baseline information

A1.1.1. We surveyed individual trees with trunk diameters of 75mm and above⁹, trees with trunk diameters of 150mm and above growing in groups or woodlands, and shrub masses, hedges and hedgerows¹⁰ 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.

A1.1.2. 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 3**. The numbers assigned to the trees in the tree survey schedule correspond with those shown on the appended tree protection plan.

A1.1.3. 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 culturally¹¹. However, where it might be necessary to differentiate between specific trees within these groups, we also surveyed these individually.

A1.1.4. 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.

A1.1.5. Whilst we categorised the trees in accordance with BS 5837 (details of the criteria used for this process can be found in the notes that accompany the tree survey schedule), we assessed the trees' suitability for retention against national, regional and local planning policies. We 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.

A1.1.6. 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.

A1.2. Tree constraints

A1.2.1. In line with the NPPF's presumption in favour of sustainable development, we assessed whether any trees should be retained in the context of the proposed re-

⁹ 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.

¹⁰ Ibid., 4.4.2.7

¹¹ Ibid., 4.4.2.3

development. Our assessment of which trees might have to be retained, and which can be removed, is based on:

- whether any trees are classed as 'ancient' or 'veteran', and thereby are designated as 'irreplaceable habitats';¹²
- which trees contribute to local character and history, including to the surrounding landscape setting; which trees contribute to biodiversity; and which trees help mitigate and adapt to climate change; and whose removal would thereby be unlikely to comply with national planning policy guidance;
- which trees are important features of the local landscape, such that their removal would be contrary to local planning policies: specifically, Policy EM4 of the London Borough of Hillingdon Council Local Plan, as set out above; and
- our assessment of the trees' quality, value and remaining life expectancy, in accordance with BS5837:2012, as summarised in the notes that accompany the tree survey schedule;

A1.2.2. As trees growing outside the boundaries of the site are in the control of others, we have assumed they will be retained, irrespective of their size, age or condition.

A1.2.3. Whilst we have categorised trees in accordance with BS 5837, we have not used these categorisations as the main criterion of whether specimens might be removed or should be retained. Trees in categories 'A', 'B' and 'C' are all a material consideration in the development process; but the retention of category 'C' trees, being of low quality or of only limited or short-term potential, will not normally be considered necessary should they impose a significant constraint on development.

A1.2.4. Furthermore, BS 5837 makes it clear that young trees, even those of good form and vitality, which have the potential to develop into quality specimens when mature "need not necessarily be a significant constraint on the site's potential"¹³.

A1.2.5. Moreover, BS 5837 states that ".... care should be taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal"¹⁴.

A1.2.6. The 'Root Protection Areas' (RPAs)¹⁵ 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

¹² The National Planning Policy Framework (NPPF) (December 2024). Paragraph 193 (c).

¹³ BS 5837, 4.5.10.

¹⁴ Ibid., 5.1.1.

¹⁵ Ibid., paragraph 3.7. "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."

(including the presence of existing roads or structures), as well as soil type, topography and drainage. Where considered appropriate, the shapes of the RPAs (although not their areas) were modified based on these considerations, so that they reflect more accurately the likely root distribution of the relevant trees.

APPENDIX 2

Outline Arboricultural Method Statement

A2.1. Tree Protection Plan

A2.1.1. The TPP at Appendix 4 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.

A2.2. Pre-start meeting

A2.2.1. Prior to the commencement of any site clearance, ground preparation, demolition 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 demolition contractor, 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.

A2.3. Site clearance

A2.3.1. 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.

A2.3.2. 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.

A2.4. Ground preparation and demolition

A2.4.1. 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).

A2.4.2. Demolition of existing buildings and removal of existing areas of hard surfacing that abut or overlie RPAs will be undertaken with care, under the control and supervision of an appointed arboricultural consultant, to ensure that the adjacent soil is not unacceptably excavated, disturbed or compacted.

A2.5. Tree protection fencing

A2.5.1. Construction exclusion zones (CEZs) will be formed by erecting protective fencing around the RPAs of all on-site trees to the specification recommended in BS 5837, Section 6.2, prior to the commencement of construction. This will consist of a scaffold framework comprising a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at maximum intervals of 3.5m. Onto this, welded mesh panels should be securely fixed with wire or scaffold clamps, as shown in **Figure 2** of that document. "TREE PROTECTION ZONE - KEEP OUT" or similar notices will be attached with cable ties to every third panel.

A2.5.2. The RPAs of the off-site trees will also be enforced by the erection of protective fencing to the same specification, prior to the commencement of construction, thereby safeguarding them from incursions by plant or machinery, storage and mixing of materials, or other construction-related activities which could have a detrimental effect on their root systems.

A2.5.3. The recommended positions of the protective fencing are shown by **bold blue lines** on the TPP. The precise positioning of the fencing around the trees will be considered in conjunction with any other protective hoarding/fencing which may be required around the site boundary.

A2.5.4. Within the CEZs safeguarded by the protective fencing, 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.

A2.6. Manual excavation within RPAs

A2.6.1. 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.

APPENDIX 3

Tree Survey Schedule



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(Operations)

Tree Survey Schedule

Union Park Block 4, North Hyde Gardens, Hayes

July 2023

SJA tss 23258-01

Tree Survey Schedule: Explanatory Notes

Union Park Block 4, North Hyde Gardens, Hayes

This schedule is based on a tree inspection undertaken by Nigel Kirby and Anthony Harte of SJAtrees (the trading name of Simon Jones Associates Ltd.), on Thursday the 20th July 2023. Weather conditions at the time were clear, dry and bright. 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 "1".

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: Seedling, sapling or recently planted tree; not yet producing flowers or seeds; strong apical dominance.
Semi-mature: Trunk often still smooth-barked; producing flowers and/or seeds; strong apical dominance, not yet achieved ultimate height.

Mature: Apical dominance lost, tree close to ultimate height.
Over-mature: Mature, but in decline, no crown retrenchment
Veteran: Mature, with a large trunk diameter for species; but showing signs of veteranisation, irrespective of actual age, with decay or hollowing, a crown showing retrenchment and a structure characteristic of the latter stages of life.

Ancient: Beyond typical age range and with a very large trunk diameter for species; with extensive decay or hollowing, a crown that has undergone retrenchment and 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.

Good: No significant morphological or structural defects, and an upright and reasonably symmetrical structure.

Moderate: No significant pathological defects, but a slightly impaired morphological structure; however, not to the extent that the tree is at immediate or early risk of collapse.

Indifferent: Significant morphological 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 morphological or pathological defects, such that there may be a risk of failure or collapse.

Hazardous: Significant and irremediable morphological 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; adjusted to give a greater weighting to trees that contribute to the character and appearance of the local landscape, to amenity, or to arboricultural 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.

(1) 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).

(2) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.

(3) 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
Union Park Block 4, North Hyde Gardens, Hayes

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physio - logy	Structure	Comments	Category
1-4	Hornbeam	#T1 6.5m #T2 6.5m #T3 6.5m #T4 6.5m	#T1 220mm #T2 2 stems @ 200mm #T3 245mm #T4 230mm all est.	2.5m	1.5m	2m	Semi-mature	Average	Indifferent	Row of closely planted specimens, designed to form a hedge or screen; unremarkable trees of very limited merit; of only low-level screening value.	C (1)
5	Goat willow	8.5m	9 stems @ 200mm est.	6.25m	2m	2.5m	Semi-mature	Average	Poor	Small self-seeded specimen; tight compression forks with evidence of included bark; unremarkable tree of very limited merit; inessential component of the landscape.	C (1)
6	Chanticleer pear	11.5m	275mm	3m	2.25m	2.5m	Semi-mature	Average	Indifferent	Small ornamental tree; located within small planting bed surrounded by services and hard surfacing; hidden in long direct public views; unremarkable tree of very limited merit.	C (1)
7	Chanticleer pear	10m	295mm	3.25m	2m	2m	Semi-mature	Average	Indifferent	Small ornamental tree; located within small planting bed surrounded by services and hard surfacing; tight compression fork with evidence of included bark in upper canopy; hidden in long direct public views; unremarkable tree of very limited merit.	C (1)
8	Norway maple	12m	225mm ivy est.	N 2.25m NE 3.75m E 4m S 4m W 3m	4m	5m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded specimen; aerodynamic meshing crown providing companion shelter; unremarkable tree of very limited merit; contributes to boundary screening with canal.	C (1)
9	Norway maple	12.5m	295mm ivy est.	N 3.5m NE 5.5m E 4.75m S 4.5m W 4m	2m	2m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded specimen; aerodynamic meshing crown providing companion shelter; unremarkable tree of very limited merit; contributes to boundary screening with canal.	C (1)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physio - logy	Structure	Comments	Category
10	Norway maple	13m	2 stems @ 220mm ivy est.	N 4.5m E 4.75m S 3m W 3m	2m	3m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded specimen; twin stemmed from base; heavily ivy-covered; aerodynamic meshing crown providing companion shelter; unremarkable tree of very limited merit; contributes to boundary screening with canal.	C (1)
11	Norway maple	12m	275mm ivy est.	3.5m	3m	3m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded specimen; aerodynamic meshing crown providing companion shelter; unremarkable tree of very limited merit; contributes to boundary screening with canal.	C (1)
12	Norway maple	12m	180mm 210mm	5m	3m	2.75m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded specimen; multi-stemmed from base; unremarkable tree of very limited merit; contributes to boundary screening with railway; inessential component of the group in which it stands.	C (1)
13	Norway maple	13.5m	240mm 315mm both ivy est.	5.5m	3m	3m	Semi-mature	Average	Indifferent	Off-site tree; planted specimen, designed to form a screen; aerodynamic meshing crown providing companion shelter; contributes to boundary screening with railway.	B (2)
14	Norway maple	13.5m	300mm	4.5m	2m	3m	Semi-mature	Average	Indifferent	Off-site tree; multi-stemmed from base; tight compression forks with evidence of included bark; aerodynamic meshing crown providing companion shelter; unremarkable tree of very limited merit; contributes to boundary screening with railway.	C (12)
15	Norway maple	14.5m	300mm est. 420mm ivy est.	6.5m	4m	4m	Semi-mature	Below average	Indifferent	Off-site tree; heavily ivy-covered; twin-stemmed from 1m; unable to assess union due to ivy; slightly sparsely foliated within central canopy; contributes to boundary screening with railway; significant component of group in which it stands.	C (12)
16	Norway maple	14m	310mm ivy est.	4.75m	3.5m	2.5m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded specimen; aerodynamic meshing crown providing companion shelter; unremarkable tree of very limited merit; contributes to boundary screening with railway and green infrastructure; inessential component of the group in which it stands.	C (12)
17	Norway maple	14m	325mm ivy est.	3.5m	4m	4.5m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded specimen; heavily ivy-covered; aerodynamic meshing crown providing companion shelter; unremarkable tree of very limited merit; contributes to boundary screening with railway and green infrastructure; inessential component of the group in which it stands.	C (12)
18	Norway maple	9m	225mm ivy est.	3.75m	3m	3m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded specimen; unremarkable tree of very limited merit; contributes to boundary screening with canal; inessential component of the group in which it stands.	C (12)
19-20	English oak	#T19 12m #T20 12m	#T19 240mm #T20 240mm both est.	4.75m	3m	2.5m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded specimens; aerodynamic meshing crowns providing companion shelter; contributes to boundary screening with canal; inessential component of the landscape.	C (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physio - logy	Structure	Comments	Category
21	Ash	14m	410mm ivy	5.75m	2m	3m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded specimen; unremarkable tree of very limited merit; contributes to boundary screening with canal; inessential component of the landscape.	C (12)
22	Norway maple	9m	300mm ivy	5m	2m	3m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded specimen; unremarkable tree of very limited merit; contributes to boundary screening with canal; inessential component of the landscape.	C (12)
23	English oak	13m	500mm 525mm both ivy	NE 9m SE 9m SW 8m NW 8m	S 1m	NE 2.5m	Semi-mature	Below average	Indifferent	Off-site tree; twin-stemmed from base, union obscured by ivy; trunk, stems heavily ivy-covered to tree's full height: impedes full inspection; slightly sparsely foliated; some dieback of branch tips resulting in small-sized 'twiggy' deadwood scattered throughout; essential component of the group in which it stands but of slightly reduced physiology.	C (2)
24	Goat willow	9m	350mm ivy	NE 3m SE 3m SW 2.5m NW 3m	2m	NE 2m	Semi-mature	Low	Indifferent	Off-site tree; trunk, stems heavily ivy-covered to 7m: impedes full inspection; crown shows significant dieback; moribund.	U
25	English oak	15m	300mm 505mm 295mm all ivy	NE 8.5m SE 7.5m SW 9m NW 3.5m	SW 2m	NE 3.5m SW 1m	Semi-mature	Average	Indifferent	Off-site tree; twin-stemmed from base with tensile union; W stem sub-dominant; main stem bifurcates from 1.5m: union obscured by ivy; stems ivy-covered to 13m; one-sided crown as suppressed by adjacent tree no. 4; slightly sparsely foliated especially within upper 3m of crown; some dieback of branch tips resulting in small-sized 'twiggy' deadwood (<40mm diameter) scattered throughout; essential component of the group in which it stands but of slightly reduced physiology and of impaired form.	B (2)
26	English oak	14m	560mm 470mm both ivy	NE 6.5m SE 6.5m S 9m SW 9m NW 8.5m	S 2m	NE 3m SW 1m	Semi-mature	Low	Indifferent	Off-site tree; twin-stemmed from 0.5m with tight compression fork and evidence of included bark; stems partially ivy-covered to 4m; crown shows significant dieback of branch tips, resulting in above average dead wood (up to 100mm diameter) concentrated within outer crown; moderate quantity of epicormic growth on major structural branches within inner canopy; essential component of the group in which it stands, but of notably reduced physiology and likely to be of reduced potential.	C (2)
27	Ash	11m	150mm 175mm both ivy	NE 3.75m SE 3.5m SW 3m NW 3m	W 3m	NE 4m	Semi-mature	Average	Indifferent	Off-site tree; drawn-up and mutually suppressed; twin-stemmed from base: union obscured by ivy; stems ivy-covered to 6m; minor deadwood up to 40mm diameter scattered throughout lower crown consistent with self-shading; inessential component of group in which it stands.	C (2)
28	Ash	11m	105mm 175mm 120mm all ivy	NE 4.75m SE 4m SW 4m NW 3.5m	NE 3.5m	NE 2.5m	Semi-mature	Average	Indifferent	Off-site tree; drawn-up and mutually suppressed; three-stemmed from base: stems grow separately; stems ivy-covered to 5m; minor deadwood up to 40mm diameter scattered throughout lower crown consistent with self-shading; inessential component of group in which it stands.	C (2)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physio - logy	Structure	Comments	Category
29	Hawthorn	8m	2 stems @ 300mm ivy est.	NE 2.5m SE 2m SW 4.5m NW 5m	NE 2m	2.5m	Semi-mature	Below average	Indifferent	Off-site tree; twin-stemmed from base; stems heavily ivy-covered to tree's full height; upper crown suppressed by ivy and sparsely foliated; significant component of group in which it stands.	C (2)
30	Hawthorn	9m	350mm ivy est.	NE 3m SE 2.5m SW 4.5m NW 4.5m	2m	2m	Semi-mature	Average	Indifferent	Off-site tree; stems heavily ivy-covered to tree's full height: impedes full inspection; multi-stemmed from 2m: union obscured by ivy; significant component of group in which it stands.	C (2)
G1	Portuguese laurel	3m	Max 55mm	3m	0.1m	0.1m	Semi-mature	Average	Indifferent	Row of closely growing specimens, forming a hedge or screen; of only low or temporary landscape benefit.	C (1)
G2	Various	14m	Max 560mm Avg 350mm Min 75mm	3m	0m	0m	Semi-mature	Average	Indifferent	Off-site group of trees; comprises mix of young and semi-mature specimens growing densely together to create impenetrable mass of self-seeded scrub; species include hawthorn, elder, ash and Norway maple; also includes occasional semi-mature English oak; contributes to amenity of Grand Union Canal footpath; dominated by individuals of low arboricultural quality but which collectively form significant component of the local landscape.	C (2)
G3	Various	4m	Max 120mm	3m	0.1m	0.1m	Semi-mature	Average	Indifferent	Self-seeded understorey scrub including bramble, buddleia, dogwood, yew; contributes to boundary screening with railway; inessential component of the landscape.	C (1)
G5	Various	6m	Max 2 stems @ 200mm Avg 7 stems @ 65mm all est.	4m	1m	3.5m	Semi-mature	Average	Poor	Off-site group of trees; species include goat willow, buddleia, hawthorn; small self-seeded scrub; unremarkable trees of very limited merit; contributes to boundary screening with railway; inessential component of the landscape.	C (12)
G6	Norway maple	15.5m	Max 455mm Avg 410mm ivy	4.75m	2m	2m	Semi-mature	Average	Moderate	Row of closely planted specimens, designed to form a hedge or screen; aerodynamic group with meshing crowns providing companion shelter; contributes to boundary screening with railway and green infrastructure; in keeping with the character of the area.	B (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.

<i>Tree No.</i>	<i>Species</i>	<i>RPA</i>	<i>RPA Radius</i>
1-4	Hornbeam	21.9m ² 36.2m ² 27.2m ² 23.9m ²	2.6m 3.4m 2.9m 2.8m
5	Goat willow	162.9m ²	7.2m
6	Chanticleer pear	34.2m ²	3.3m
7	Chanticleer pear	39.4m ²	3.5m
8	Norway maple	22.9m ²	2.7m
9	Norway maple	39.4m ²	3.5m
10	Norway maple	43.8m ²	3.7m
11	Norway maple	34.2m ²	3.3m
12	Norway maple	34.6m ²	3.3m
13	Norway maple	70.9m ²	4.8m
14	Norway maple	40.7m ²	3.6m
15	Norway maple	120.5m ²	6.2m
16	Norway maple	43.5m ²	3.7m
17	Norway maple	47.8m ²	3.9m
18	Norway maple	22.9m ²	2.7m
19-20	English oak	26.1m ² 26.1m ²	2.9m 2.9m
21	Ash	76.0m ²	4.9m
22	Norway maple	40.7m ²	3.6m
23	English oak	237.8m ²	8.7m
24	Goat willow	55.4m ²	4.2m
25	English oak	195.5m ²	7.9m
26	English oak	241.8m ²	8.8m
27	Ash	24.0m ²	2.8m
28	Ash	25.4m ²	2.8m
29	Hawthorn	81.4m ²	5.1m
30	Hawthorn	55.4m ²	4.2m
G1	Portuguese laurel	2.5m ²	0.9m
G2	Various	141.9m ²	6.7m
G3	Various	6.5m ²	1.4m
G5	Various	18.1m ²	2.4m
G6	Norway maple	93.7m ²	5.5m

APPENDIX 4

Tree Protection Plan

