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**Arboricultural Impact Assessment:
Redevelopment at Jacobs Douwe Egberts, Ruscote Avenue, Banbury – Site 3**

Prepared for:
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1. Introduction

- 1.1 I received instruction from Project Landscape Architects Barry Chinn Associates Ltd to prepare an Arboricultural Impact Assessment in respect of the Site 3 proposal at the Jacobs Douwe Egberts factory off Ruscote Avenue, Banbury, Oxfordshire, OX16 2QU. The proposed development consists of the erection of a drive-thru café within Use Class E; together with associated car parking, servicing and access; landscaping and all associated works.
- 1.2 National recommendations for the consideration of existing trees within a development context are set out within BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.
- 1.3 I undertook a Pre-Development Tree Survey in accordance with section 4 of the above Standard in order to detail the arboricultural constraints associated with potential development work at the site. This process was undertaken objectively without any regard to a particular development layout and has provided the arboricultural baseline information that has been built upon within this assessment.
- 1.4 The process of an Arboricultural Impact Assessment is set out within section 5.4 of the Standard and, wherever applicable, this document has been structured to accord with these recommendations.
- 1.5 Having regard to the arboricultural constraints identified during the initial survey I have reviewed the proposed layout in this context and have made an assessment in terms of the potential arboricultural impact.
- 1.6 This assessment is to be read in conjunction with the following drawings:
 - Barry Chinn Associates Ltd Landscape Architects (Contract number: 1953/19, Site 3 drawings):
 - Drawing number: 02, Tree Constraints Plan
 - Drawing number: 04, Tree Retention, Protection and Removal Plan
- 1.7 My Pre-Development Tree Survey relating to the site assessment is shown at Appendix 1.
- 1.8 The application site is located to the south east of Ruscote Avenue located at grid reference SP 444985 241501.
- 1.9 It is understood that the trees are not currently subject to any local authority administered statutory protection in the form of either a tree preservation order or by virtue of being located within a conservation area.

- 1.10 Trees planted within the public highway verge along Ruscote Avenue were identified at an early stage as an important amenity feature and have been included in the tree assessment with an alphabetical reference being assigned to the individual trees to differentiate them from those within the application area.
- 1.11 Referring to the British Geological Survey's Geology of Great Britain Viewer, the bedrock geology is that of the Charmouth mudstone formation being sedimentary bedrock. No superficial deposit has been recorded. However, from observations on site, there appears to be a deep, relatively structured topsoil which clearly supports adequate tree growth on the site and, in a precautionary manner, is considered potentially susceptible to compaction.
- 1.12 Given the nature of the site, the Forestry Act 1967 (as amended) currently applies to the land, in particular the potential requirement for a Forestry Commission felling licence should a significant volume of trees be proposed for removal. Upon the granting of full detailed planning permission, it is most likely that such a requirement will no longer apply. However, future arboricultural advice should be sought.
- 1.13 This report is presented in the following format:
- Section 2: Review of tree cover
 - Section 3: Development impact
 - Section 4: Construction phase protection
 - Section 5: Conclusions
 - Appendix 1: Pre-Development Tree Survey
 - Appendix 2: Preliminary Arboricultural Method Statement

2. Review of tree cover

- 2.1 The Pre-Development Tree Survey took account of 7 arboricultural features within the application site (excluding those around the highway and footpath verges which were surveyed as groups 9 and 10 and trees A to E inclusive).
- 2.2 Of the individual trees within the site, three were assessed as the highest Category A value, one as Category B value and three as Category C value.
- 2.3 The third party owned groups, growing beyond the perimeter fence, were both assessed as Category C in respect of their cumulative value.
- 2.4 All of the frontage highway trees were classified as Category A.
- 2.5 The more significant trees are illustrated below with the aid of photographs which were taken at the same time as the pre-development tree assessment (unless otherwise stated).

Photograph 1: Birch tree 1 to the righthand side of highway tree A



Photograph 2: Looking towards Swedish whitebeam tree 4 with London plane trees 2 and 3 to the right.



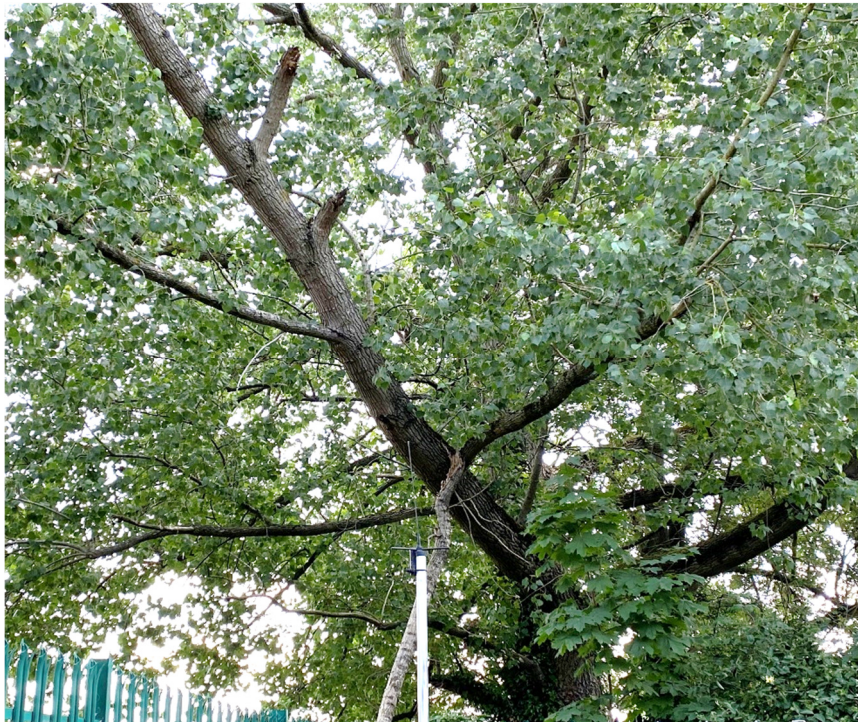
Photograph 3: Showing dominant poplar tree 7 (left) and London plane tree 5 (right) from within the site.



Photograph 4: Narrow leaved ash tree 8 grows through the crown of poplar tree 7.



Photograph 5: Poplar tree 7 features heavy, end-weighted primary limbs with recent secondary branch shedding evident.



Photograph 6: Poplar root-suckers have recently come up through the car park surface.



Photograph 7: Poplar tree 7 and ash tree 8 in 2019, better showing their structure whilst not in leaf.



3. Development impact

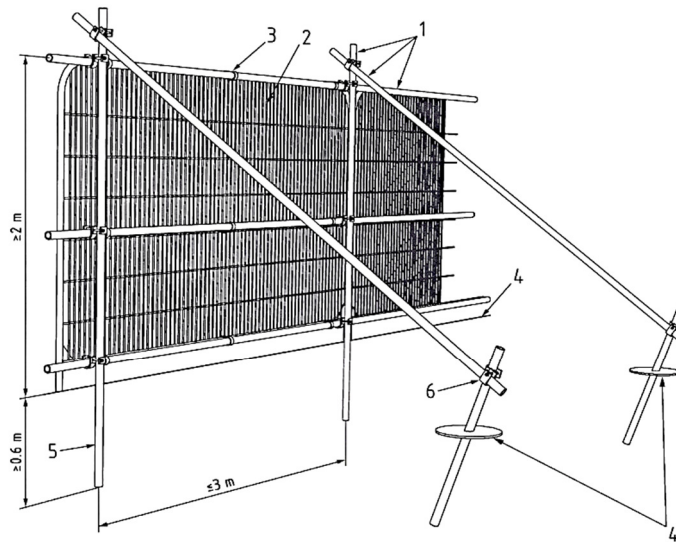
- 3.1 The proposed construction relates to a drive-through retail unit within what was part of the existing car parking area. The existing highway entrance off Ruscote Avenue will be utilised.
- 3.2 Proposed construction will mainly occur within the extent of the current surfaced car park area. The drive-through unit itself is located centrally within the application area, away from the boundary trees. Staff and visitor parking along with the delivery/waiting bay are located within the eastern half of the site.
- 3.3 The elements of the proposed build closest to the trees consist of the car stacking lane ahead of the drive-through collection point. Due to ground levels sloping down towards the boundary with Ruscote Avenue, there will need to be a modest retaining wall/structure located to the outer edge of the staff car parking and stacking lane, close to the outer edge of the calculated root protection areas of the existing trees. Lower branches from two of the plane trees slightly overhang the stacking lane by around 1m (their branch spreads exceeding the root protection area radius).
- 3.4 The retaining wall alignment results in a minor incursion within the root protection area of poplar tree 7 (affecting around 20 m² out of a total of 480 m²). This poplar tree is of Category C value. On arboricultural grounds, it has been recommended to substantially reduce the crown of this tree (post-pruning height of around 15m and a remaining radial crown spread of around 7m). Given the low value and limited longevity of this tree, the proposed construction is acceptable in this instance.

- 3.5 The only remaining construction operation within the area of interest to the trees relates to the uplift of the existing hardstanding and the installation of a 2m high acoustic fence, and the methodology for these elements of the proposals has been addressed within the method statement appended to this assessment.

4. Construction phase protection

- 4.1 Following the granting of any necessary permissions, the recommended tree pruning is to be agreed and implemented. The timing of tree works in relation to ecological restrictions will need to be further considered and the methodology for the works will be further considered within a finalised arboricultural method statement.
- 4.2 Immediately following tree works and ahead of any other construction related activity on site, a robust tree protection scheme shall be implemented to protect all remaining trees and their secured root protection areas and/or structural landscaping zones from construction related activity.
- 4.3 Where construction activity occurs close to protected trees or working access is required which encroaches into protected areas, appropriate ground protection measures may be necessary and will be reviewed within any finalised arboricultural method statement.
- 4.4 The alignment of the tree protection barriers is to accord with the Tree Removal, Retention and Protection Plan.
- 4.5 The default barrier is to accord with Figure 2 of BS5837:2012.

Extract from BS5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*, Figure 2 Default specification of protective barrier, to be used on soft ground



Key

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

4.6 Where the barrier is to be erected on top of existing hardstanding (pending it being uplifted), rubber block foot-blocks may be used, subject to adequate diagonal bracing, such as current barriers found on site.

Photograph 8: Example of barrier securely fixed into existing hardstanding.



4.7 The default protection barrier is based upon a scaffold framework with driven vertical posts and diagonal bracing where necessary to ensure the barrier remains fit for purpose throughout the duration of the construction period.

- 4.8 Once erected, the barrier must be considered sacrosanct and protected areas must not be subject to any form of development related activity, in particular excavation or any ground alterations.
- 4.9 The protection barrier shall not be removed or the alignment altered or temporarily dismantled without the agreement of the Project Arboriculturalist and, where necessary, the consent of the local planning authority.
- 4.10 At approximately 15m linear intervals, waterproof signs are to be affixed to the barrier with wording facing the side of construction activity stating: Construction Exclusion Zone – Keep Out.
- 4.11 The responsibility for monitoring the protection barriers and maintaining them in an appropriate condition throughout the course of development will be clearly assigned to site management personnel and augmented by independent arboricultural monitoring.
- 4.12 Sheet material and/or wooden hoarding shall not be attached to the barriers where this would hinder monitoring of protected areas behind.
- 4.13 When working beyond the barrier, consideration must still be given towards activities that may negatively affect the protected soil beyond. This includes the possible spillage of phytotoxic fluids including herbicides, chemicals and oils/fuels along with alkaline concrete/mortar slurry. Such precautions are particularly pertinent where in proximity to the ditches and open watercourses on the site.
- 4.14 No fires are to be lit within 10m of any tree protection barriers.
- 4.15 Whilst welfare facilities may potentially be incorporated into the tree protection barrier, there must be no temporary service connections both above and below ground into protected soil zones.
- 4.16 Static internal combustion engines such as those associated with generators should not be positioned so that exhaust emissions are directed towards remaining trees.

5. Conclusions

- 5.1 To implement the scheme, it is not necessary to remove any trees within the application area. In addition, the surrounding offsite trees have been carefully considered and will not suffer any appreciable negative impact as a result of the proposal.

- 5.2 Two retained London plane trees will require crown lifting. This would have been the case if the extant adjacent section of car parking was still in use, and the pruning will not be detrimental to the trees and may be undertaken in accordance with best practice.
- 5.3 Poplar tree 7 and, by implication ash tree 8, require crown reduction pruning. These are assessed as low value trees and the need for such pruning is independent of any construction activity. The proposed retaining structure results in a modest incursion within the root protection area for the larger poplar. Given the heavy reduction pruning required and within the context of the trees' value and limited longevity, this is deemed acceptable in this instance.
- 5.4 The development proposals have been significantly interrogated to ensure that all retained trees may be robustly and successfully protected. The required safeguarding measures may be secured by adequately worded conditions attached to any planning grant.
- 5.5 On the basis that the proposed development accords with the principles of acceptable development and given the scheme ensures the retention of all the trees, then upon assessment, the proposal is considered acceptable on arboricultural grounds.

Signed:



Ben Bennett BSc (Hons) For, Cert Arb (RFS), MArborA
Director, BB Trees Ltd

Appendix 1: Pre-Development Tree Survey of July 2021

A1. Tree survey assessment notes

A1.1 This tree survey has been structured to accord with the requirements of Sections 4.4 and 4.5 of British Standard 5837 of 2012: *Trees in relation to design, demolition and construction – recommendations*. The columns in the tree survey assessment refer to the following items:

Tree/Group number: Tree reference number as shown on drawings.

Common name *Botanical name*: Identifies individual species by common name. For avoidance of doubt the botanical name is shown *in italics*.

Tree height: Estimated height of the tree in metres.

Stem diameter: Diameter of the trunk(s) measured in accordance with Annex C of the Standard and expressed in millimetres.

Branch spread: Measured radial spread of the crown broken down into the four main compass points and expressed in metres.

Height above ground level of: Estimated measurement (in metres) to inform on ground clearance, crown/stem ratio and shading presented in two sub-categories:

- First significant branch (at point of attachment with parent stem) and direction of growth (eg 2.4 N).
- Canopy ie assessment of clearance above ground of lowest branch tips. Where irregular, and potentially significant towards development proposal, direction of assessed crown height has been added.

NB: For tree height, stem diameter and branch spread, the measurement conventions are as follows:

- Height and crown spread are recorded to the nearest half metre (crown spread being rounded up) for dimensions up to 10m and the nearest whole metre for dimensions over 10m.
- Stem diameter is recorded in millimetres (using a calibrated girth tape), rounded up to the nearest 10mm (0.01m).
- Estimated dimensions (eg for off-site or otherwise inaccessible trees where accurate data cannot be recovered) are identified by being suffixed with a #.

Life stage: The estimated age: young, semi mature, early mature, mature or over mature, shown as Y, SM, EM, M or OM respectively.

Physiological condition: Physiological condition being good, fair, poor or dead, shown as A, B, C or D respectively.

Structural condition: Structural condition being good, fair, poor or dangerous (eg collapsing, the presence of decay and physical defects), shown as A, B, C or D respectively.

General observations, including preliminary management recommendations: Particularly of structural and/or physiological condition, including further investigations of suspected defects that require more detailed assessment and potential for wildlife habitat.

Estimated remaining contribution in years (RC): <10, 10–20, 20–40 or >40.

Retention category (RC): Categorisation of survey trees in accordance with Section 4.5 and Table 1 of the Standard.

- **U (dark red):** Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

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 (eg 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.

NOTE: Category U trees can have existing or potential conservation value that it might be desirable to preserve.

- **A (light green):** Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Mainly arboricultural qualities: Trees that are particularly good examples of their species, especially if rare or unusual, or those that are essential components of groups or of formal or semi-formal arboricultural features (eg the dominant and/or principal trees within an avenue). Indicated by 1 in brackets after the appropriate category classification.

Mainly landscape qualities: Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features. Indicated by 2 in brackets after the appropriate category classification.

Mainly cultural values, including conservation: Trees, groups or woodlands of significant conservation, historical, commemorative or other value (eg veteran trees or wood-pasture). Indicated by 3 in brackets after the appropriate category classification.

Trees with an estimated remaining life expectancy of at least 20 years.

- **B (mid blue):** Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

Mainly arboricultural qualities: Trees that might be included in category A, but are downgraded because of impaired condition (eg presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years or trees lacking the special quality necessary to merit the category A designation. Indicated by 1 in brackets after the appropriate category classification.

Mainly landscape qualities: Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals or trees occurring as collectives, but situated so as to make little visual contribution to the wider locality. Indicated by 2 in brackets after the appropriate category classification.

Mainly cultural values, including conservation: Trees with material conservation or other cultural value. Indicated by 3 in brackets after the appropriate category classification.

- **C (grey):** Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.

Mainly arboricultural qualities: Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories. Indicated by 1 in brackets after the appropriate category classification.

Mainly landscape qualities: Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value and/or trees offering low or only temporary/transient landscape benefits. Indicated by 2 in brackets after the appropriate category classification.

Mainly cultural values, including conservation: Trees with no material conservation or other cultural value. Indicated by 3 in brackets after the appropriate category classification.

Tree 1 to tree group G10 were inspected by Ben Bennett from ground level only on Tuesday 20 July 2021. Weather conditions were dry and bright with good visibility from ground level.

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations		RC (years)	Category	
					First branch	Canopy		Physiological condition	Structural condition			
1	Silver birch <i>Betula pendula</i>	17	430	N 5.5 E 4.5 S 6 W 6	4.5 E	4.5	EM	B	B	Previously crown lifted on western side. Crown adds to diversity of frontage tree cover. No works required at present.	>40	B (2+3)
2	London plane <i>Platanus x hispanica</i>	16	560	N 7 E 9 S 8.5 W 5	3 E	0 SE	EM	A	A	Growing as one of a pair close to site frontage. Potentially implicated in some of the tarmac heave evident in public footway due north. Minor dead branches in crown. Monitor tarmac heave. Remove dead and defective branches. It would be acceptable on arboricultural grounds to crown lift to 3-4 m all round.	>40	A (2)
3	London plane <i>Platanus x hispanica</i>	17	510	N 6 E 5 S 8 W 7	3.5 S	0 SE	EM	A	B	The second of a pair of frontage plane trees. Near-to-surface roots causing heave in footway to north west. Minor deadwood within crown. Minor plane anthracnose. Monitor footway heave. Undertake ramp repair as necessary. It would be acceptable on arboricultural grounds to crown lift to give 3.5m clearance all round. Remove dead and defective branches.	>40	A (2)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
4	Swedish whitebeam <i>Sorbus intermedia</i>	8	380	N 4.5 E 4.5 S 4.5 W 4.5	2.2 E	1 E	EM	B	B	Standing in landscaping verge to the frontage and adding diversity by way of species to this section of the treescape. Congested crown as is typical, however free from any significant defect. Occupied pigeon nest at the time of assessment. Crown lift to give 2.6m clearance on southern side. Remove any obvious crossing branches.	>40	B (2+3)
5	London plane <i>Platanus x hispanica</i>	16	490	N 8 E 8.5 S 8 W 6	2.7 E	0.5 E	EM	A	A	Growing adjacent to an asphalt former car parking area. Slight heave to the old car park surface indicating near-to-surface rooting to around 3m radius from the trunk base. Dominant crown over adjacent ash. Minimal deadwood. Slight willow anthracnose/ leaf miner damage. Young ivy establishing upon lower trunk. Sever and strip ivy. Crown lift all round to give 3-4m clearance.	>40	A (2)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
6	Narrow leafed ash <i>Fraxinus angustifolia</i>	17–18	530# over ivy	N 7.5# E 6.5 S 6 W 4	3 N	4–5	EM	C	C#	<p>Heavily misshapen following removal of previous tree on the western side some years ago. Slender attenuated branch extending over highway verge boundary.</p> <p>Densely clad in ivy to 6m, obscuring the majority of the primary structure from inspection. Minor deadwood. Further thinning out of crown and shedding of larger, lower dead branches since previous assessment.</p> <p>Consideration should be given towards proactive removal and replacement planting.</p> <p>If tree is proposed for retention, it will require careful severance and removal of ivy outside of the bird nesting season and a more thorough structural assessment.</p> <p>RC provisional only.</p>	10–20	C (2)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
7	Hybrid poplar <i>Populus x canadensis</i>	20	1,040 over ivy	N 13 E 14 S 14 W 13#	2.8 N	2–3	EM/ M	B	C	<p>Growing close to existing area of asphalt covered car parking.</p> <p>Surface heave evident at a distance of up to 7m from the base of the trunk. However, the car park surface was covered with fallen leaves, twigs and other detritus. Sucker growth of up to 1m in height is now emerging from the disturbed asphalt surface.</p> <p>Trunk now densely clad in ivy up to 4m above ground level. Upswept primary branch on northern side is heavily end weighted and has recently lost a secondary branch of around 7m in length by up to 160mm in diameter, resulting in a slightly torn wound to the remaining stem.</p> <p>Tree appears to have lost its central apical leader many years ago at around 7m above ground level resulting in a particularly broad spreading habit. Crown engulfs that of adjacent ash.</p> <p>Occasional small to medium sized deadwood is evident.</p> <p>Tree has limited longevity in its current situation.</p>	10–20	C (2)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations		RC (years)	Category	
					First branch	Canopy		Physiological condition	Structural condition			
7 continued												
8	Narrow leafed ash <i>Fraxinus angustifolia</i>	18–19	550 over ivy	N 1 E 7 S 10 W 9–10#	2.6 S	1–1.5 S	EM	C	C	<p>Entirely reliant upon companion shelter provided by previous poplar with a heavily suppressed crown with minimal spread on northern side.</p> <p>Suspected near-to-surface root causing heave of up to 11m due south, albeit this may turn out to be from the poplar adjacent.</p> <p>Acute fork at around 4.5m, however crown heavily interwound with that of poplar, providing significant shelter.</p> <p>Tree of minimal arboricultural merit. Will require to be reduced as part of the suggested crown reduction of adjacent poplar.</p> <p>RC provisional only.</p>	10–20	C (2)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
G9	English elm <i>Ulmus procera</i> Hawthorn <i>Crataegus monogyna</i> Elder <i>Sambucus nigra</i>	Up to 8	Up to 240	As per plan	0	0	SM– EM	B–D	B–D	Off-site vegetation growing adjacent to boundary fence. Most significant element is a single English elm which is entirely dead, having succumbed to Dutch elm disease. Responsible party should remove dead elm next to footpath. Remainder of group adds to site screening at present. RC is for remainder of group.	20–40	(C) (3)
G10	Apple <i>Malus spp</i> Elder <i>Sambucus nigra</i>	Up to 5.5	Up to 300#	Up to 5 Overhang beyond fence: Up to 1.5 E	N/A	0	M	B#	B#	Off-site vegetation entirely festooned in ivy, obscuring it from inspection. Minimal overhang beyond site fence. Group has some low level wildlife value and overhang may be clipped back in line with fence without any negative impact upon any of the more significant trees.	20–40	(C) (3)

Tree A to tree E growing within the public highway verge with alphabetical reference as shown on associated Tree Constraints Plan were inspected by Ben Bennett from ground level only on Tuesday 20 July 2021. Weather conditions were dry and bright with good visibility from ground level.

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
A	Norway maple <i>Acer platanoides</i>	17	550	N 7 E 7 S 6 W 6	2.8	2–3	EM	B	A	Only small quantity of deadwood present in crown, which only overhangs the verge. No works required at present.	>40	A (2)
B	Norway maple <i>Acer platanoides</i>	13	550	N 7.5 E 7 S 6 W 8	3	3	EM	A	A	Small diameter deadwood and occasional crossing and chafing branches in crown. No works required at present.	>40	A (2)
C	Norway maple <i>Acer platanoides</i>	15–16	580	N 7.5 E 7 S 7 W 7	2.6 W	3 (average)	EM	B	A	Minor damage to root buttresses. Occasional dead branches in crown. Slightly less than optimum crown density. Remove deadwood.	>40	A (2)
D	Norway maple <i>Acer platanoides</i>	13	500	N 7 E 7.5 S 6 W 7.5	3.6 E	2–3	EM	B	B	Slightly suppressed on southern side by neighbouring tree. Deadwood present within crown. Slightly less than optimum crown density. Crown lift all round to give 3m clearance. Remove dead and defective branches.	>40	A (2)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
E	Norway maple <i>Acer platanoides</i>	13–14	540	N Up to 7 E Up to 7 S Up to 7 W Up to 7	2.5 S	2–3	EM	B	B	Slight growth list due south with crown in contact with adjacent telecommunications distribution pole 2. Congested crown with minor deadwood and some historic damage to root buttresses. Less than optimum crown density. Remove deadwood. Prune back to give clearance to distribution pole.	>40	A (2)

Appendix 2: Preliminary Arboricultural Method Statement

Pre-commencement tree works

- A2.1 In general terms, all tree works are to comply with BS3998:2010 *Tree work – Recommendations* wherever applicable and are to be undertaken by a specialist and suitably qualified and experienced arboricultural contractor.
- A2.2 The main pruning requirements are for the crown lifting of London plane trees 2 and 5 to provide 3-4m post-pruning clearance beneath. The extent of the crown reduction pruning for poplar tree 7 (and by implication, ash tree 8) is to be further specified ahead of the works. As this stage, a post-pruning height of around 15m and a remaining radial spread of around 7m is envisaged. Any remaining dead or defective branches should be removed.
- A2.3 Wherever possible, tree works are to be specified for actioning outside of the closed bird nesting season, typically extending from March until July. Should any tree works be required within this period then further specialist ecological advice should be sought. It is also appropriate to consider any other ecological restrictions due to protected species which may apply to the site.
- A2.4 Tree works are to be subject to future arboricultural advice to ensure that any necessary consents are in hand, which is particularly pertinent to tree works to be undertaken ahead of the granting of full detailed planning permission.

Ground protection

- A2.5 Initially, it is intended to safeguard all protected zones by virtue of a robust protection barrier. Should temporary construction access be required into these areas then the need for ground protection must be further considered.

Uplift of existing hardstanding within the RPA

- A2.6 Where low branches remain, due care and planning must be exercised to ensure damage is avoided to remaining branches due to physical contact with the excavator boom and bucket. The following precautionary approach is to be adopted:
- Excavator operator to work in conjunction with designated banksman, both having been prior briefed as to the arboricultural constraints associated with the operation. Excavator to use a toothless bucket with the blade aligned near horizontal to the surface to be lifted so as disturbance to underlying soil is kept to an absolute minimum. *Where roots are identified near to the surface and/or*

in areas where the surface to be removed is particularly thin, digging within such areas must be undertaken manually.

- The resultant spoil from the uptake of hardstanding must not be stockpiled within the root protection areas of the retained trees and must be exported to a designated area.
- Following uptake of surface, the infill should be of good quality topsoil and laid without compaction.
- Immediately following the works, the tree protection barrier is to be re-erected along the alignment specified within the tree protection plan.

Retaining structures adjacent to protected areas

- A2.7 The excavation to the south-eastern side of Poplar tree 7 is to be undertaken under the watching brief of an arboriculturalist. In the unlikely event that roots are encountered which are greater than 30mm in diameter, the extent of any root in relation to the remaining tree structure will be further assessed by the arboriculturalist.
- A2.8 Engineers' proposals for the retaining structure are to receive arboricultural review ahead of finalisation.
- A2.9 Where appraising alternative retaining structure types, the full width of the associated excavation must be considered as part of the potential impact i.e., the increased width of crib lock type construction over that of relatively narrow driven sheet pile construction.
- A2.10 Where considering cast in situ concrete structures, provision must be made towards the incorporation of an impermeable membrane to stop harmful alkaline leachates from polluting soil within protected areas.
- A2.11 The proposed method statement for the installation of finalised retaining structures must receive arboricultural review ahead of approval.

New service connections

- A2.12 All associated excavation and trenching associated with new services are to occur beyond the root protection area of any remaining tree or group as identified on the Tree Constraints Plan.

Landscaping within root protection areas

- A2.13 Substantial planting pits associated with new trees are to be avoided within the root protection area of any remaining trees or vegetation. Any landscaping proposed

within protected zones is to be undertaken without deep mechanical cultivation, typically being restricted to planting of only small whips or cell grown trees or shrubs.

Acoustic Fence

- A2.14 A section of acoustic fence is proposed to be erected adjacent to the boundary with Nursery Drive, which will run close to retained trees 7 and 8. Although the fence specification is subject to final design, it has been detailed as being 2m tall and of wooden construction. The alignment is such that it will likely replace the existing palisade fence running around the boundary.

Photograph 9: Showing current fence alignment adjacent to trees 7 and 8 (image dated 2019 showing the trees when not in leaf).



- A2.15 Given the modest height and wind-loading upon the fence, it appears unlikely that much larger post footing will be required than is the case with the extant fence. Ahead of the works, the new fence specification shall be subject to arboricultural review.
- A2.16 Where nearest the two retained trees, potential post location shall be subject to trial excavation. If tree roots greater than 25mm diameter are encountered, then support post locations shall be altered to avoid such roots and a bespoke section of fence panel constructed to suit. Within the root protection areas, any post footing holes shall employ an impervious liner, to protect the soil and roots from harmful leachate ahead of the concrete/postcrete curing.

Arboricultural monitoring

- A2.17 Arboricultural monitoring and future input is envisaged. This shall include providing a detailed specification for any necessary tree works including the identification of trees on site if necessary. The Project Arboriculturalist shall also confirm the correct installation of the tree protection scheme prior to the commencement of the main construction activity and will also undertake monitoring visits.
- A2.18 Should at any stage of construction activity it appear that to proceed with the approved development will result in conflict with retained trees then further arboricultural advice must be sought by contacting Ben Bennett at ben@bbtrees.co.uk or 07949 797656.