

BB Trees Ltd
Tree and Woodland Consultancy
ben@bbtrees.co.uk
www.bbtrees.co.uk

**Finalised Arboricultural Method Statement:
Jacobs Douwe Egberts, Ruscote Avenue, Banbury – Site 2**

Prepared for:
Trinity Property Consultants
10-11 Greenfield Crescent
Edgebaston
Birmingham
B15 3AU

Document reference: 707-22, Revision 0

1. Introduction

- 1.1 I received instruction from Andrew Baker, Senior Commercial Manager at Trinity Property Consultants to prepare an Arboricultural Method Statement in relation to the Site 2 proposal at the Jacobs Douwe Egberts factory off Ruscote Avenue, Banbury, Oxfordshire, OX16 2QU.
- 1.2 Cherwell District Council granted consent under planning application number 21/04144/F in respect of the *Demolition of existing office block and erection of surface level car park providing 215 replacement car parking spaces, including landscaping and other associated works; new main entrance and reception of the computer Suite, with external re-cladding* at the site. This document has been prepared to discharge pre-commencement Condition 8 of the planning grant.
- 1.3 I previously prepared an Arboricultural Report including a pre-development tree survey in July 2021 (document reference 614-21) which was submitted as part of the now consented planning application. I re-assessed the trees on Wednesday 29 June 2022.
- 1.4 Having reviewed all the trees within the site bounds, I found there had been no significant change in their condition since my previous assessment. All trees were re-assessed in relation to the consented development to enable a final specification for tree works and protection measurements.
- 1.5 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*.
- 1.6 This document is to be read in conjunction with the following drawings:
 - Barry Chinn Associates Ltd Landscape Architects (Contract number: 1953/19):
 - Drawing number: 01 - Tree Constraints Plan
 - Drawing number: 03 - Tree Retention, Protection and Removal Plan.
- 1.7 For wider context, my Pre-Development Tree Survey is included at Appendix 1.
- 1.8 The application site is located to the south east of Ruscote Avenue and to the eastern side of an extant site entrance and security lodge, being located at grid reference SP 450 416.
- 1.9 Trees at the site are not understood to be the subject of 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 included within the original tree survey with an alphabetical reference being assigned to the individual trees to differentiate them from those within the application area. These trees do not have any direct bearing on the works covered within this document.

1.11 Referring to the British Geological Surveys' Geology of Great Britain Viewer, the bedrock geology is that of the Charnmouth 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 This report is presented in the following format:

- Section 2: Review of tree cover in relation to approved development
- Section 3: Arboricultural Method Statement-
- Appendix 1: Pre-Development Tree Survey

2. Review of tree cover in relation to approved development

2.1 The Tree Survey took account of 27 arboricultural features within the application site (excluding those on the highway verge which were surveyed as trees A to G inclusive).

2.2 The tree cover is illustrated below with the aid of photographs taken at the same time as the pre-development tree assessment unless otherwise stated.

2.3 Trees 1, G2, 3 and 4, 5 and 6 grow to the rear of the boundary palisade fence at the upper crest of a steep sided embankment located beyond the existing perimeter road to the factory. These are located well beyond the area of proposed works and there will be no construction access to this area.

Photograph 1: Boundary trees on top of embankment viewed from the east.



- 2.4 Tree 8 is coppice regeneration from a previously felled ash tree and grows amongst an outgrown shrubbery surveyed as group G9, for which the arboricultural elements are mainly restricted to younger self-sown trees of mediocre only form.

Photograph 2: Showing coppiced base of ash tree 8 (photograph taken in May 2019 when more visible).



Photograph 3: Part of group G9 viewed from the south. The south eastern tip of this group will be cleared.



- 2.5 Trees 10 to 19 have a collective impact growing upon either the sloping embankments or the upper level of the landscaping mound. Trees 10 to 17 will be removed to facilitate the works.

Photograph 4: Showing trees 10 to 12 viewed from the north.



Photograph 5: Showing trees 10 to 19 inclusive viewed from the south.



- 2.6 Tree 20 is a prominent frontage, high value London plane tree that has co-evolved with Norway maple tree G growing in the public verge, which will remain.

Photograph 6: London plane tree 20 viewed from the south east with Norway maple tree G visible in the background (photograph taken in May 2019).



- 2.7 Plane trees 21 to 24 inclusive form one half of an avenue feature to either side of the main access into the site with the security lodge in the centre.
- 2.8 The north western tree, tree 21, is the best developed and grows in the most conspicuous location, is to remain, with the rest being removed.

Photograph 7: Plane trees 21 to 24 viewed from the east (photograph taken in May 2019).



- 2.9 Apple tree 26 and group G27, formed from cypress and yew, are both to be removed. These are located within the amenity space set back slightly within the factory footprint close to the nitrogen production plant.

Photograph 8: Apple tree 26 viewed from the west.



Photograph 9: Group G27



3. Arboricultural Method Statement

Pre-commencement tree works

- 3.1 Tree removal is strictly to be in accordance with the approved Tree Retention, Protection and Removal Plan. If there are any queries at all, these must be raised ahead of commencement.
- 3.2 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 arboricultural contractor.
- 3.3 Ecological advice is necessary to check for bird nesting activity immediately ahead of the works. Some nesting activity was noted during the site review in late June.
- 3.4 Where stumps are to be removed within the root protection area of remaining trees an arboricultural stump grinder is to be used to ensure roots of remaining trees are not unacceptably damaged
- 3.5 Once all pursuant conditions have been discharged, the tree works set out below are to be undertaken:

Tree reference number	Common name	Specification for works
T8 T8 Cont.	Ash	Clear shrubbery from within 1.5m radius of trunk base. Sever and strip ivy from lowest 2m of trunks. Commission a re-inspection.

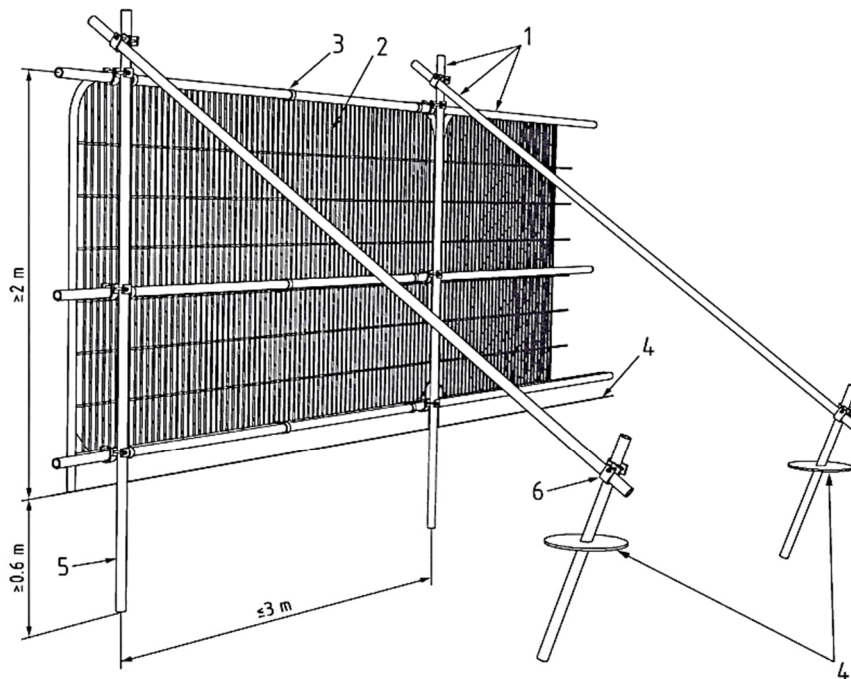
Tree reference number	Common name	Specification for works
G9	Various	<p>Clear designated section of group, including grinding out of any significant stumps to around 200-300mm beneath surface.</p> <p>From the remaining side of the newly created edge, young Norway maple trees of up to 100mm diameter to remain where more than 2m from edge of group. Formatively prune to promote best form.</p> <p>Coppice or reduce shrubs near edge (rose, cotoneaster and buddleia etc.)</p>
T10 to T16 inc		Remove including stumps.
T17	Lime	<p>Carefully dismantle to avoid any damage to remaining T18.</p> <p>Grind out stump to at least 300mm beneath surface.</p>
T18	Lime	<p>Cut back basal sucker growth. Crown lift by shortening secondary growth only to provide 2-3m clearance above ground.</p> <p>Selectively reduce any remaining lower branches on south eastern side where exposed following removal of adjacent tree.</p> <p>Remove dead and defective branches from remainder of crown.</p>
T19	Lime	<p>Cut back basal sucker growth. Crown lift by shortening secondary growth only to provide 2-3m clearance above ground.</p> <p>Remove dead and defective branches from remainder of crown.</p>
T20	London plane	Crown lift by shortening secondary growth only to provide around 3m clearance above ground.

Tree reference number	Common name	Specification for works
N/A	Ash and Norway maple	Saplings less than 100mm diam. growing between plane trees T20 and T21: Cut down to near ground level. Carefully grind stumps to around 100mm beneath surface.
T21	London plane	Sever and carefully remove ivy. Crown lift by shortening secondary growth only to provide around 3m clearance above ground. Remove significant deadwood.
T22	London plane	Tree to be carefully dismantled to avoid damage to remaining T21. Stump to be ground out to between 300-400mm beneath ground level.
T23 and T24	London plane	Trees to be removed including their stumps.
T25	False acacia	Remove including stump.
T26	Apple	Remove including stump.
G27	Cypress and yew	Remove. Liaise with main contractor regarding best method of stump removal.

Tree Protection measures

- 3.6 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 from construction related activity.
- 3.7 The alignment of the tree protection barriers is to strictly accord with the Tree, Retention Protection and Removal Plan. If **any** alteration to the approved alignment is made, this must result in betterment in terms of the overall protected zone.
- 3.8 The 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



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

- 3.9 This robust 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.
- 3.10 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.
- 3.11 The protection barrier shall not be removed nor the alignment altered or temporarily dismantled without the agreement of the Project Arboriculturalist and, where necessary, the consent of the local planning authority.
- 3.12 At approximately 10m 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.
- 3.13 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.
- 3.14 Sheet material and/or wooden hoarding shall not be attached to the barriers where this would hinder monitoring of protected areas behind.
- 3.15 When working beyond the barrier, consideration must still be given towards activities that may negatively affect the protected soil beyond such as the spillage of phytotoxic fluids including herbicides, chemicals and oils/fuels along with alkaline concrete/mortar slurry.
- 3.16 Provision is to be made for the storage and handling of such materials, which must be more than 15m from the trees and downhill of the remaining trees.
- 3.17 No fires are to be lit at the site.
- 3.18 Welfare facilities are to be independent of the tree protection barriers and there shall be no temporary service connections both above and below ground into protected soil zones.
- 3.19 Static internal combustion engines such as those associated with generators are to be positioned so that exhaust emissions are directed away from remaining trees.

Alterations to railings near T21

- 3.20 If it is necessary to replace the extant railings the current subterranean fixings must be removed with minimum excavation (best pulled near vertically).
- 3.21 New post fixing points to use impervious membrane hole liners to prevent the alkaline leachate from un-cured concrete products.

Landscaping within root protection areas

- 3.22 Substantial planting pits associated with new trees have been avoided within the root protection area of any remaining trees or vegetation. The approved landscaping 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.

Arboricultural monitoring

- 3.23 The scheme for monitoring is set out below:
- The Project Arboriculturalist shall confirm the remedial pruning to remaining trees and the correct installation of the tree protection scheme prior to the commencement of the main construction activity. At the same time, nearby ash tree 8 shall be re-inspected.
 - The site manager shall regularly inspect the general condition of the barriers to ensure they remain in a fit for purpose state. Should the Site Manager identify any potential conflict with remaining trees and the evolving construction, a further visit with the Project Arboriculturalist will be arranged.
 - Towards the end of the construction programme, an arboricultural monitoring visit is to be scheduled ahead of landscape installation, allowing review of any tree protection barrier removal or alignment to facilitate the works subject to a prior agreed landscape installation methodology.
 - Following installation of landscaping and at the end of the predictable construction phase, a final site monitoring visit shall be made preferably at the time of dismantling of any remaining protection barriers. A concluding monitoring statement will be prepared including any recommendations for specific monitoring of retained trees post-construction.

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 the associated 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 G 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	Broad leaved lime <i>Tilia platyphyllos</i>	15	560	N 6.5# E 6.5 S 5 W 5#	2.4 W	0–2.5	EM	A	A	Set back from palisade frontage fence separating survey site from public footpath with crest of steep sided embankment at around 1m on southern side. Congested crown exhibiting good vigour but with only very small diameter deadwood which is not a health and safety concern at present. Remove basal suckers. Shorten secondary growth over footpath to maintain around 3m clearance.	>40	A (1+2)
G2	8no birch <i>Betula spp</i>	Up to 14	Up to 360	N Up to 5.5 E Up to 5.5 S Up to 5.5 W Up to 5.5	N/A	2–4	EM	B	B	Trees have been established immediately to the rear of the palisade fence with a steep sided 1:1 to 1:2 embankment on the southern side. Trees previously crown lifted on fence side giving significant clearance over public footpath, typically with a slight growth bias into the site. Minor deadwood only. For tree closest to tree 1, cut back basal suckers and epicormic growth from lowest 2.5m of trunk. Remainder of group require no works at present.	20–40	(B) (2+3)

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			
3	Small leafed lime <i>Tilia cordata</i>	12	510	N 5 E 5.5 S 7.5 W 4	1.9 S	2 S	EM	A	B	Restricted rooting architecture with significant near-to-surface roots extending down embankment on southern side. Congested crown with a number of acute branch unions exhibiting some included bark, however crown relatively well sheltered. Small diameter crossing and chafing branches, however crown retains high vigour. No works required at present.	>40	A (2+3)
4	Small leafed lime <i>Tilia cordata</i>	12	560	N 6.5# E 4 S 7.5 W 7	1.6 S	1 S	EM	C	B	Near-to-surface roots, particularly on western side. Co-dominant crown structure. Suffering slightly from suppression, although generally fair. Reduced crown density, which is less than optimum. However, no current dieback. Avoid mowing damage to near-to-surface roots.	>40	B (2+3)

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			
5	False acacia <i>Robinia pseudoacacia</i>	14	640	N 8# E 6 S 7 W 6	2.3 S	2–3	M	B/C	C	Heavily reliant upon companion shelter provided by adjacent acacia. Acute main fork at 1.8m. Self-set saplings growing from build up of detritus suggesting likelihood of some decay. Pay particular attention to main fork during future assessments. Retain only alongside dominant acacia tree 6.	20–40	C (2)
6	False acacia <i>Robinia pseudoacacia</i>	17	580	N 6.5# E 5 S 6 W 6	3.5 W	3	EM	A	B#	Dominant false acacia. Trunk bifurcates at 2.2m resulting in an acute main fork with clear open lipped bark seam on southern side (similar but to a lesser extent to the north) indicating a lack of stem fusion. Small to medium sized deadwood within crown, however maintaining fair vigour. Remove dead and defective branches. Install three low stretch cable braces uniting the three stems at around 9–10m above ground level in a triangular configuration. Pay particular attention to main fork during future monitoring.	>40	B (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			
G7	False acacia <i>Robinia pseudoacacia</i>	Up to 7.5	Up to 110	Up to 4	N/A	0	SM	B	C	Basal sucker regrowth from around perimeter of old felled stump. Inappropriate for future growth in this location. Cut all suckers to near ground level and chemically treat to abate future regrowth. Opportunity for additional replanting adjacent.	<10	(U)

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			
8	Ash <i>Fraxinus excelsior</i>	17	440# 330# 290# 420#	N 7.5# E 8 S 8.5 W 7#	3 N	1.5–2	EM	B/C	C#	<p>Omitted from topographical survey and approximate only position shown on associated Tree Constraints Plan.</p> <p>Since the previous assessment, the tree has become heavily clad in ivy preventing thorough inspection/ measurement of trunk dimensions.</p> <p>Tree is clearly of coppice regeneration following the felling of a parent tree many years ago located within the dense overgrowing shrubbery.</p> <p>Initially, it appears highly likely that there is a degree of dysfunction and/or decay in the lower trunk structure. Minor deadwood only present in crown.</p> <p>Very early indications of peripheral crown thinning, likely associated with the onset of ash dieback.</p> <p>Sever and strip ivy from lowest 2m of trunks. Clear any remaining vegetation away from lower trunks and remove any build up of detritus, allowing a thorough inspection.</p> <p>Tree appears unsuitable for retention into full maturity due to the heightened risk of individual stem collapse due to its lapsed coppice form.</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	Norway maple <i>Ace platanoides</i> Wild cherry <i>Prunus avium</i> Ash <i>Fraxinus excelsior</i> Hawthorn <i>Crataegus monogyna</i> Hazel <i>Corylus avellana</i>	Up to 7	Up to 130	N/A	0	0–1	Y–SM	A–C	B (average)	Group entry relates to self-set tree species present within overgrown shrubbery. All trees have self-seeded with some clearly being of poor and compromised form, rendering them inappropriate for retention into full maturity. Rogue out inappropriate self-set trees while modest in size, ensuring that cut stumps are directly treated with an appropriate herbicide to limit regrowth. Any retained trees should be assessed for suitable formative pruning to maximise their potential long term value.	10–20	(C) (2)
10	Small leafed lime <i>Tilia cordata</i>	10	490	N 6.5 E 7 S 7 W 6	1.8 W	2 (average)	EM	B	B	Somewhat contorted crown that is co-dominant with adjacent lime. Indications of pruning during early establishment at mid-crown height. Lacking a central dominant leading stem above 4.5m. Occasional chafing branches. No works required at present.	>40	B (2+3)

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			
11	Small leaved lime <i>Tilia cordata</i>	12	480	N 6.5 E 4 S 7 W 4.5	1.8 N	0 S	EM	A	B	Co-dominant crown structure. Significant root flare with disrupted bark but no indications of any dysfunction. Congested crown with small diameter crossing and chafing branches but free from significant defect. No works required at present.	>40	B (2+3)
12	False acacia <i>Robinia pseudoacacia</i>	13	400	N 4.5 E 3 S 4.5 W 5	2.2 W	2	EM	A	B	Slightly suppressed crown on eastern side, however retaining good form. Small diameter deadwood only in centre of crown. No works required at present.	>40	B (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			
13	False acacia <i>Robinia pseudoacacia</i>	9.5	480	N 4 E 8.5 S 9 W 8#	1.7 S	3 (average)	EM– M	B/C	B	<p>Tree grows to edge of group with a strong bias in a southerly direction. At the base of the trunk on the southern side, there is the start of a necrotic seam of minor decay. First branch at around 1.7m appears to have a less than ideal union with the parent stem and is heavily end weighted. A further fork at 2.2m is acute with a build up of detritus from which there is a self-set hawthorn growing.</p> <p>Viewing the tree within the active growth season, the crown density is considered fair. There is considered to be an increased likelihood of the lowest branch potentially subsiding and shedding, particularly as outer growth becomes more end weighted. Overall, the tree benefits significantly from shelter provided by the following lime.</p> <p>Acceptable at present as part of wider group. Limited longevity.</p> <p>It is recommended that peripheral growth on the lowest primary branch on the southern side be shortened by around 2m in length.</p> <p>Deadwood should be removed at the same time.</p> <p>Tree should be paid particular attention during future monitoring.</p>	10–20	C (2+3)

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			
14	Small leaved lime <i>Tilia cordata</i>	13–14	560	N 9 E 6 S 7.5 W 8	2.5 W	2.5–3	EM	A	B	Dominant lime tree in immediate grouping. Crown based upon co-dominant stems emerging from around 2.5m above ground level, however union partially obscured from inspection. Crown appears free from any significant defect but is somewhat congested. No works required at present.	>40	B (2+3)
15	Small leaved lime <i>Tilia cordata</i>	14	370	N 5 E 4 S 5 W 6	2.5 W	3	SM/ EM	B	B	Narrow, drawn up tree with limited radial crown spread but maintaining good vigour. Occasional chafing branch in the southern side of the crown. No works required at present.	>40	B (2+3)
16	False acacia <i>Robinia pseudoacacia</i>	13	510	N 5 E 5 S 6.5 W 7	1.8 W	3–4	EM	B	B	Growing from the edge of a shrubbery with some shrub stems climbing up against lower trunk. Deadwood beginning to accumulate within crown including on the car park side. Some suspected crown recession noted during previous survey. However, current vigour fair. Remove dead and defective branches and monitor vigour.	20–40	C (2+3)

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			
17	Small leafed lime <i>Tilia cordata</i>	16	550	N 7 E 6 S 7 W 6.5	1.8 N	3 (average)	EM	A	B	Dominant tree within grouping. Main trunk bifurcates at around 2.6m whereby the co-dominant stems share a slightly acute union with clear signs of included bark to the east. Congested crown with a number of crossing and rubbing branches. No works required at present. Pay particular attention to main fork during future monitoring.	>40	B (2+3)
18	Small leafed lime <i>Tilia cordata</i>	10	460	N 8.5# E 5 S 7 W 5	1.9 E	2–3	EM	B	B	Low spreading habit due to low fork at 1.8m which has produced a potentially weak union, albeit relatively well sheltered within the group. Tree reliant upon companion shelter. Superficial bark wound on downhill side of trunk. Crown lift branches hanging low over pavement to give 3m clearance and monitor root heave within pavement surface. Retain only as part of wider group. Pay particular attention to main fork during future monitoring.	>40	C (2+3)

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			
19	Small leaved lime <i>Tilia cordata</i>	12	470	N 6.5# E 4 S 6.5 W 7#	1.8 W	2.5	EM	A	B	Asymmetric crown due to being on edge of group. Near-to-surface roots, some of which have inevitably been damaged during mowing operations. Part reliant upon companion shelter. Retain as part of wider group. No works required at present.	>40	B (2+3)
20	London plane <i>Platanus x hispanica</i>	16	640	N 10 E 9 S 8 W 7.5#	2.4 SW	1	EM	A	A	An open grown specimen with a slight growth list to the north. Previous service trenching at around 5m due east, however no indications of any impact upon the crown. Free from any significant defect. Crown lift branches hanging low over pavement to give 3m clearance and monitor root heave within pavement surface.	>40	A (1+2)
21	London plane <i>Platanus x hispanica</i>	17	680	N 9.5 E 9.5 S 7 W 9	3 W	3–4	EM	A	A	End specimen in a line of four contemporary plane trees. Recently installed service chamber at around 2.5m. Occasional dead branch including some small hung up dead branches. Light ivy now cladding trunk to 3m above ground level. Crown lift all round to give approximately 4m clearance above ground level. Remove remaining significant deadwood.	>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			
22	London plane <i>Platanus x hispanica</i>	16	510 over light ivy	N 7 E 7 S 6.5 W 7	2.8 SE	3 (average)	EM	B	B	A drawn-up tree with a co-dominant crown structure that has previously been pruned on the road side, however often cutting internodally. Part reliant upon companion shelter and its value is as a component of a wider group. Lightly clad in ivy to around 3m above ground level. Regenerating well following previous pruning. Sever ivy.	>40	B (2)
23	London plane <i>Platanus x hispanica</i>	15–16	510 over ivy	N 7 E 6 S 6 W 7#	3.5 E	3–4	EM	B/C	B/C	Suppressed tree with flattened crown architecture. Numerous dead/dying back lower branches; some with the saprophytic fungus Jew's ear present. Ivy growing rampantly, indicating tree is heavily suppressed. Remove dead and defective branches. Sever ivy and allow to die back. Pay particular attention to tree during future monitoring. Tree's value is as a component of a wider group rather than individual contribution.	20–40	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			
24	London plane <i>Platanus x hispanica</i>	16	620 over ivy	N 7.5 E 9.5 S 9# W 9–10#	2.5 N	3 (average)	EM	A	B	<p>An end specimen in a line of four plane trees with a slightly suppressed crown on the northern side. Ivy growth becoming dense to around 5m above ground level.</p> <p>To a distance of 2.5m on the southern side, a substantial (130mm in diameter) near-to-surface root is evident. It is apparent that an area of localised footway repair has been required, however the current cast-in-situ concrete is becoming displaced, likely due to near-to-surface rooting.</p> <p>Branches previously selectively shortened on the side of the security lodge. Minor deadwood only present.</p> <p>Clear shrubbery from around base. Sever ivy and strip from lower trunk. Remove dead and defective branches.</p>	>40	B (2+3)

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			
25	False acacia <i>Robinia pseudoacacia</i>	15	580# over ivy	N Up to 6 E Up to 6 S Up to 6 W Up to 6	3.6 N	3 (average)	M	B	B#	Becoming festooned in ivy, obscuring the lowest 6m of the main structure from assessment/measurement. Where visible, the upper crown retains reasonable vigour with only very small diameter deadwood. Cut back shrub bed. Clear ground ivy and strip as much as is practicable from the trunk of the tree. Pay particular attention to tree during future monitoring. RC provisional only.	20–40	C (2)
26	Apple <i>Malus domestica ssp</i>	4.5	280	N 4.5 E 4.5 S 4.5 W 4.5	N/A	0.5	M	B	B	Trunk has a list to the south east towards adjacent nitrogen production plant. Low mop-headed crown with limited room for mowing beneath. Heavily congested with multiple crossing and chafing branches but maintaining good vigour. Minor woolly aphid infestation. No works required at present. If required, crown lift to give around 1.3m clearance beneath circumference.	10–20	C (3)

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			
G27	Cypress <i>Cupressus spp</i> Elder <i>Sambucus nigra</i> English yew <i>Taxus baccata</i>	Up to 7	140–290#	2–3 (average)	N/A	0–1	SM– EM	C–D	B–D	<p>Planted as what is assumed to have been a low level screen around underground tank. Elder of self-set origin and it appears likely the yew is also self-set.</p> <p>Trees on the northern side of the group, in particular, show significant crown stress which has been ongoing for a number of years, likely due to hostile rooting environ.</p> <p>The trees to the northern side of the group have continued to decline, currently being between 70% and 80% dead and approaching a moribund state.</p> <p>Collectively, the grouping is of minimal arboricultural merit.</p> <p>Dying/dead trees should be removed.</p>	<10	(U)

Trees growing within the public highway verge with alphabetical reference as shown on associated Tree Constraints Plan

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>	11	520	N 7 E 6.5 S 5 W 7	2.8 W	2.5–3	EM	A	B	Minor damage to root buttresses. Small diameter internal deadwood. Deadwood should be removed.	>40	A (2)
B	Norway maple <i>Acer platanoides</i>	14	580	N 7 E 7 S 6 W 8	2.4 W	2.5	EM	B	A	Dominant tree of excellent form. Slight girdling root buttress. Small diameter deadwood. Remove deadwood from crown.	>40	A (2)
C	Norway maple <i>Acer platanoides</i>	14	450	N 6 E 6 S 6 W 6	2.6 W	2.5–3	EM	B/C	B	Small diameter deadwood in crown only including some failed and hung up branches. Minor damage to root buttresses. Slight peripheral crown dieback. However, current crown density appears fair. Remove dead and defective branches and monitor.	>40	A (2)
D	Norway maple <i>Acer platanoides</i>	14	530	N 7 E 7 S 7 W 7	2.6 S	2.5	EM	B	B	Minor historic damage to root buttresses. Minimal heave to tarmac pavement surface. Crown lift all round to give 3m clearance. Remove dead and defective branches.	>40	B (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>	9–10	390	N 6 E 6 S 6 W 6	2.6	2.5	EM	B	B	Four runs of light deflection by way of tarmac heave within the footway surface. Crown lift to give 3m clearance over pavement. Monitor tarmac heave.	>40	B (2)
F	Norway maple <i>Acer platanoides</i>	9.5	490	N 6.5 E 6.5 S 6.5 W 6.5	2.6 S	2.5	EM	B	B	Minor runs of tarmac heave within footway surface with roots clearly spreading into adjacent Jacobs Douwe Egberts site. Low consolidated crown. Slight thinning of crown, particularly on northern side. Crown hanging low over pavement. Crown lift to give 3m clearance over pavement. Monitor tarmac heave.	>40	B (2)
G	Norway maple <i>Acer platanoides</i>	16	560	N 8 E 7# S 7 W 8	2.8 S	2.5 (average)	EM	A	A	Runs of surface heave within adjacent footway and historic damage to near-to-surface roots/buttress region. Minor deadwood within centre of crown. Existing services within root protection area radius. Crown lift all round to give 3m clearance. Monitor tarmac heave.	>40	A (2)