



TREE SURVEY
and
ARBORICULTURAL IMPLICATIONS ASSESSMENT

In relation to:
Proposed Development Works,
Willow Tree Retail Park
UB4 9SN

15 June 2017

Company of Gardeners General Notes

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Project: Willow Tree Retail Park, UB4 9SN
Client: Deutsche Alternative Asset Management (UK) Ltd,

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Date 15 June 2017

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Signature

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ISSUE	DESCRIPTION	DATE
000	Issue to Urban Edge	15 June 2017
001		
002		

Willow Tree Retail Park, Yeading.

1.0 Introduction

- 1.1 This report, in accordance with BS5837:2012 Trees in Relation to Construction – Recommendations, has been commissioned by Deutsche Alternative Asset Management (UK) Ltd, to provide an appraisal of existing trees and the implications upon them in relation to the siting of a proposed Starbucks Drive Thru within the existing car-park of Willow Tree Retail Park, Yeading, UB4 9SN.
- 1.2 The report includes:
- A survey of existing trees and an impact of the proposed development upon them along with recommendations for tree protection during the proposed works.
 - A site plan (Tree Constraints Plan) indicating the location of existing trees on site in relation to the proposed development (Appendix A).
 - A survey / assessment schedule of the quality of individual trees, including species, size, condition, anticipated life expectancy, and anticipated rooting areas (Appendix B).
 - Method statements, outlining how works should proceed to minimise damage to trees during the development process (Appendix C).
 - Planting proposals (Appendix D)
- 1.3 The survey was conducted on 6th August 2016. Trees were inspected in fine weather, from ground level. If a more detailed assessment involving aerial access to the tree is required, this will be noted within the recommendations.
- 1.4 BS5837: 2012 Table 1, provides a cascade chart for tree quality assessment proposing four categories indicating trees by retention value and colour coded accordingly. These categories have been employed throughout this report and accompanying documents.

2.0 Limitations

- 2.1 The dynamic nature of trees as living organisms means that their health and condition can change and be affected by external conditions. Therefore this report should only be considered as valid for a period not exceeding 6 months from the date of inspection.
- 2.2 A risk assessment of the trees has not been undertaken.

3.0 Site Context and Project Description

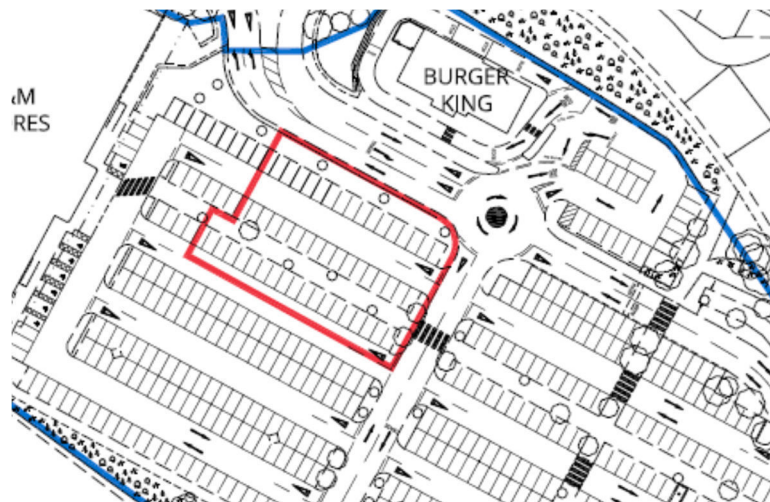
- 3.1 The retail park, south of Glencoe Road, Yeading extends to approximately 3.1 hectares, and adjoins further retail outlets, all surrounded by residential housing. Small pockets of amenity landscape planting exist within and around the car park of the site, and it is within these areas that all the surveyed trees exist.
- 3.2 Development proposals for a new A3 retail unit, extending to 1,800 sq ft, to be sited within the existing car park are being prepared for submission to planning
- 3.3 The combined proposals for the new unit and accompanying car parking spaces will necessitate the removal of an estimated 7nr trees, and construction works within close proximity of two others. The trees are located within areas of soft landscape: either shrub beds or lawn, or within the hard-landscape of paving and housed within gravel filled, plastic tree grilles.

Willow Tree Retail Park, Yeading.

Category A High Quality	Category B Moderate Quality	Category C Low Quality	Category U Unviable
4	0	7	2

Quality of individual trees surveyed.

- 3.4 The trees are generally in a good condition commensurate with the environment within which they are located; with notable differences between the growth rates of trees within hard and soft landscaped areas.
None of the trees are protected with either Tree Preservation Orders, or are within a Conservation Area.



Plan Showing Location of Proposed A3 Unit

4.0 Arboricultural Implications Assessment (AIA)

- 4.1 An Arboricultural Implications Assessment (AIA) seeks to identify the potential impact of the development proposals upon adjacent trees. If there is a need to protect trees from potential development impacts e.g. where proposals may encroach into Root Protection Areas (RPA's), then a Method Statement will provide guidance for amelioration.
- 4.2 RPA's indicate the area around a tree [12 x the trees girth] that should not be disturbed in order to ensure the trees health and longevity. Minimal encroachments into the RPA [max 20%] can be accommodated and specialist construction techniques employed in such circumstances to minimise root disturbance and disruption.
- 4.3 The Survey Schedule (Appendix B) indicates the extent of the RPA's for the individual trees being surveyed.
- 4.4 Of the thirteen trees surveyed within the vicinity of the proposed development (drive thru and replacement car parking), twelve (T1, 2, 3, 8, 9, 11 & 12)) will require removal to accommodate the proposals.

Willow Tree Retail Park, Yeading.

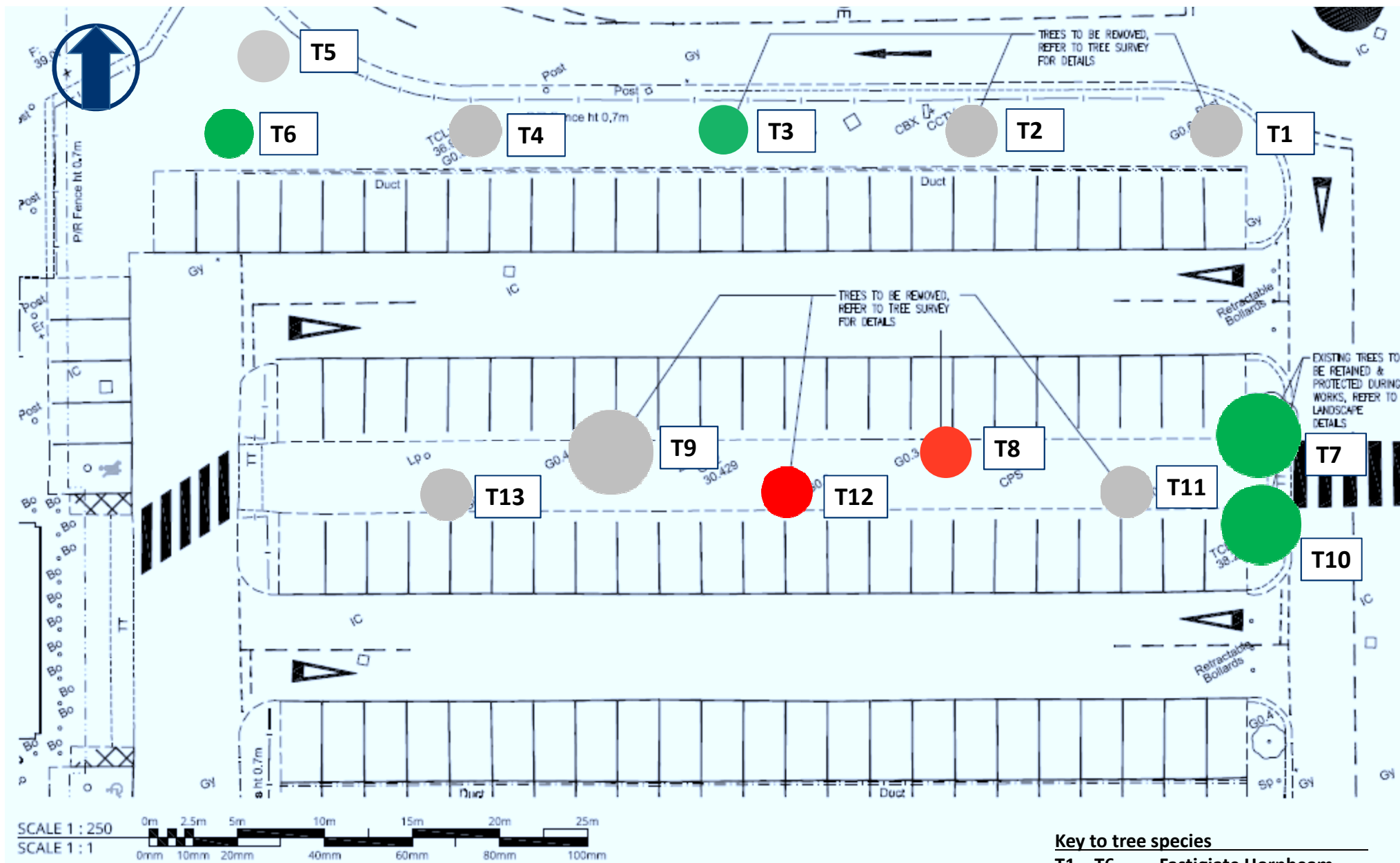
- 4.5 The footprint of the proposed building sits outside the RPA's of the retained trees (T7 & T10), within an area of existing car park. Therefore, root protection measures are not required. A considered layout controlling access / movement of site traffic and plan will prevent any negative impacts occurring upon the retained stock.

5.0 Recommendations

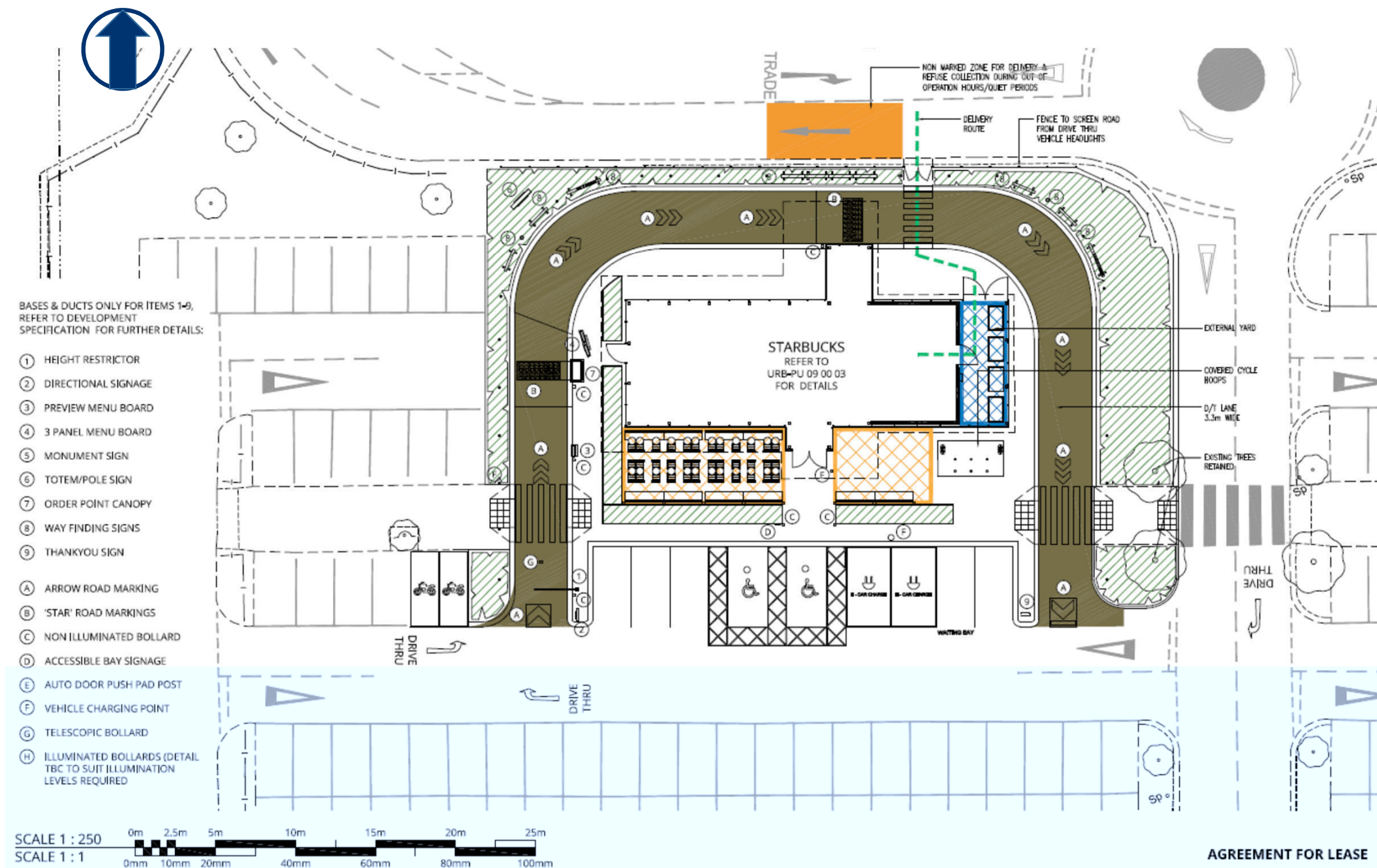
- 5.1 Trees proposed for retention should be protected throughout the construction phase of the development to ensure they are not affected by the works. All retained trees should therefore be protected as detailed in the Arboricultural Method Statement. See Appendix C
- 5.2 Replacement planting as Dwg No: 191 – 001 (Appendix D), should be implemented compensate for tree removals.

Appendix A

Survey / Tree Constraints Plan



**Willow Tree Retail Park, Glencoe Road, Yeading.
Survey / Tree Constraints Plan.**



**Willow Tree Retail Park, Glencoe Road, Yeading.
Proposed Site Layout.**

Appendix B

Tree Survey Record

Willow Tree Retail Park
June 2017

Ref	Species	Tree height (m)	Stem Dia (mm)	Crown Spread N – S E - W		Life Stage	Condition	Comments / Preliminary Recommendations	Life Expectancy	BS Category	BS RPA Radius (m)
		Crown height (m)									
T1	Fastigiate Hornbeam	7	120	1	1	Y	Good	Reasonable specimen. Removal required to accommodate development proposals.	40+	C	1.5
		2		1.5	1.5						
T2	Fastigiate Hornbeam	7	120	2	1.5	Y	Good	Reasonable specimen. Removal required to accommodate development proposals.	40+	C	1.5
		2		1.5	2						
T3	Fastigiate Hornbeam	7	150	1	1.5	Y	Good	Well-shaped tree, with good shape and form, typical of the species. Removal required to accommodate development proposals.	40+	A	2.0
		2		1.5	1						
T4	Fastigiate Hornbeam	7	110	1	1	Y	Good	Group of young trees within grassed verge along site entrance. All of good shape and form, typical of the species. No work / recommendations.	40+	C	1.5
		2		1	1						
T5	Fastigiate Hornbeam	7	110	1.5	1	Y	Good		40+	C	1.5
		2		1.5	1						
T6	Fastigiate Hornbeam	7	170	1.5	1.5	Y	Good		40+	A	2.0
		2		1.5	1.5						
T7	Italian Alder	8	170	2.5	2	S/M	Good	Well-shaped tree, with good shape and form, typical of the species.	40+	A	2.0
		3		2	2						
T8	Italian Alder	3.5	80	0.5	0.5	Y	Poor	Weak specimen with broken / lost main leader. Removal required to accommodate development proposals.	-10	U	1.0
		1.75		1	0.5						
T9	Italian Alder	6.5	120	2	1.5	Y	Good	Reasonable specimen. Removal required to accommodate development proposals.	40+	C	1.5
		1.75		1.75	1.75						
T10	Italian Alder	8	150	2	2	S/M	Good	Well-shaped tree, with good shape and form, typical of the species.	40+	A	2.0
		3		2	2						
T11	Italian Alder	6.5	110	1.75	1	Y	Good	Reasonable specimen. Removal required to accommodate development proposals.	40+	C	1.5
		1.75		1	2						

Willow Tree Retail Park
June 2017

Ref	Species	Tree height (m)	Stem Dia (mm)	Crown Spread N – S E - W		Life Stage	Condition	Comments / Preliminary Recommendations	Life Expectancy	BS Category	BS RPA Radius (m)
		Crown height (m)									
T12	Italian Alder #	5.5	80	1	0.75	Y	Poor	Slow / weak growth and minor die back / dead wood [5%] within crown.	-10	U	X
		1.75		1	0.5						
T13	Italian Alder #	5	90	1	0.75	Y	Fair	Slow / weak growth.	+10	C	1.0
		2		0.5	0.5						

Willow Tree Retail Park

June 2017

Key to Tree Survey Schedule

Tree No

Tree numbers applied as T1, etc to each tree are per the Tree Survey Plan and accompanying drawings. In line with the advice of BS5837, where trees occur as a cohesive group, these are suffixed with a 'G', and are assessed as such with all size data being given as mean figures unless otherwise stated. Any trees on site and off site that are appropriate to be included but are omitted from the topographical survey supplied are included in the schedule, though their positions are only shown indicatively.

Height

Tree height measured in metres.

Stem Diameter

Stem diameter in millimetres at 1.5m above ground level. Where the stem is divided before 1.5m, measurements are taken immediately above the root flare, indicated by the notation 'RF'.

Branch Spread

Radial crown spread in metres, measured for each of the four cardinal points [N, S, E & W] of the compass from the centre of the trunk.

Height of Crown

Height above ground in metres to the lowest branch.

Age Class

Y	Young	Recently planted or establishing tree that could be transplanted with specialist equipment, i.e. less than 150 dia at 1.5m
S/M	Semi-mature	An established tree, but with some growth to make before reaching its potential maximum size. A tree within its 1 st third of lifespan.
E/M	Early-mature	A tree that is reaching its ultimate potential height, but if healthy will still increase in stem diameter and crown spread. 2 nd third of lifespan.
M	Mature	A mature specimen with limited potential for any significant increase in size. A tree within its final third of lifespan.
O/M	Over-Mature	A senescent, or moribund specimen of low vigour, within its final third of lifespan. Possibly also containing defects with implications.
V	Veteran	Specimens exhibiting features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species.
D		The tree is dead.

Deadwood

Twigs	Small branch material up to 10mm in diameter.
Minor Deadwood	Dead wood 10mm – 50mm in diameter.
Major Deadwood	Dead wood 50mm in diameter and above.

Willow Tree Retail Park June 2017

Condition

G	Good	Generally in good health typical of the species needing little, if any, attention. Few minor defects of little overall significance such as physical damage or suppressed branches. Showing no adverse risk or failure / defects.
F	Fair	Minor, but rectifiable defects or in the early stages of stress, from which it may recover. Showing minor signs of deterioration. This could include a major defect in an early life stage, or multiple minor defects. A tree that may require work to remove or improve a defect.
P	Poor	A tree, or trees with major structural and physiological defects or stressed such that it would be a risk to retain in its current or future known situation. Unlikely to return to a good condition given time or remedial work.
D	Dead	A tree or trees no longer alive. However, this could also apply to those trees that are dying and will be unlikely to recover, or are becoming or have become dangerous.

Comments / Preliminary Recommendations

These may include further investigations for the presence of decay or climbed inspections, ivy removal or pruning works. (This is not intended to be a specification for tree work and further advice may be required prior to implementation).

Trees assessed as being in apparently immediately hazardous condition will be notified to the client separately as soon as practicable.

Estimated Remaining Contribution

An estimate of the safe remaining life contribution in years that the tree or group of trees is expected to have based on species / site condition in its current context. The following bands are used:

- 10	Estimated life remaining contribution less than 10 years.
10+	Estimated life remaining contribution of at least 10 years.
20+	Estimated life remaining contribution of at least 20 years.
40+	Estimated life remaining contribution of at least 40 years.

Quality and Value grade classification according to BS5837

Category U	Trees in such a condition that they cannot be retained as living trees in the context of the current land use for longer than 10 years.
Category A	Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category B	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category C	Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees below 150mm dia.

RED
GREEN
BLUE
GREY

Suffix 1	Tree valued mainly because of its arboricultural qualities
Suffix 2	Tree valued mainly because of its landscape qualities
Suffix 3	Tree valued mainly because of its cultural values, including conservation

Whole / part of tree inaccessible to survey, therefore estimates are given.



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Appendix C
Arboricultural Method Statement
Protective Fencing

Starbucks Drive Thru – Willow Tree Retail Park.

Proposed Method Statement for Plant Protection during construction works.

Introduction

The Arboricultural Method Statement outlines the scope of works required to protect aerial and subterranean parts of trees during site construction works. Tree protection measures should be conducted and completed in advance of any construction works, and remain in place until all development works are complete and all plant / machinery etc has been removed from site.

The general aim is to create a protective zone around the tree [Root Protection Area: RPA], that will remain undisturbed throughout the site development programme. As a rule of thumb, the RPA radius, radiating from the centre of the protected tree extends to 12 x, the trees diameter measured at a height of 1.5m above ground level. For example, a tree with a diameter of 400mm will require a RPA of at least 4.8m [72.38 sq metres].

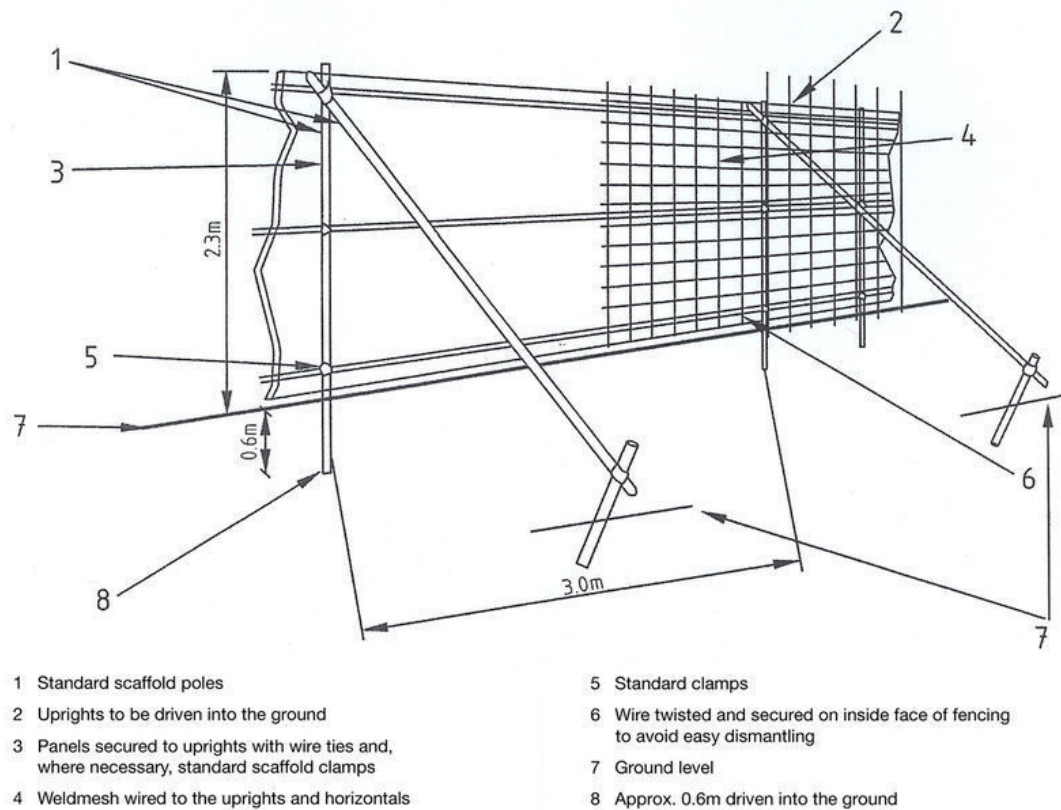
Method

1. Determine and confirm trees requiring protection: reference to arboricultural surveys & reports, landscape layout drawings, planting plans etc may be available to assist in this process.
2. Erect fencing as per accompanying detail, or similar approved e.g. Heras type fencing fixed to posts driven into the ground, or into propriety rubber block plates where surface mounting. Secure panels with a minimum of two clips as shown below, and include for support struts mounted within block plates at each junction.



Typical surface mounted protective fencing detail.

3. Ensure weather proof signage is fixed at minimum 10m centres, in accord with accompanying illustration, shown below.



Typical fencing detail using scaffold poles and weldmesh panels.



Weather proof signage at a maximum of 10m centres.

Appendix D

Planting Proposals

3 No. *Acer campestre*
'Elsrijk'

20 No. *Cornus alba* 'Elegantissima'
20 No. *Cornus stolonifera*
RANDOM GROUPS OF 5

30 No. *Cotoneaster*
'Coral Beauty'
30 No. *Pachysandra*
terminalis

30 No. *Cornus canadensis*

30 No. *Euonymus*
'Emerald Gaiety'

1 No. *Betula jacquemontii*
'Grayswood Ghost'

20 No. *Cotoneaster*
'Coral Beauty'

20 No. *Euonymus*
'Emerald Gaiety'

30 No. *Euonymus* 'Emerald Gaiety'

3 No. *Phormium* 'Purpureum'

35 No. *Viburnum davidii*

1 No. *Betula jacquemontii*
'Grayswood Ghost'

30 No. *Cornus alba* 'Elegantissima'
30 No. *Cornus stolonifera*
RANDOM MIX GROUPS OF 6

30 No. *Cornus canadensis*
30 No. *Euonymus* 'Emerald Gaiety'
RANDOM MIX GROUPS OF 6

25 No. *Pittosporum tenuifolium*

20 No. *Cotoneaster*
'Coral Beauty'

15 No. *Cotoneaster*
'Coral Beauty'

EXISTING TREES RETAINED

25 No. *Euonymus* 'Emerald Gaiety'



WILLOWTREE RETAIL PARK Proposed Drive Thru

Proposed Planting Details

20 April 2017

1:200 / A3

Dwg No: 191 / 001

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