

PROPOSED WAITROSE DEVELOPMENT
LAND AT MONDELEZ INTERNATIONAL
SOUTHAM ROAD, BANBURY

Arboricultural Impact Assessment

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1 INTRODUCTION

1.1 Instruction

1.1.1 This Arboricultural Impact Assessment has been prepared by Aspect Arboriculture to inform an outline planning application put forward by Barwood Capital and Mondelez International.

1.1.2 The proposals relate to the development of a new Waitrose convenience store with car parking and access arrangements at land at Mondelez International, Southam Road, Banbury.

1.2 Scope

1.2.1 In keeping with current industry advice, this work has been guided by BS5837:2012 Trees in Relation to Design, Demolition and Construction and provides an assessment of the application areas existing trees, and their relationship with the proposed development.

1.3 Limitations

1.3.1 This work relates to arboriculture, therefore reliance should not be given to comments made in respect of other disciplines, i.e. landscape or civil engineering without first consulting an appropriate expert.

1.3.2 This assessment has been prepared in respect of proposed development and should not be interpreted as a report on tree health and safety. Reasonable effort has been made to identify visible defects whilst undertaking the tree survey; trees are however, prone to natural failure without warning therefore no guarantee can be made as to the absolute safety of any of the trees surveyed. Aspect's opinion of tree condition and structural potential is therefore valid for a limited period of 12 months from the date of inspection. Validity is assumed in the absence of inclement weather and no change to the trees' existing context.

1.4 **Site Description**

- 1.4.1 The application area is situated to the west of Southam Road, Banbury, and the site is administered by Cherwell District Council
- 1.4.2 The application site occurs within the southwestern corner of the Mondelez International facility, Banbury. Subsequently, the southern, western and northern boundaries of the application area all border the Mondelez International facility. To the east the boundary is defined by the Southam Road.
- 1.4.3 The existing tree cover within influence of the application site can be described by predominantly early mature ornamental plantings, interspersed with a number of more established specimens across the site interior. The boundary tree cover is defined by, namely two distinct groups, a row of Lime trees border Southam Road, and a row of Lombardy Poplar are offsite to the south.

2 **POLICY CONSIDERATIONS**

2.1 **Policy Review**

- 2.1.1 Cherwell District Council has a statutory obligation to ensure adequate provision is made for the preservation of trees through Section 197 of the Town and Country Planning Act (1990). It is understood that the primary development control document in the Borough (relating to trees) is the Cherwell District Local Plan adopted in 2007 which includes criteria for considering trees in respect to development.

2.2 **Cherwell Local Plan 1996 and draft Cherwell Local Plan 2006-2031**

- 2.2.1 Trees are of particular relevance to Policy C28 in part within the 2006 Local Plan wherein the Council recognises the important contribution that trees make to the amenity of urban and rural areas as natural features. The screening and amenity potential associated with trees is also cited as being able to enhance the appearance of new development.
- 2.2.2 In the context of proposed development, there is presumption in favour of tree retention pursuant to which the applicant is expected to identify and retain

important tree cover. To establish the presence of important trees, balance tree retention/removal and inform landscape mitigation proposals, the Council recommends applicants refer to guidance provided within BS5837.

2.2.3 Wherever new tree or hedge planting is considered justified by the nature or scale of a proposed development, the Council require the provision of mitigation proposals; for example to offset the removal of less-important trees whose removal is demonstrated to be unavoidable.

2.2.4 Policy ESD 10 within the draft Local Plan (adopted for development control), maintains a presumption for tree retention on account of the multiple benefits and values associated with trees in the preceding plan. Supporting text also includes an expectation for developers to incorporate and enhance biodiversity and the natural environment e.g. through design and protection during construction, with trees being an implicit consideration.

2.2.5 Note that it is presumed that Policy C14 is not applicable considering that the application site is located within the built environment.

2.3 **Policy C28 - Layout, design and external appearance of new development**

2.3.1 *'C28 control will be exercised over all new development... to ensure that the standards of layout, design and external appearance... are sympathetic to the character of the urban or rural context of that development.... The Council will seek to avoid discordant or badly designed development that would harm the appearance and character of the existing built environment, the Green Belt or the countryside'.*

2.4 **Policy ESD 10: Protection and Enhancement of Biodiversity and the Natural Environment**

2.4.1 *'Protection and enhancement of biodiversity and the natural environment will be achieved by the following ...the protection of trees will be encouraged with an aim to increase the number of trees in the district'.*

3 STATUTORY DESIGNATIONS RELATING TO ARBORICULTURE

3.1 Tree Preservation Order(s)

3.1.1 Enquiries made to Cherwell District Council have confirmed the absence of Tree Preservation Orders confirmed on the site (CDC, March 2015).

3.2 Conservation Area

3.2.1 Background checks also show that the site does not occur within a designated Conservation Area. The Council is therefore understood to *not require* notice of an intention to undertake works to trees in order to consider the making of new TPOs (CDC, March 2015).

4 BASELINE INFORMATION

4.1 Tree survey

4.1.1 Pursuant to the council's policy request, the site's existing trees have been surveyed under guidance provided by BS5837:2012. Existing trees within influence of the application area can subsequently be described by reference to 51no. individual trees, 13no. groups of trees, and 4no. hedgerows.

4.1.2 The survey provides a record of species, dimensions, age, physiological and structural condition and the perceived visual importance of each tree/group. A plan of the survey area is included in appendix A.

4.1.3 Note that baseline tree survey work has been undertaken independently of a proposed layout and prior to any form of preparatory works occurring on site. Aspect's opinion of the trees' significance is therefore independent of specific proposals for development.

4.1.4 The trees have been assessed on an individual tree basis, however where appropriate, trees have also been assessed as groups. The term 'group' is used to define trees that form a cohesive arboricultural feature, i.e. aerodynamically, visually or culturally. The assessment of individuals within groups has also been undertaken where it will be advantageous to make such a differentiation.

Full detail of the tree stock is provided within appendix B; the distribution of the trees is illustrated in appendix C.

- 4.1.5 In all instances, the tree survey has been undertaken visually, from ground level and from land on which access was permitted. Where access was not available or practicable, measurements have been estimated; this also typically applies to the trunk diameters of small trees occurring as understory to larger independently surveyed tree groups.

5 TREE CONSTRAINTS

- 5.1 The proposals have been designed with the overall objective of achieving confident long-term retention of existing trees, particularly those of importance to the site's amenity where practicable. This includes minimisation of future pressures for tree clearance and nuisance complaints post-completion of the development. To facilitate this relationship, the following constraints have been provided:

5.2 Canopies

- 5.2.1 The distribution of the Site's canopy area is illustrated on the Tree Constraints Plan in appendix C. Canopies have been measured at cardinal points for individual trees and informed by a topographical survey.
- 5.2.2 It has been Aspect's default position that no proposed buildings are sited within the canopy spreads of retained trees; where it is necessary for proposed structures to be sited within close proximity to canopies; this has been balanced with an allowance for future growth and with species attributes.
- 5.2.3 Vertical canopy clearance has been referenced where it is necessary to permit access beneath canopies, albeit where justifiable. Our default position has been to avoid access beneath canopies where possible.
- 5.2.4 Crown height is provided to balance potential light obstruction in the proposed setting.

5.3 **Root Protection Areas**

5.3.1 RPAs are illustrated as a radius from the trunk in plan form and represent the minimum soil surface area required to enable each tree/group's confident retention. It has been our default position that this area remains undisturbed and sacrosanct during redevelopment of the Site where practicable.

5.3.2 In accordance with table.2 of BS5837:2012, the relative quality of the trees in respect to suitability for retention is illustrated by the colour of their Root Protection Area.

5.4 **Grading Categories**

5.4.1 The quality of the trees is described by reference to BS5837 categories which in this instance range B, C and U in order of their constraint.

5.5 **Category B Tree Cover**

5.5.1 **T7** Small Leaved Lime; **T11** Lombardy Poplar; **T44** Silver Birch; **G3** Lombardy Poplar, Norway Maple, Field Maple, Sweet Chestnut, Lime, Sycamore; and **G6** Lime: All located on the site boundaries, where they are considered to form significant arboricultural features of moderate arboricultural quality, and to provide screening benefits of the extant site from external views.

5.5.2 **T1** Silver Birch; **T12, T14, T27, T35, G1** Grey Poplar; **T23, T24** Maple spp.; **T26 G2** Weeping Willow; **G8** Hybrid Black Poplar; and **G9** Lombardy Poplar: These trees and groups are located internally within the site and are considered to be of moderate arboricultural quality and provide structure and maturity to the internal tree cover.

5.5.3 **T45, T46, T47** Lombardy Poplar and **G11** Lombardy Poplar, Leyland Cypress and Sycamore Located offsite to the south, these trees are considered to be of moderate arboricultural quality as individuals and to form a significant constraint due to their offsite location.

5.6 **Category C Tree Cover**

- 5.6.1 With the exception of tree no. 13, all remaining tree cover is considered to represent generally unremarkable examples of their type i.e.: trees that demonstrate compromised structure, signs of stress; trees and groups of indifferent structural and physiological appearance and of limited or transient amenity value which may be readily replaced without significant individual impact on the amenity of the site.
- 5.6.2 Irrespective of their quality, particular benefits provided by category C components relate to: filtering views of the site, and contributing to the definition of the site boundaries.

5.7 **Category U tree cover**

- 5.7.1 Tree no. 13 (Grey Poplar) within the survey area which is considered to warrant category U, by virtue of extremely poor structural condition. The early loss of this tree through collapse is anticipated. The removal of **[T13]** is recommended on the grounds of sound arboricultural management.

Category U trees are referenced on Aspect plans with a red canopy outline, no RPA and tree number enclosed within square brackets [].

6 IMPACT ASSESSMENT

6.1 Preliminary Tree Protection Plan

6.1.1 In keeping with the recommendations of BS5837:2012, our assessment of the proposals in relation to the existing trees is presented as a *Preliminary Tree Protection Plan* (refer to Appendix D).

6.1.2 The purpose of the TPP is to identify: a) trees to be retained and integrated within the proposed setting, b) illustrate safeguarding measures to ensure that retained trees are not harmed, either during the course of construction, or as a result of the development; and lastly, c) identify trees that it is necessary to remove in order to implement the proposed framework.

6.1.3 Our assessment and the TPP are informed by the tree survey and constraints plan balanced with the requirements of the proposals and adopted policy. The tolerance of the trees to disturbance based on species, age, condition and the presence of surrounding trees and built structures has also been considered. Our opinion of the quality and value of the trees is taken into account with boundary hedgerows and offsite trees adjacent to the site prioritised for retention by default.

6.2 Tree Removals Necessary To Implement The Framework

6.2.1 The removal of 35 no. individual trees, 6 no. groups, sections of 1 no. group and 4 no. hedgerows is necessary and unavoidable to implement the proposed development. The proposals facilitate the retention of the majority of well-established trees along the site boundaries, with removals being concentrated to the site interior and areas along the eastern boundary to accommodate the proposed service road, access and car parking. Trees to be removed to implement the development are listed in Table 1 overleaf.

6.2.2 Clearance works should be timed to avoid the main nesting season for birds between 1st March and 31st August 2015. If scheduled within this period it is recommended that an ecologist is present to advise on any necessary protective measures, and on hand to confirm that tree works are not likely to cause disturbance to nesting birds.

Table 1. Tree Removals by Category

Category B	Category C
T7 – Small Leaf Lime	T5 – Spindle
T23 – Maple spp.	T8 – Large Leaf Lime
T24 – Maple spp.	T9 – Large Leaf Lime
T26 – Weeping Willow	T16 – Lombardy Poplar
T27 – Grey Poplar	T19 – Norway Maple
T35 – Grey Poplar	T20 – Lombardy Poplar
T44 – Silver Birch	T21 – Norway Maple
G3 – Mixed species	T22 – Himalayan Birch
Sections of G6 including 8no. trees	T25 – Maple spp.
G8 – Hybrid Black Poplar	T28 – Grey Poplar
G9 – Lombardy Poplar	T29 – Grey Poplar
	T30 – Crab Apple
	T31 – Crab Apple
	T32 – Common Ash
	T33 – Grey Poplar
	T34 – Grey Poplar
	T36 – Crack Willow
	T37 – Norway Maple
	T38 – Lime
	T39 – Lime
	T40 – Leyland Cypress
	T41 – Rowan
	T42 – Alder
	T43 – Silver Birch
	T48 – Poplar
	T49 – Weeping Aspen
	T50 – Field Maple
	T51 – Silver Birch
	G5 – Silver Birch
	G7 – Mixed species
	G13 – Mixed species
	H1 – Mixed species
	H2 - Beech
	H3 - Beech
	H4 – Mixed species

6.3 Protective Barriers

- 6.3.1 To ensure integration of retained trees, it will be necessary to protect their above ground structures and underlying RPA from damage during construction. To achieve this, the barrier specification for direct protection should consist of the default specification provided in BS5837:2012 (shown below). It is considered essential that this is erected prior to occupation of the site for construction related purposes. The location for the tree protection fencing is illustrated within appendix D with a bold blue line.
- 6.3.2 It would be prudent for the project arboriculturist to oversee the initial erection of tree protection barriers and provide written confirmation to CDC's arboricultural officer on completion.
- 6.3.3 It will be necessary to relocate the tree protection barriers to provide construction access to construct the service road within the RPAs of **T45-T47 & G10**, the pedestrian footpath within the RPA of **G6**, and the proposed access road within the RPA of **T4**. The secondary locations of the tree protection barriers are illustrated within appendix D with a dotted yellow line.

Plate.1 Default Protective Barrier Specification



6.4 Access Facilitation

- 6.4.1 To ensure a adequate crown clearance to frontage trees where pedestrian access is required, the retained section of G6 will require an additional minor crown lift at the western side and a re-pruning as per previous management to the eastern side. This is anticipated to include the removal of minor lower branches while preserving the structural form of this section of the group.
- 6.4.2 Throughout the entire site, dead branches should be entirely removed from the canopies of retained trees. Although this work is not required to facilitate construction, it will help mitigate the risk of future tree related hazards emerging. It would be prudent for this work to coincide with clearance work on account that access to the trees will be unimpeded.
- 6.4.3 This work should be undertaken in accordance with BS3998:2010 by a competent tree contractor to ensure that cuts are performed correctly, and positioned so as to avoid future structural defects or physiological issues, facilitate growth and maintain aesthetic value.

6.5 Manual Excavation

- 6.5.1 There are two areas within the development where hard surface is to be introduced within the peripheries of the RPAs of retained trees. The proposed service road incurs slightly into a section of the RPA of **G10**, and the access road incurs within the RPA of **T4**. In both instances, the areas are currently grassed with no evidence of root disturbance.
- 6.5.2 These incursions are considered acceptable subject to the precautionary measure of any excavation being undertaken by hand following the principles contained within section 7.2 of BS5837:2012 'Avoiding physical damage to the roots during demolition or construction'. To ensure that the principles are adhered to, it is recommended that the works within RPAs are carried out under direct arboricultural supervision.

6.6 Above Soil Surfacing

6.6.1 There are 2no. features within the application area which must be constructed above soil to prevent detriment to retained trees. These features are: a vehicular access within the RPAs of offsite **T45-T47**, and a pedestrian footpath within the RPA of retained **G6**. These areas are illustrated within appendix D with a blue hatch.

6.6.2 The installation of these areas of above soil surfacing is to be carried out following the principles contained within section 7.4.2 of BS5837:2012. The access road is to be founded on a minimum of 200mm standard cell CellWeb, and the footpath is to be founded on 75mm standard cell CellWeb. By design no underground services are to be installed within the areas managed by above soil construction.

6.7 Mitigation

6.7.1 Pending the acceptability of proposals, a supplementary landscape design plan will be adopted that demonstrates mitigation for tree removals through enhancement of amenity of both internal and external views. All trees recommended for clearance can be mitigated for as part of a comprehensive scheme of soft landscaping, particularly if extended to introduce formal planting along proposed access routes, structure planting within car parking areas and site boundaries. As part of this work it is reasonable to also presume opportunities for introducing specimen trees to the site interior.

6.7.2 Depending on species choice, i.e. native species and cultivars that are appropriate for inclusion within the existing landscaping scheme.

6.7.3 The use of advanced nursery stock that seeks to provide seasonal interest is also more likely to provide immediate and appropriate amenity benefits within external *and* internal views.

6.8 Future Pressure

6.8.1 The spatial relationship allows for canopy clearance and demonstrates an avoidance of direct conflict and seasonal nuisance complaints, all of which is facilitated through adequate clearance for unmaintained canopy growth.

6.9 Phasing and Services

- 6.9.1 At this stage, Aspect has not been able to provide input regarding the phasing of construction works as part of the application put forward. Pending the acceptability of the scale and nature of the proposed development to Cherwell District Council, it is anticipated that these details will be the subject of an Arboricultural Method Statement and *detailed* Tree Protection Plan.

7 CONCLUSIONS

- 7.1 Pursuant to Cherwell District Council's adopted policy in the context of proposed development, a BS5837:2012 survey and assessment has been prepared to inform the retention of important trees and their contribution to amenity.
- 7.2 By design, the proposals seek to balance the retention of arboricultural features of the application area considered to be important to the amenity of the site and in facilitating the proposals integration within the wider setting. This is considered practicable subject to temporary protection and mitigation for permanent development in close proximity to retained trees during construction.
- 7.3 In the absence of perceived harm to important tree cover in particular, it is our professional opinion that the proposals put forward by Barwood Capital and Mondelez International allow for confidence in the long-term viability of retained and appropriate tree cover. The principle of the proposed layout is therefore considered supportable from the arboricultural perspective and in terms of Local Policy where it relates to trees. This opinion is subject to the adoption of future safeguards, auditing and inspection.

8 RECOMMENDATIONS

- 8.1 Pursuant to the Council's preference to ensure tree retention during development, a detailed Arboricultural Method Statement should be prepared which expands on appendix D, this could be requested by condition.
- 8.2 Heads of Terms are advised to include: specifications for tree protection barriers, including revisions to barrier locations; a schedule of tree works; phasing of work; a scheme for auditing tree protection and works within RPAs, and subsequent reporting to the LPA should feature explicitly throughout.
- 8.3 Detailed Tree Protection Drawings should be prepared to 1:500 scale to support the AMS, with detail given of proposed levels and service routes.

PREPARED BY:

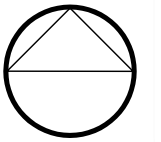
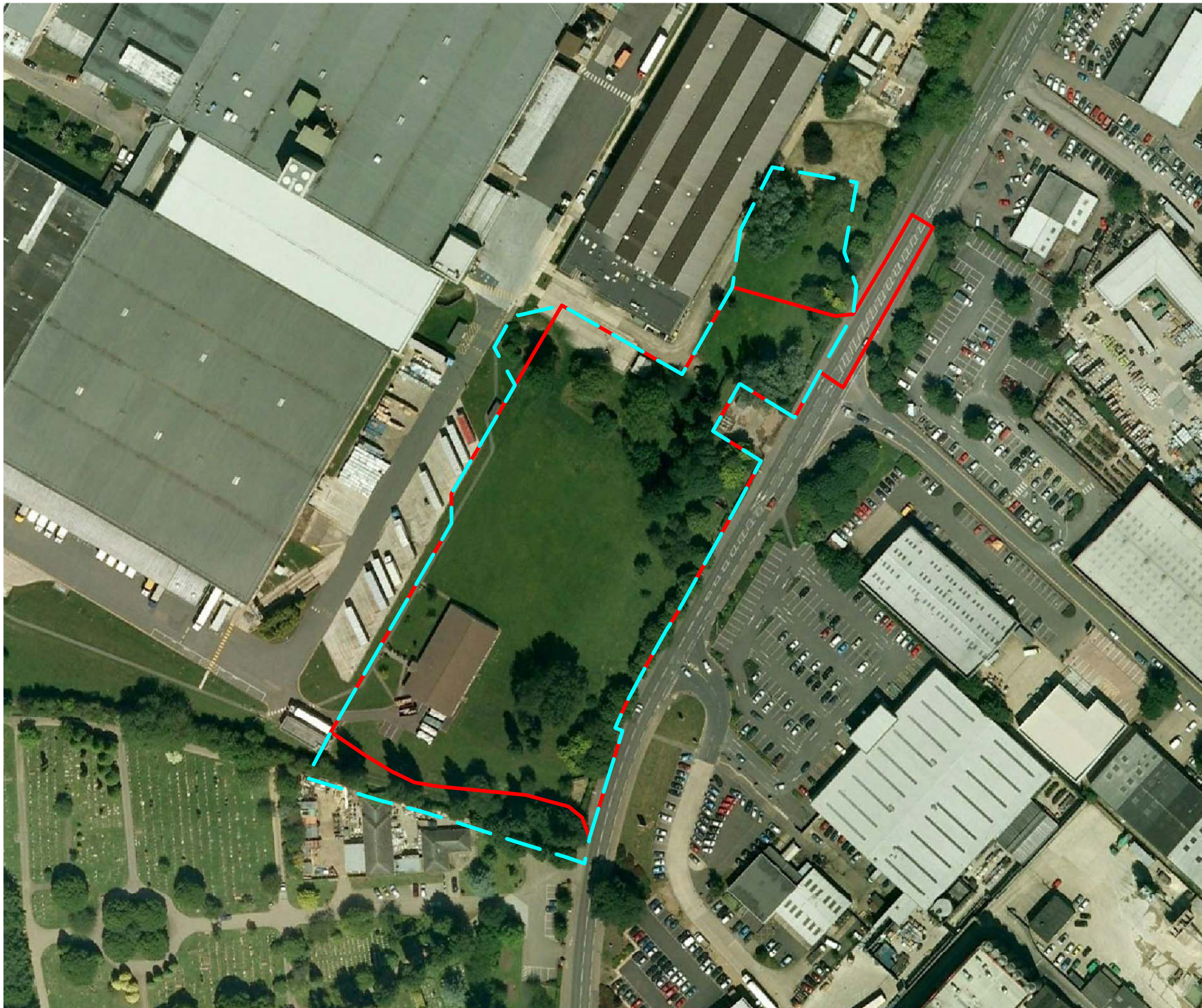
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APPENDICES

APPENDIX A

SURVEY BOUNDARY PLAN (8912 SBP)



KEY:



Site Boundary



Extent of Tree Survey
(not application area boundary)

REV	DATE	NOTE	Drawn	Chk'd
REVISIONS				



TITLE

Land West of Southam Road
Survey Boundary Plan

CLIENT

Barwood Capital and Mondelez International

SCALE	DATE	DRAWN
Not to scale	MAR 2015	GW
DRAWING NUMBER	REVISION	
8912 SBP 01		

Cited from Google Earth

APPENDIX B

TREE SURVEY SCHEDULE (8912 TS 01)

**BS 5837:2012 Tree Schedule: Land at Mondelez International,
Southam Road, Banbury**

BS5837:2012 Tree Survey: Explanation of Survey Criteria

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	radial							

Sequential reference number cited on all aspect drawing.

Height and Crown spread measured to the nearest half meter; # denotes where this is estimated.

e.g.: young, semi-mature, early-mature, mature or over-mature

Area around tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of roots and soil structure is a priority.

Category prefix A-C denotes arboricultural quality, decreasing from A (high) to C (low); Subcategories 1, 2 and 3 highlight associated arboricultural (1), landscape (2) and ecological (3) qualities.

Category U trees are those in such a condition that they cannot be realistically retained as living trees in the current context for the long term.

Measured to the nearest 10mm; # denotes estimated diameter where access is not possible.

e.g.: above-average, average, below average or dead

General observations, i.e. defects, preliminary management recommendation, presence of pests/disease, perceived significance.

Height of first significant branch and/or canopy

e.g.: good, indifferent, poor, or hazardous

Colour band key:

- Category A
- Category B
- Category C
- Category U

The following survey should not be interpreted as a report on tree health and safety. Aspect's opinion of tree condition and structural potential is valid for a limited period of 12 months from the date of inspection. Validity is assumed in the absence of inclement weather and no change to the trees existing setting.

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)				radial	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W								
1	Silver Birch	300 310	11m	5.00					1.25	Mature	Average	Indifferent	Established ornamental planting Stem forks at 0.5m into 2 x co-dominant stems Well distributed crown Upper canopy has structure typical for species Pruning wound in lower stem Considered to be of moderate arboricultural value	B2	5.1
2	Silver Birch	315	8m					3.50	2	Mature	Below Average	Indifferent		C12	3.9
3	Sycamore	220	8m					3.50	2.25	Early mature	Below Average	Poor		C12	2.7
4	Silver Birch	240 305	9m					4.75	1.25	Mature	Average	Indifferent		C12	4.8
5	Spindle	145	3m					2.25	1	Semi-mature	Average	Indifferent		C12	1.8
6	Sycamore (over ivy)	260	8m	2.00	3.25#	1.75	1.75		2.5	Early mature	Below Average	Poor		C12	3
7	Small Leaf Lime	455	13m	5.50	5.75#	3.25	5.75		2.25	Mature	Average	Indifferent	Established ornamental planting Maintains a central dominant leader Upper canopy has structure typical for species Considered to be of moderate arboricultural quality and value	B12	5.4
8	Large Leaf Lime (over ivy)	420	12m	3.50	5.00#	3.50	5.25		1.25	Mature	Average	Poor		C12	5.1
9	Large Leaf Lime	440	6m					3.25	0.5	Mature	Average	Poor		C12	5.4
10	Elm	260	6m					2.25	2.5	Mature	Below Average	Poor		C12	3
11	Lombardy Poplar	670	25+	1.50	2.00#	2.00#	2.00#		2.5	Mature	Average	Indifferent	Stem forks at 2m into 1 x dominant and 1 x sub-dominant stem Slightly suppressed to NW by adjacent trees Structure is typical for species Considered to be of moderate arboricultural value	B2	8.1
12	Grey Poplar	700	25+	9.75	7.25	5.25	6.25		2	Mature	Average	Indifferent	Fused base of stem with T15 Slight lean to E Stem forks at 3m into 2 x co-dominant stems Considered to be of moderate arboricultural value	B2	8.4
13	Grey Poplar	590	20m	11.00	10.50	4.50	0.00		2	Mature	Average	Poor	Root-plate lifting causing bulge in soil Significant lean to E Upper canopy has a structure typical for species Tree overhanging road and footpath off site Recommend removal due to significant structural defect	U	N/A
14	Grey Poplar	750 (at 1m)	20m	12.25	1.75	10.00 #	11.25		1.75	Mature	Average	Indifferent	Single bole forking at 1.5m into 3 x co-dominant stems Over-extended lateral limb but typical for species Forms cohesive canopy with surrounding trees Considered to be of moderate arboricultural value	B2	9
15	False Acacia	535	12m	2.00	5.75	9.00	3.25		1	Mature	Average	Poor		C12	6.3
16	Lombardy Poplar	330	17m					1.75	0	Mature	Average	Indifferent		C12	3.9
17	Scots Pine	200	8m	3.50	3.25	2.25	2.25		1.75	Semi-mature	Average	Indifferent		C12	2.4
18	Scots Pine	330	8m	3.25	2.50	3.75	3.50		1.75	Early mature	Average	Indifferent		C12	3.9
19	Norway Maple	230	8m					4.50	2.5	Early mature	Average	Indifferent		C12	2.7
20	Lombardy Poplar	580	20m					2.00	2	Mature	Average	Indifferent		C12	6.9
21	Norway Maple	290	10m					5.50	2	Early mature	Average	Indifferent		C12	3.6
22	Himalayan Birch	2 x 240	13m	4.75	4.75	4.75	2.50		2	Mature	Average	Indifferent		C12	4.2

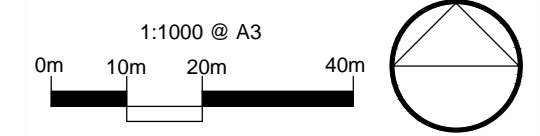
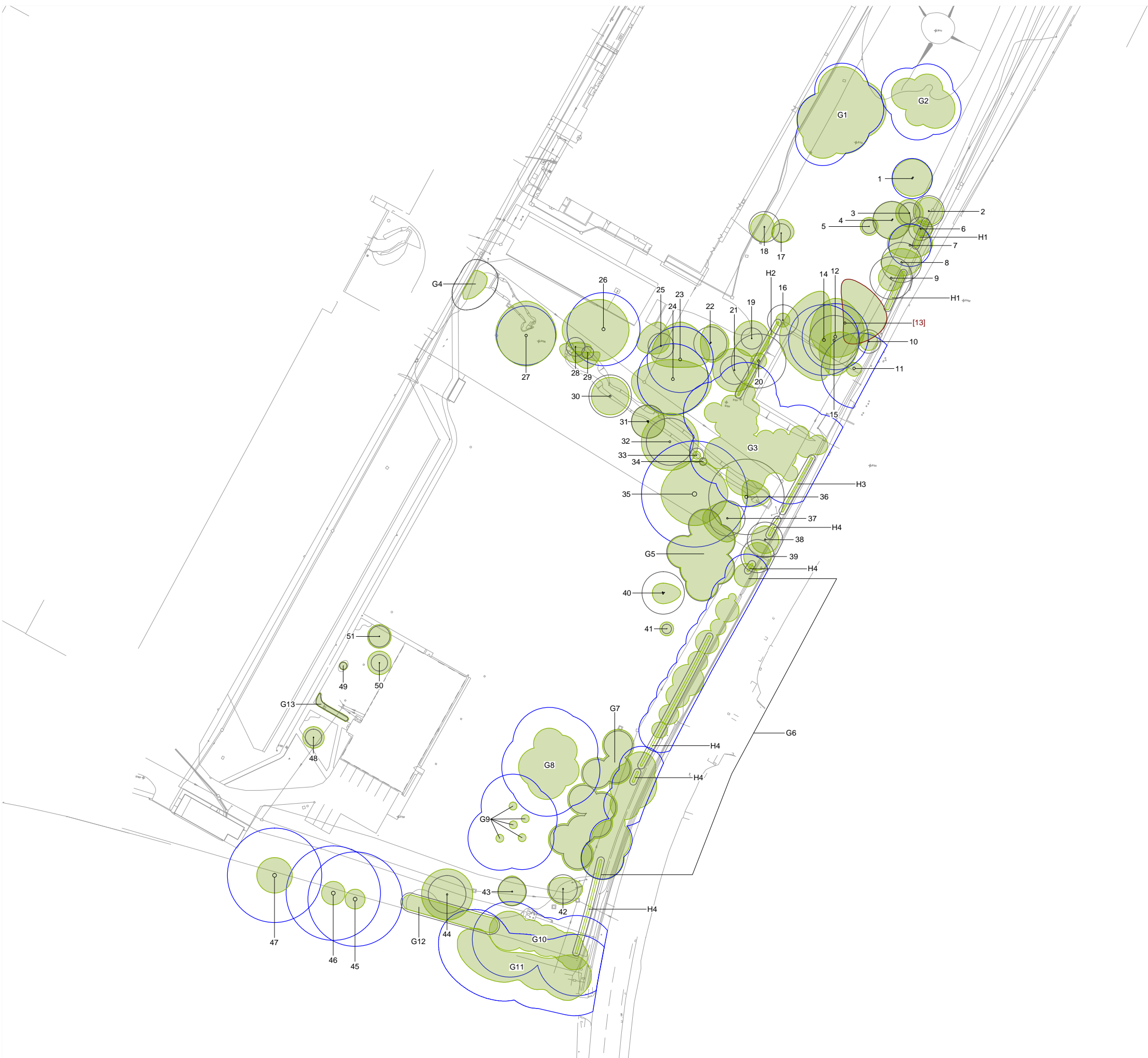
Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)				radial	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W								
23	Maple spp.	700	18m	9.50	7.25	2.00	7.00		1.5	Mature	Average	Indifferent	Established ornamental planting Stem forks at 1.25m into 2 x co-dominant stems Slight lean to NE Forms cohesive canopy with T24 Considered to be of moderate arboricultural quality and value	B12	8.4
24	Maple spp.	750 (at 0.5m)	18m	5.00	9.75	9.25	10.50		1	Mature	Average	Indifferent	Stem forks at 1m into 2 x co-dominant stems with tight union/included bark Upper canopy has structure typical for species Minor bark damage in primary limb to E at 1.5m Considered to be of moderate arboricultural value	B2	9
25	Maple spp.	280	7m	6.00	2.00	1.75	6.00		2.75	Early mature	Below Average	Poor		C12	3.3
26	Weeping Willow	780 (at 1m)	14m	7.50	6.50	8.00#	10.50		0	Mature	Average	Poor	Established ornamental planting Stem forks at 2.5m into 1 x dominant and 1 x sub-dominant stems Well distributed crown but heavy and congested internal structure Poorly pruned to N crown Considered to be of moderate arboricultural value	B2	9.3
27	Grey Poplar	635	20m	8.75	7.75	7.75	7.75		1.5	Mature	Below Average	Indifferent	Established ornamental planting Surface roots to N around stream Some large sections of deadwood throughout crown Maintains a central dominant stem Structure is typical for species Considered to be of moderate arboricultural value	B2	7.5
28	Grey Poplar	200#	7m	1.00	4.00	4.00	4.00		0	Semi-mature	Average	Poor		C12	2.4
29	Goat Willow	2 x 80#	5m	0.00	3.00	4.00	4.00		0	Semi-mature	Average	Poor		C12	1.5
30	Crab Apple	450#	6m					4.75	1.25	Mature	Average	Indifferent		C12	5.4
31	Crab Apple	4 x 180 av.#	6m					4.25	1	Mature	Average	Poor		C12	4.2
32	Common Ash	500#	13m					7.25	1	Mature	Average	Indifferent		C12	6
33	Grey Poplar	150	6m					1.00	0	Young	Average	Indifferent		C12	1.8
34	Grey Poplar	80	5m					1.00	0	Young	Average	Indifferent		C12	0.9
35	Grey Poplar	1120 (at 1m)	25m	8.50#	8.50	8.00	8.50		2	Mature	Average	Poor	Exposed surface roots to N/E with damage/decay Epicormic growth forming from surface roots Stem forks at 1.25m into 3 x co-dominant stems with poor union Upper canopy has structure typical for species with well distributed crown Considered to be of moderate arboricultural value	B2	13.5
36	Crack Willow	800#	7m	4.00	6.00	2.00	1.00		0	Over-mature	Below Average	Poor		C12	9.6
37	Norway Maple	365		4.25	3.50	6.00	6.25		1	Mature	Average	Poor		C12	4.5
38	Lime	370	5m					3.50	0.5	Mature	Average	Poor		C12	4.5
39	Lime	360	6m					3.50	1	Mature	Average	Poor		C12	4.2
40	Leyland Cypress	4 x 220 av.	9m	2.50	4.50	2.75	2.75		0	Mature	Average	Poor		C12	5.4
41	Rowan	2 x 70 av.	3m					1.75	1.5	Young	Average	Poor		C12	1.2
42	Alder	295	11m	3.00	5.00	4.00	4.00		2	Mature	Average	Poor		C12	3.6
43	Silver Birch	295	10m	4.00	3.50	3.50	3.50		1.5	Mature	Average	Indifferent		C12	3.6

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	radial							
44	Silver Birch	400	13m					6.50	2	Mature	Average	Indifferent	Minor decay pocket at base Maintains a central dominant stem Structure is typical for species 1 x secondary limb failure W crown at 4m Considered to be of moderate arboricultural quality and value	B12	4.8
45	Lombardy Poplar	1000#	25m+					2.50	2	Mature	Average	Indifferent	Offsite Structure is typical for species Considered to be of moderate arboricultural quality and value	B12	12
46	Lombardy Poplar	1000#	25m+					3.00	2	Mature	Average	Indifferent	Offsite Structure is typical for species Considered to be of moderate arboricultural quality and value	B12	12
47	Lombardy Poplar	1000#	25m+					4.50	3	Mature	Average	Indifferent	Offsite Structure is typical for species Considered to be of moderate arboricultural quality and value	B12	12
48	Poplar	180	5m					2.75	1	Semi-mature	Average	Indifferent		C12	2.1
49	Weeping Aspen	80#	2m					1.00	0	Semi-mature	Average	Indifferent		C12	0.9
50	Field Maple	170	4m					3.00	1.5	Early mature	Average	Indifferent		C12	2.1
51	Silver Birch	215	8m					3.00	0.5	Early mature	Average	Indifferent		C12	2.4
G1	Grey Poplar	570 max	21m					10.50	0.25 (tips) 2.00 (limb)	Mature	Average	Poor to Indifferent	5 no. trees forming a cohesive canopy Significant lean in stem in E trees Considered to be of moderate arboricultural value as a collective	B2	6.9
G2	Weeping Willow	560 max	15m					9.50	0 (tips) 2.00 (limb)	Early mature to Mature	Average	Indifferent	4 no. trees forming a cohesive canopy Considered to be of moderate arboricultural value as a collective	B2	6.6
G3	Lombardy Poplar Norway Maple Field Maple Sweet Chestnut Lime Sycamore	450 480 max	22m max					2.00 av. (Poplars) 6.00 max (Sycamore)	1.5 av.	Semi-mature to Mature	Poor to Average	Indifferent	Established ornamental plantings forming cohesive canopy in parts Predominantly Poplar Considered to be of moderate arboricultural value as a collective	B2	5.4 5.7 max
G4	Willow Prunus spp. Ornamental shrubs Holly	500 max#	5m max					3.25	0	Mature	Average	Indifferent	Crack Willow pollarded at 2.75m Shrub understory	C12	6
G5	Silver Birch	360 max	11m max					4.00 av	2.5 av	Early mature to Mature	Average	Indifferent	Established ornamental plantings Largest specimen has pruning wound with decay at 1.5m up stem	C12	4.2
G6	Lime	450 max	12m max					5.5 max 5.00 av	2 av. 1 min.	Mature	Average	Indifferent	15 no. trees Established row bordering E of site Structures are typical for species Considered to be of moderate arboricultural quality and value	B12	5.4
G7	Sycamore Silver Birch Rowan	290 max	10m max					4.00 max	2 av.	Early mature to Mature	Poor to Average	Poor to Indifferent	Predominantly poorly established ornamental plantings Suppressed by surrounding larger trees	C12	3.6

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	radial							
G8	Hybrid Black Poplar	770 max	25m+					15.5 max	2 av. 1 min.	Mature	Average	Indifferent	5 no. trees forming a cohesive canopy Maintains central leaders Internally suppressed by one another Structures are typical for species Considered to be of moderate arboricultural quality and value	B12	9.3
G9	Lombardy Poplar	680 max	23m max					1 av.	0.5	Mature	Average	Indifferent	Established ornamental plantings creating a formal arboricultural feature as a collective Considered to be of moderate arboricultural value as a collective	B2	8.1
G10	Sycamore Lime Lombardy Poplar	800 max (offsite Poplar) 430, 250 (onsite Sycamore)	25m+					7.50	2.75	Mature	Average	Poor to Indifferent	3 no. Sycamore 2 no. Lime located onsite 2 no. Lombardy Poplar and 1 no. Sycamore located offsite Trees form cohesive canopy with Sycamore being multi-stemmed from base Considered to be of moderate arboricultural value as a collective	B2	9.6 max 6
G11	Lombardy Poplar Leyland Cypress Sycamore	800 max#	25m+					2.5 av.	1 av.	Mature	Average	Indifferent	Offsite Structure is typical for species Considered to be of moderate arboricultural value as a collective	B2	9.6
G12	Elder Holly Plum	200 max	7m max					3.50 max	2.50	Mature	Average	Poor	Established shrub-like trees with Holly understory	C12	2.4
G13	Ornamental Shrubs	75 max	2m					1.00	0	Mature	Average	Indifferent		C12	0.9
H1	Hawthorn Beech	75 max	2m					0.50	0	Mature	Average	Indifferent	Maintained hedgerow	C12	0.9
H2	Beech	75 max	3m					0.25	0	Mature	Average	Indifferent	Maintained hedgerow	C12	0.9
H3	Beech	75 max	3m					0.25	0	Mature	Average	Indifferent	Maintained hedgerow	C12	0.9
H4	Beech Leyland Cypress Hawthorn Sycamore	75 max	3m					0.25	0	Mature	Average	Indifferent	Maintained hedgerow, intermittent in areas	C12	0.9

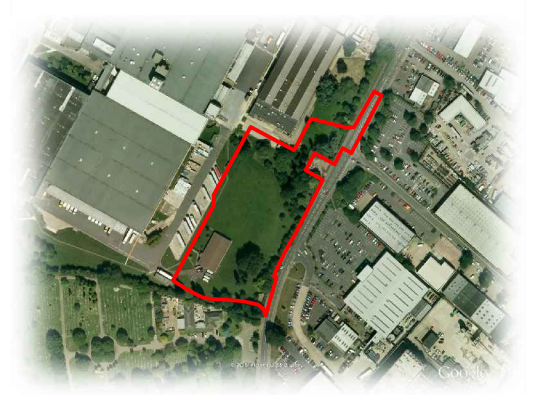
APPENDIX C

TREE CONSTRAINTS PLAN (8912 TCP 01)



- KEY:**
- Site Boundary
 - Tree Numbers
 - Tree Canopies
 - Category 'U' Trees
 - Category 'B' RPA
 - Category 'C' RPA

Note: Trees 1,45,46,47 and Group 11 are not on the topographical survey and their locations are approximated using scale aerial photographs combined with measurements taken on site.



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd
REVISIONS				



TITLE
**Land at Mondelez International
 Southam Road, Banbury
 Tree Constraints Plan**

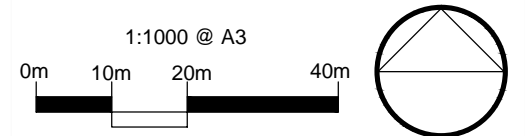
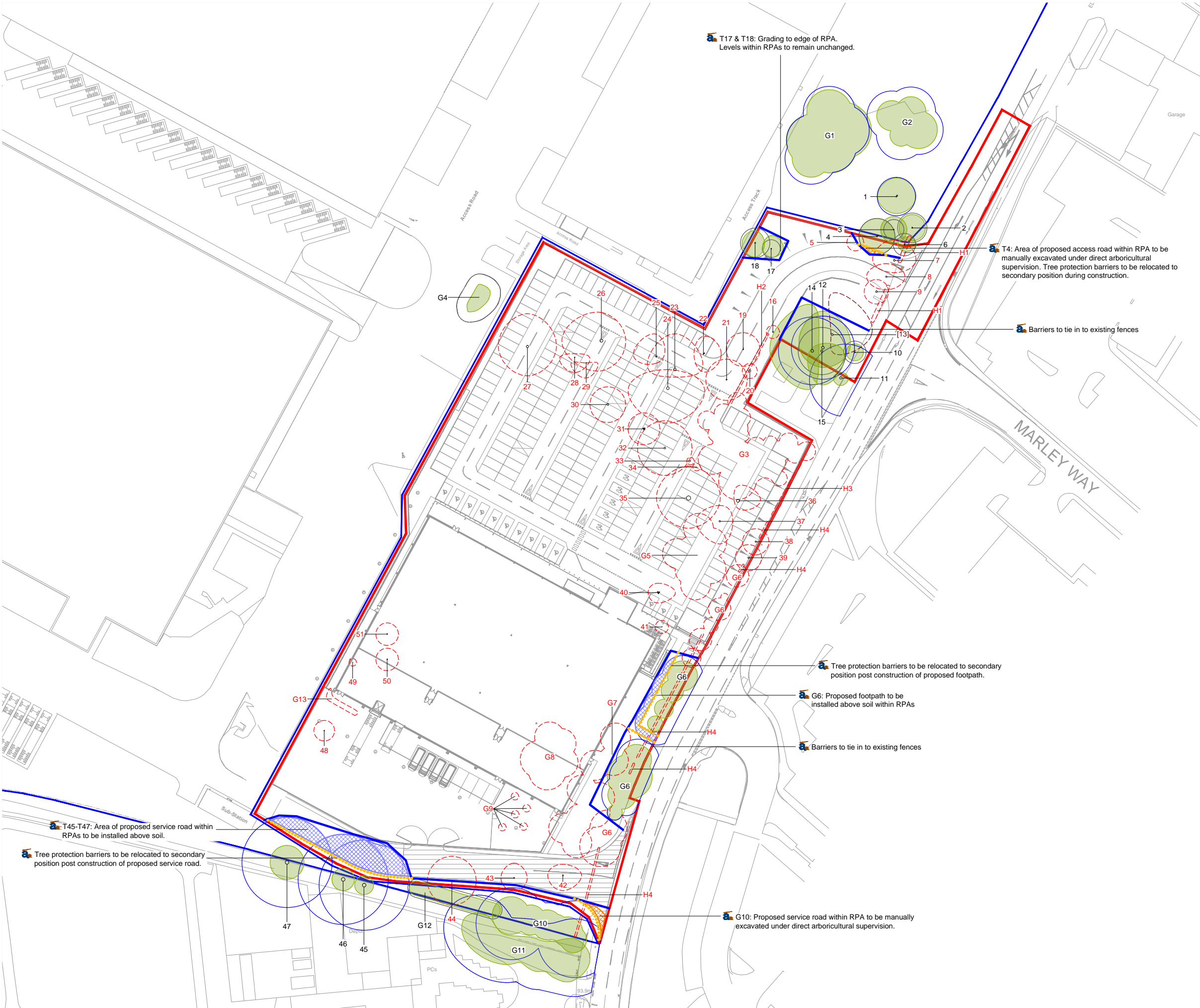
CLIENT
Barwood Capital and Mondelez International

SCALE 1:1000 @ A3	DATE JAN 2015	DRAWN GW
DRAWING NUMBER 8912 TCP 01		REVISION

Based on topographical dwg ref:111097-1-2D-PART1ADVANCED.dwg

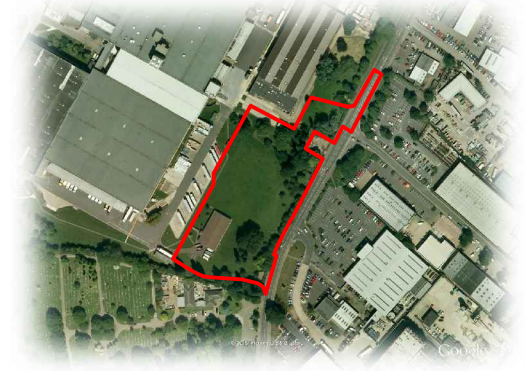
APPENDIX D

TREE PROTECTION PLAN (8912 TPP 01)



- KEY:**
- Site Boundary
 - Tree Numbers
 - Tree Canopies
 - Category 'U' Trees
 - Category 'B' RPA
 - Category 'C' RPA
 - Trees to be Removed
 - Manual Excavation
 - Above Soil Surfacing
 - Tree Protection Barrier
 - Tree Protection Barrier (2nd Position)

Note: Trees 1,45,46,47 and Group 11 are not on the topographical survey and their locations are approximated using scale aerial photographs combined with measurements taken on site.



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd
REVISIONS				



TITLE
**Land at Mondelez International
 Southam Road, Banbury
 Tree Protection Plan**

CLIENT
Barwood Capital and Mondelez International

SCALE 1:1000 @ A3	DATE MAR 2015	DRAWN GW
DRAWING NUMBER 8912 TPP 01		REVISION

Based on layout ref: Proposed Site Plan.dwg

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