Border Retail Park, Wrexham LL13 8NG – BS 5837:2012 Arboricultural Report, Impact Assessment and Method Statement

Wes No.1 Ltd

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Ecus Ltd

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Executive Summary

On behalf of Wes No.1 Ltd (the Client), Ecus Limited (Ecus) has carried out a tree survey to BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations* in March 2024 at Border Retail Park, Wrexham, LL13 8NG. This survey has formed the basis for an assessment of the impacts that development proposals may have on the existing tree cover and recommends methodologies that will need to be adopted to protect retained trees during development.

The survey recorded all significant trees within the site and those which may be affected by any development proposed within the site boundary, recording a number of parameters including species, crown spread and Root Protection Area (RPA).

The RPA of any given tree is calculated in accordance with BS 5837:2012 and is generally a circular plot centred on its stem. This area around each tree should not be disturbed by excavation, compaction, contamination or other related demolition and construction activities. Minor encroachment into the RPA may be possible if specific methodologies are put in place that reduce the likelihood of the tree being negatively impacted.

The survey recorded 11 individual trees & 6 tree groups. *The trees at this site were a mix of native and non-native. The trees are located around the site boundary in formal planting areas all of which are adjacent to the main car park area.*

Wrexham Council has been contacted to confirm whether the site is located within a Conservation Area and whether any trees included in the survey are protected by a Tree Preservation Order (TPO). The approval of the Local Planning Authority should be sought before any works are carried out to protected trees.

An online search using the Multi Agency Geographical Information for the Countryside (MAGIC) website for statutory conservation sites was undertaken (where appropriate) to determine the presence of Ancient Woodland within 15.0 m of the site boundary.

The Client proposes the construction of a new Costa Coffee building with an accompanying drive through. There is also proposed associated soft and hard landscaping around the development . This will require the removal of 2 moderate quality trees, and may also have an impact on the roots, stems and canopies of retained trees unless suitable protection measures are put in place.

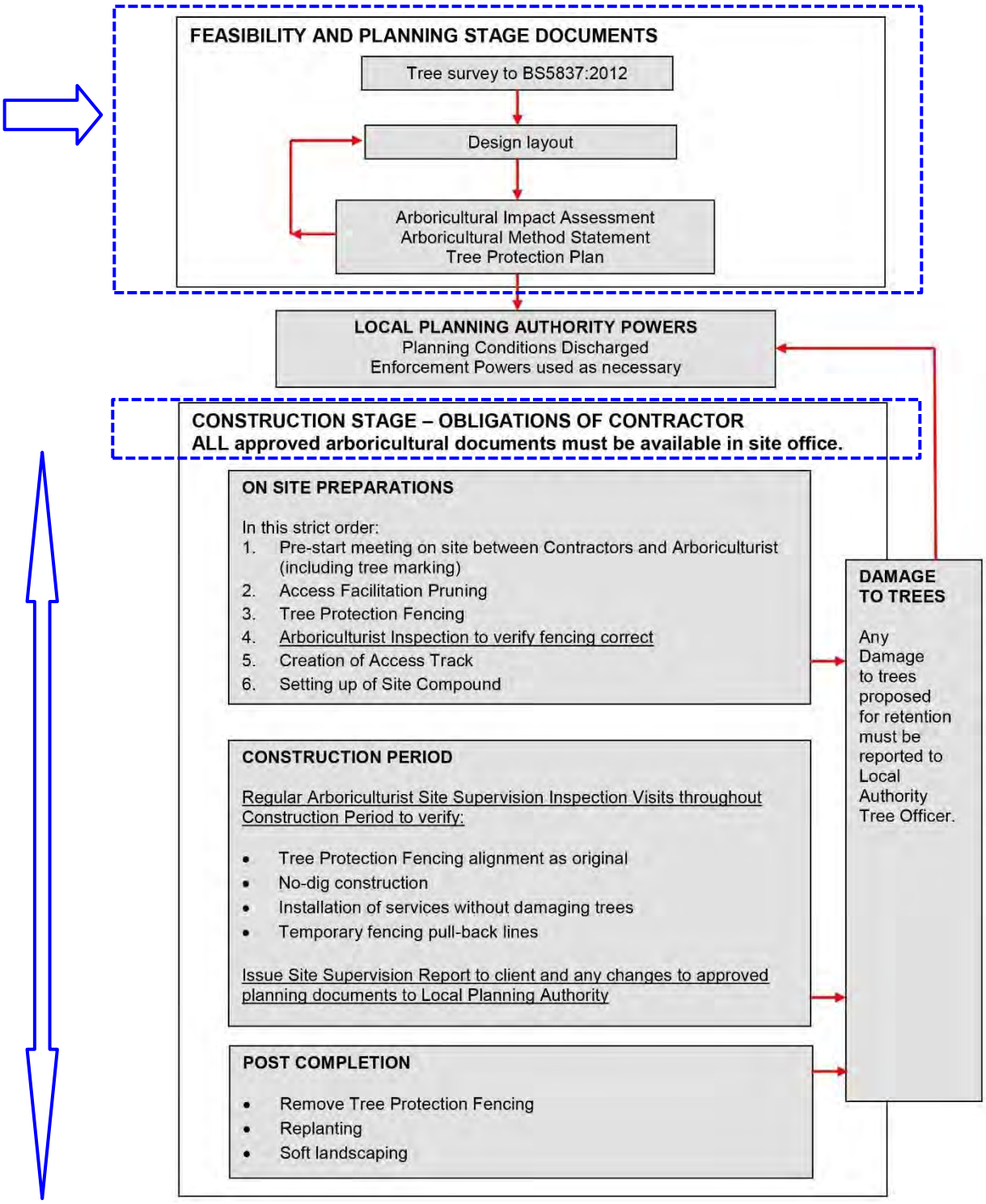
This report details the potential arboricultural impacts of development at the site and offers a range of protection measures and construction methodologies which should be adopted. These measures aim to prevent accidental damage and other adverse effects on the health of retained trees.

The report also makes recommendations for any measures to mitigate or compensate for the loss of trees within the site and the likely impact on the site and the wider local landscape.

1. Introduction

1.1 Context of this Report in the Planning System

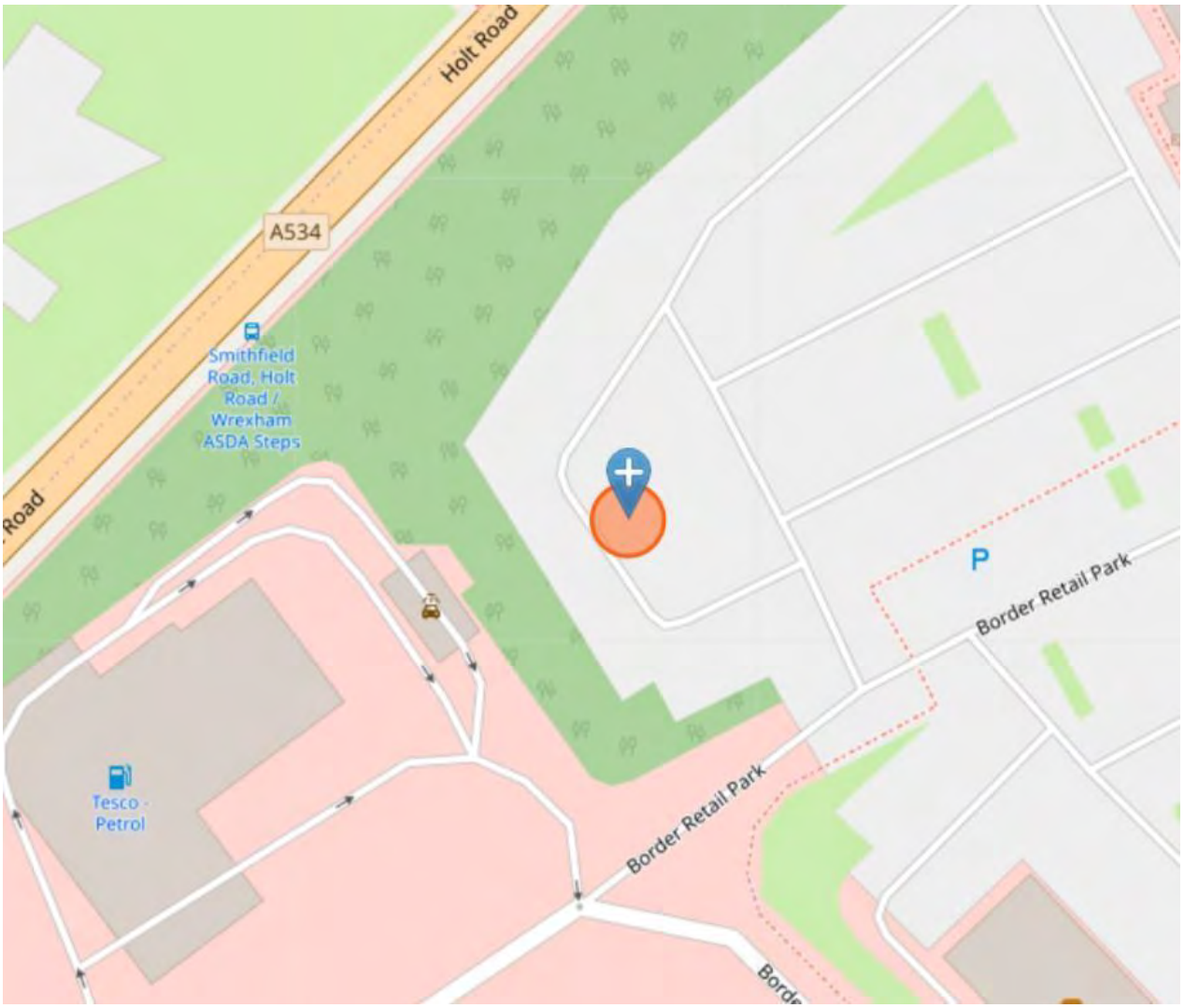
Figure 1: The Design and Construction Process and Tree Care



1.2 Location

1.2.1 Ecus Limited has been commissioned by the Client to undertake a tree survey of the site at Border Retail Park, Wrexham, LL13 8NG, Ordnance Survey UK Grid Reference: SJ 33971 50526 and prepare the findings in a report. The site location is shown in Figure 2.

Figure 2: Location Map



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1.3 Tree Designations

1.3.1 The Arboricultural/Tree Officer at Wrexham Council has been contacted to confirm whether the site is located within a Conservation Area and whether any trees included in the survey are protected by a Tree Preservation Order (TPO). If any trees included in the survey are protected Ecus will inform the Client once a response has been received.

1.3.2 The permission of the local planning authority must be sought before any works are carried out to protected trees. Potentially unlimited fines can be imposed for illegally carrying out any works to protected trees.

1.3.3 Reference to the Multi Agency Geographical Information for the Countryside (MAGIC) website indicates that no ancient woodland is present within a 15.0 m buffer of the site.

1.4 Protected Species

Bats

1.4.1 Mature trees can often contain cavities or hollows which provide potential roosting locations for bats. Bats and the places they use for shelter or protection (i.e. roosts) are protected under *The Conservation of Habitats and Species Regulations* 2017 (Habitats Regulations 2017). They also receive legal protection under the *Wildlife and Countryside Act* (WCA) 1981. Consequently, causing damage to a bat roost constitutes an offence.

1.4.2 Generally, should the presence of a bat roost be suspected whilst completing works on any trees on site then an appropriately licensed bat worker should be consulted for advice.

Birds

1.4.3 Trees and hedgerows can provide habitat for nesting birds which are protected under the *Wildlife and Countryside Act* (WCA) 1981. Some species are further protected by special penalties. This legislation makes it an offence to intentionally or recklessly damage or destroy an active bird nest or part thereof.

1.4.4 As the trees at the site provide potential habitat for nesting birds all tree work should ideally be completed outside the peak nesting bird season (Generally March to August inclusive).

1.4.5 If this is not possible then the vegetation should be subject to a nesting bird inspection by a suitably experienced ecologist prior to commencement of works. If active nests are identified then the vegetation, and a defined buffer zone, will need to remain in place until the young have fully fledged.

2. Tree Survey Methodology

2.1 Site survey

2.1.1 Ecus have undertaken the tree survey in accordance with BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*, to provide detailed and independent arboricultural advice in the context of potential development. The survey was a ground based visual inspection carried out by a suitably qualified arboriculturist. No trees were tagged as part of the survey.

2.1.2 The tree inspection was carried out in March 2024 by Matthew Lally FdSc MArborA (Arboricultural Consultant), when the deciduous trees were generally not in leaf.

2.1.3 The weather on the day of the survey was dry and still. This allowed for a thorough inspection of all trees included in the survey.

2.1.4 The survey recorded all trees with a stem diameter of 75 mm or more at a height of 1.5 m above ground level within the site boundary. Any significant trees outside the boundary which could be significantly affected by the future development of the site were also recorded.

2.1.2 The following characteristics were recorded:

- Species
- Stem diameter at 1.5 m above ground level (mm)
- Estimated height (m)
- Approximate crown spread (m) in North, East, South and West directions
- Estimate of the number of years that the tree is likely to remain suitable for retention
- Age class
- Condition category in accordance with BS 5837:2012. The categories are defined as:
    - Category U = 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
    - 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 with a stem diameter below 150 mm
- Value subcategories where appropriate in accordance with BS 5837:2012. These are defined as:
    - 1 = Mainly arboricultural qualities
    - 2 = Mainly landscape qualities
    - 3 = Mainly cultural values, including conservation
- General notes about physiological and structural condition and any management recommendations

2.1.5 All survey data has been based on a topographical survey where possible, supplied by the client. Where topographical information has not identified tree positions or Ordnance Survey mapping has been utilised, trees and hedgerows have been positioned using GPS and aerial photography to provide approximate locations in relation to existing surrounding features. Further confirmation of

tree locations through a topographical survey of the site is recommended to ensure future design accuracy.

2.1.6 Some locations for trees have been estimated. This is highlighted with a hash (#) symbol in the Tree Survey Schedule at Appendix 1.

2.1.7 Where trees formed a continuous canopy they may have been grouped, in line with the guidance of BS 5837:2012. If densely wooded areas are not expected to be directly affected by development proposals only the significant trees at the woodland perimeter will have been surveyed.

2.1.8 Trees are living organisms that change over time. A re-survey of all trees should be carried out if there have been any significant storm events or more than 12 months have passed since the survey was carried out.

2.2 Calculation of Root Protection Area (RPA)

2.2.1 The Root Protection Area (RPA) is calculated according to the formulae set out in BS 5837:2012. This is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure should be treated as a priority.

2.2.2 Due to the specific topography of the site and the presence of surrounding structures the RPA is likely to be a simplified representation of the actual morphology and disposition of tree roots. Any deviation in the shape of the RPA from the calculated circular shape will largely be based on conjecture and so should generally be avoided. However, where significant site features are present that could clearly influence the disposition of tree root growth (e.g. water courses, building foundations and retaining walls), the RPA may be amended to take these features into account.

3. Tree Survey Results

3.1 General Site Description

3.1.1 The site is currently a car park area for the Border Retail Park complex. The specific development area is located west of the retail park car park adjacent to the Tesco petrol station. Border Retail Park is situated some 400 metres east of Wrexham town centre.

3.1.2 The trees at the site were located predominantly on the site boundaries in formal planting areas, however, there was a small group of trees located in planting areas within the car park.

3.1.3 Holt Road borders the site to the north. There are some significant trees on the site boundary that border this road and form part of a bigger tree group which is highly visible from this public and busy road.

3.2 Results of Tree Survey

3.2.1 The Tree Survey Schedule at Appendix 1 details the results of the tree survey and includes any management recommendations. The schedule should be read in conjunction with the tree plans at Appendix 3 which show the location of each tree and group surveyed and the extent of their canopies and RPA.

3.2.2 11 individual trees & 6 tree groups have been recorded during the survey. A summary of the tree survey findings is shown in Table 1.

Table 1: Summary of Tree Survey Findings

Category A	Category B	Category C	Category U
Trees: 0	Trees: 7	Trees: 4	Trees: 0
Groups: 0	Groups: 3	Groups: 3	Groups: 0
Woodlands: 0	Woodlands: 0	Woodlands: 0	Woodlands: 0
Hedgerows: 0	Hedgerows: 0	Hedgerows: 0	Hedgerows: 0

3.2.3 The most significant trees were the large early mature sycamore trees on the border of Holt Road T10, T11, T12, T14#, G15# & G15a#, the mature oak T16#, and to a lesser extent the semi mature mixed group G17#. These were all visually prominent trees, with good arboricultural value. They had good future prospects and will add significant value to any new development.

3.2.4 T3# and G5 have also been categorised as moderate quality and are visible from public viewpoints.

3.2.5 The majority of the remaining trees were of low value, retention category C, and should not pose a significant constraint on the development potential of the site. However, these trees provide some moderate collective amenity value. Large scale tree removals should be avoided where trees are not in conflict with design proposals.

3.3 Tree Constraints and General Design Advice

3.3.1 The retention of category A and B trees should be considered as a priority, as these trees provide long term amenity value and are likely to make a significant contribution as part of the site development.

3.3.2 The retention of the category C trees should be considered where they do not directly conflict with

design proposals. However, these are trees of low quality that may only offer a short term contribution to the future site. Attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal.

3.3.3 The retention of category U trees should not generally be considered within any new development. However, in some circumstances category U trees can be retained for the wildlife habitat potential that they offer, provided they are situated in areas with limited access and pose a limited potential risk.

3.3.4 The design of the new development should consider the crown position of retained trees in relation to any new dwellings. Whilst either shade or sunlight might be desirable, depending on the potential use of the area affected, the design should avoid unreasonable obstruction of light and should give adequate provision for future tree growth.

3.3.5 Where any demolition or construction operations are proposed that encroach beneath the canopy spread or within the RPA of a retained tree they must be carried out in a manner that eliminates the likelihood of any damage occurring.

3.3.6 An Arboricultural Impact Assessment will be needed where proposed development has the potential to negatively impact the trees at the site, to assess how they could be affected by the development. This will include recommendations to limit these impacts where possible and advise on suitable mitigation for any required tree loss.

3.3.7 Once the design proposals have been finalised an Arboricultural Method Statement is likely to be required to demonstrate how the retained trees will be suitably protected throughout the development. This should include specialist construction methodology where works are in close proximity to trees and measures to protect tree roots, stems and crowns, such as fencing and ground protection.

3.3.8 The planting of suitable replacement trees, as part of a wider landscaping scheme, can provide mitigation for any tree removals. It is recommended that tree planting follows 5 – 10 – 20 - 30 formula (i.e. No more than 5% of any one cultivar, no more than 10% of any one species, no more than 20% of any one genus, and no more than 30% of any one family.) This gives any new tree population maximum resilience against pests and diseases.

4. Arboricultural Impact Assessment (AIA)

4.1 Introduction

4.1.1 A BS 5837:2012 Arboricultural Impact Assessment (AIA) has been carried out for all trees included in the survey. The AIA methodology evaluates the potential direct and indirect impacts the proposed development could have on the trees at the site. Where necessary mitigation measures are recommended.

4.1.2 BS 5837:2012 paragraph 5.4.2 states:

> *"The assessment should take account of the effects of any tree loss required to implement the design, and any potentially damaging activities proposed in the vicinity of retained trees. Such activities might include the removal of existing structures and hard surfacing, the installation of new hard surfacing, the installation of services, and the location and dimensions of all proposed excavations or changes in ground level, including any that might arise from the implementation of the recommended mitigation measures. In addition to the impact of the permanent works, account should be taken of the buildability of the scheme in terms of access, adequate working space and provision for the storage of materials, including topsoil."*

4.2 Development Proposals

4.2.1 The client proposes the construction of a new Costa Coffee building and drive through along with associated soft and hard landscaping.

4.2.2 This AIA is based on the development layout provided by the Client (ref: 18980-010 by the Harris Partnership dated February 2024).

4.3 Tree Retention and Removal

4.3.1 The development proposals indicate that 2 trees within the site boundary will need to be removed to facilitate the new development, as the RPA of the trees are situated in the footprint of new road structures.

4.3.2 The trees that need to be removed are detailed in the Tree Survey Schedule at Appendix 1 and located on the Tree Impacts Plan at Appendix 3. A summary of the required tree removals is shown in Table 2.

Table 2: Summary of Required Tree Removals

Trees to be Removed			Trees to be Retained		
Category A	**Category B**	**Category C**	**Category A**	**Category B**	**Category C**
Trees: 0	Trees: 2	Trees: 0	Trees: 0	Trees: 5	Trees: 4
Groups: 0	Groups: 0	Groups:0	Groups: 0	Groups: 3	Groups: 3
Woodlands: 0	Woodlands: 0	Woodlands: 0	Woodlands: 0	Woodlands: 0	Woodlands: 0
Hedgerows: 0	Hedgerows: 0	Hedgerows: 0	Hedgerows: 0	Hedgerows: 0	Hedgerows: 0
Total: 0	**Total: 2**	**Total:0**	**Total: 0**	**Total: 8**	**Total: 7**

4.3.3 Although the tree removals proposed to facilitate this development are deemed to be of moderate quality, the visibility of these trees is limited from public viewpoints by adjacent trees. There will be some loss of amenity value from the removals, but it will not significantly detract from the landscape value of the wider site. This loss can be mitigated through the planting of suitable species, particularly in the open area around the wider site.

4.3.4 The development proposals have allowed space for the planting of replacement trees throughout the site once construction is complete. The planting of diverse tree species that are in keeping with the surrounding landscape character and tolerant of climate change can mitigate for the required removals and, in the longer term, increase the amenity value and ecosystem service benefits that the site's trees provide.

4.4 Tree Pruning

4.4.1 The pruning of trees should only be undertaken where essential, to prevent open wounds that can lead to bacterial or fungal infection. Pruning works should generally be undertaken during the winter months when the tree is dormant or during the summer months when the tree is fully active.

4.4.2 Any pruning works that are required to facilitate the development are detailed in the Tree Survey Schedule at Appendix 1.

4.4.3 Tree pruning should be carried out by a suitably qualified and insured arboricultural contractor and in accordance with the recommendations of BS 3998:2010 *Tree work – Recommendations.*

4.5 Impacts from Demolition/Construction Operations

4.5.1 Where proposed operations encroach beneath the canopy or into the RPA of retained trees there is the potential for damage to occur.

4.5.2 Construction of the proposed buildings drive through road encroaches into the RPA of the retained trees T10 & T14# and new car parking spaces are proposed within the RPA of T16# detailed on the Tree Impacts Plan at Appendix 3.

4.5.3 In this instance the encroachment into the RPA of T10 & T14# is less than 3%, as this encroachment is so small coupled with the large areas of unsurfaced soil for the roots to exploit, it is my opinion it is of little concern and should be considered permissible.

4.5.4 The encroachment of the new parking area into the RPA of T16# is slightly more significant at 8.2%

and therefore it is my opinion that this encroachment will require supervised excavation and root pruning.

4.6 Shading

4.6.1 The shade from trees can be considered both a constraint and an opportunity. Some shade from trees can be beneficial. In particular, deciduous trees provide shade in summer but allow access to sunlight in winter. However, the design proposals should avoid excessive shading, and give adequate provision for future tree growth. The development should be fully considered to ensure a harmonious and sustainable relationship can be achieved.

4.6.2 When considering the position and orientation of new residential buildings in relation to existing trees, primary living areas should receive the largest proportion of natural sunlight. BRE guidelines recommend “at least half of the garden or open space should receive at least two hours sunlight on March 21 (Spring Equinox)”.

4.7 Mitigation and Protection

4.7.1 The retained trees will need protecting from development operations to ensure that they are not negatively impacted during the development. This has been detailed as part of an Arboricultural Method Statement. The primary method to achieve this is through the use of temporary protection fencing which encloses the RPA of retained trees, creating a sacrosanct Construction Exclusion Zone (CEZ) where no works can take place.

4.7.2 Where existing hard surfaces are present within the RPA of retained trees they should be kept in place where possible, even if they are not part of the design proposals. These hard surfaces will provide ground protection for any roots present beneath the hard surface during development works.

4.7.3 Any works that are proposed beneath the canopy or within the RPA of retained trees must be carried out as specified in an Arboricultural Method Statement. It is likely that these works will need to be supervised by the project arboriculturist so that any tree related issues that occur can be suitably dealt with.

4.7.4 To compensate for potential root damage and stress caused by construction activities, retained trees onsite should be mulched. The materials that may be used include wood chip, pulverized bark, or leaf mould. The mulched area should extend throughout the open ground within the RPA. The depth of an organic mulch should not be so much as to inhibit aeration of the root system or to cause overheating (Approximately 50 mm to 100 mm).

4.7.5 Where the removal of trees is required to facilitate the development, the planting of suitable replacement trees will be required as part of a wider landscaping scheme. It is recommended that tree planting follows a 5 – 10 – 20 - 30 formula (i.e. No more than 5% of any one cultivar, no more than 10% of any one species, no more than 20% of any one genus, and no more than 30% of any one family.) This gives any new tree population maximum resilience against pests and diseases.

4.7.6 Tree planting and establishment should be carried out in accordance with BS 8545:2014 *Trees: from nursery to independence in the landscape – Recommendations*.

5. References

BS 3998:2010 *Tree work – Recommendations*. ISBN 978 0 580 53777 6

BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. ISBN 978 0 580 69917 7

BS 8545:2014 *Trees: from nursery to independence in the landscape – Recommendations.* ISBN 978 0 580 713170

Littlefair P. (2011). *Site layout planning for daylight and sunlight: a guide to good practice (BR 209).* ISBN 978 1 84806 178 1.

Volume 4 National Joint Utilities Group (NJUG) *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees*, Volume 4: Issue 2: 16/11/2007, www.njug.org.uk

Appendix 1: Tree Survey Schedule

Table 3: Tree Survey Schedule

Key:	Symbols Used	Age Class	SLE	Comments	Management	Category
	< = less than ~ = approximately > = greater than # = estimated	Young, Semi mature, Early mature, Mature or Over mature	Estimate of Safe Life Expectancy (<10 Years, 10+ Years, 20+ Years or 40+ Years)	AGL - Above Ground Level MS - Multi-Stemmed TD - Trunk Division (height in m) DED - Dutch Elm Disease ADB - Ash Die Back AHC (1, 2, 3 or 4) - Ash Health Class	*Tree works that are recommended regardless of future development are in Italics* **Tree works that are required to facilitate the proposed development are in Bold**	**BS 5837:2012 Retention Categories:** U - Unsuitable for retention A - High B - Moderate C - Low **Sub-categories:** 1 - Mainly arboricultural qualities 2 - Mainly landscape qualities 3 - mainly cultural value

Tree No.	Species	Height (m)	No. of Stems	Stem Dia. @ 1.5m (mm)	Crown Spreads (m)				Height of Crown Clearance (m)	Age Class	SLE	Overall Condition	Comments	Management	Cate-gory	RPA Radius (m)	RPA Area (m^2)
					N	E	S	W									
G1#	Lime x 5	6	1	210	3	3	3	3	2.5S	Young	40+	Good	A group of five limes located in formal planting area. Vitality of trees appears normal. No significant risk features observed. Some low branches over parking area.	No action	C2	2.52	20
G2#	Lime x 4	4	1	120	2	2	2	2	2N	Young	40+	Good	A group of four trees located in formal planting area within car park. Vitality is within normal range. No significant features observed.	No action	C2	1.44	7
T3#	Oak	10	1	330	3.5	4	4	3	3.5N	Semi Mature	40+	Good	An oak located on site boundary adjacent to roundabout. Multiple pruning wounds on stem showing early signs of occlusion. Vitality is within normal range. Tree appears stable.	No action	B1	3.96	49
T4	Ash	7	1	150	2	2.5	3	3	3S	Young	40+	Good	An ash tree located in formal planting area on site boundary. Large surface roots present. Vitality appears normal. Tree appears stable.	No action	C1	1.80	10
G5	Birch x 2	13	1	170	2.5	2.5	2.5	2.5	3N	Semi Mature	40+	Good	A group of two birch trees located on site boundary within formal planting area. Vitality is within normal range. No significant risk features observed. Trees appear stable.	No action	B2	2.04	13

Tree No.	Species	Height (m)	No. of Stems	Stem Dia. @ 1.5m (mm)	Crown Spreads (m)				Height of Crown Clearance (m)	Age Class	SLE	Overall Condition	Comments	Management	Cate-gory	RPA Radius (m)	RPA Area (m^2)
					N	E	S	W									
T6#	Hazel	8	1	350	3	3.5	4	4	0S	Early Mature	20+	Fair	A multi-stemmed hazel located in formal planting area adjacent to car park. Acute primary and included unions. Crossing stems and branches in direct contact with the adjacent car wash. Contact with car wash may cause damage in the medium term. Vitality of tree is in normal range. Tree appears stable. Poor pruning evident on carpark side.	*Clear branches from car wash to prevent damage*	B1	4.20	55
T7#	Birch	12	1	220	1	2	2.5	1	3S	Semi Mature	20+	Fair	Located on top of bank on site boundary. Asymmetrical crown due to adjacent trees. Large surface roots. Vitality appears normal. Tree appears stable.	No action	C1	2.64	22
T8#	Norway Maple	12	2	170, 170	5.5	5.5	3	3	3E	Semi Mature	20+	Fair	A double stemmed tree located on site boundary. Stem is leaning. Tree is located on top of bank, possibly third-party owned. Vitality is within normal range and tree appears stable.	**Reduce crown on eastern side of crown by 2m to allow access down drive through road.**	C2	2.88	26
G9#	Norway Maple x 3. Elderberry x 1	5	1	140	2.5	2.5	2.5	2.5	1S	Young	40+	Good	A group of third-party owned trees on site boundary on top of bank. Vitality is within normal range. Trees appear stable. No significant risk features observed.	No action	C2	1.68	9
T10	Sycamore	17	1	470	1	2	6	6	3S	Early Mature	40+	Good	Located in grassed area adjacent to main road. Asymmetrical crown due to adjacent trees. Vitality is within normal range and the tree appears stable. A bat box is present on the main stem of this tree.	No action	B2	5.64	100
T11	Sycamore	17	1	370	1	4	6	3	4S	Early Mature	40+	Good	Located in grassed area adjacent to main road. Asymmetrical crown due to adjacent trees. Vitality is within normal range. No significant risk features observed.	**Remove to facilitate development**	B2	4.44	62

Tree No.	Species	Height (m)	No. of Stems	Stem Dia. @ 1.5m (mm)	Crown Spreads (m)				Height of Crown Clearance (m)	Age Class	SLE	Overall Condition	Comments	Management	Cate-gory	RPA Radius (m)	RPA Area (m^2)
					N	E	S	W									
T12	Sycamore	17	2	440, 420	6	7	7	4	2.5E	Early Mature	40+	Fair	A double stemmed tree located in grassed area adjacent to main road. Primary union at 0.5 m. Union appears stable at this time. Vitality is within normal range. Old pruning wounds partially occluded. No evidence of significant decay or instability. A bat box and a bird box are present on the main stem of this tree.	**Remove to facilitate development**	B2	7.32	168
T13#	Sycamore	15	1	310	0.5	0.5	6	6	5S	Early Mature	10+	Fair	Located on site boundary in close proximity to chain-link fence. Asymmetrical crown due to adjacent trees. Vitality appears reduced. Deadwood present in crown. Tree appears stable. Apparent soil level changes on southern side of root plate.	No action	C1	3.72	43
T14#	Sycamore	18	2	440, 530	3	3	3	7	4S	Early Mature	40+	Fair	A double stemmed tree located in grassed area adjacent to main road. Basal union at 0.5 m from ground level. Old wire fence embedded in stem. Asymmetrical crown due to adjacent trees. Vitality of tree appears to be in normal range. Deadwood present in crown. Tree appears stable. No evidence of fungal decay or cavity formation.	No action	B2	8.28	215
G15#	Sycamore x 7	19	1	480	5	5	5	5	3N	Early Mature	40+	Good	A boundary group located adjacent to road at base of grass bank. Ivy on stems and lower parts of tree, which restricted the inspection. Some trees are double stemmed with acute primary unions. Deadwood in crown. Vitality of trees appears to be within normal range. No significant risk features observed.	No action	B2	5.76	104

Tree No.	Species	Height (m)	No. of Stems	Stem Dia. @ 1.5m (mm)	Crown Spreads (m)				Height of Crown Clearance (m)	Age Class	SLE	Overall Condition	Comments	Management	Cate-gory	RPA Radius (m)	RPA Area (m^2)
					N	E	S	W									
G15a #	Sycamore	19	1	330	5	5	5	5	3N	Early Mature	40+	Good	A sycamore which is part of G16. Vitality of tree appears to be within normal range. No significant risk features observed. G16a has been measured to be 9.2 m from the curb edge and has a smaller DBH than the rest of the group.	No action	B2	3.96	49
T16#	Oak	9	1	730	5	5.5	5.5	4.5	3S	Mature	20+	Fair	A mature oak located on grass bank adjacent to car park. Historically topped with decay evident in old topping points. Tree has recovered well and the vitality appears to be normal considering the hard prune this tree has received. The sounding hammer on the main stem, suggest no evidence of significant cavity formation. Tree appears stable.	No action	B3	8.76	241
G17#	Wild Cherry. Birch. Ash. Lime	11	1	240	2.5	2.5	2.5	2.5	3N	Semi Mature	40+	Good	A linear boundary group located on grass by bank between road and carpark. Vitality is within normal range. I have not fully inspected all trees, only observed them from the car park. Trees appear stable. Trees provide important screen from road to retail park.	No action	B2	2.88	26

Appendix 2: Site Photographs



Plate 1: G1#



Plate 2: G2#



Plate 3: T3



Plate 4: G5



Plate 5: T6



Plate 6: T7# & T8#



Plate 7: G9#



Plate 8: T11, T12



Plate 9: T10, T11, T12, T14 & G15a

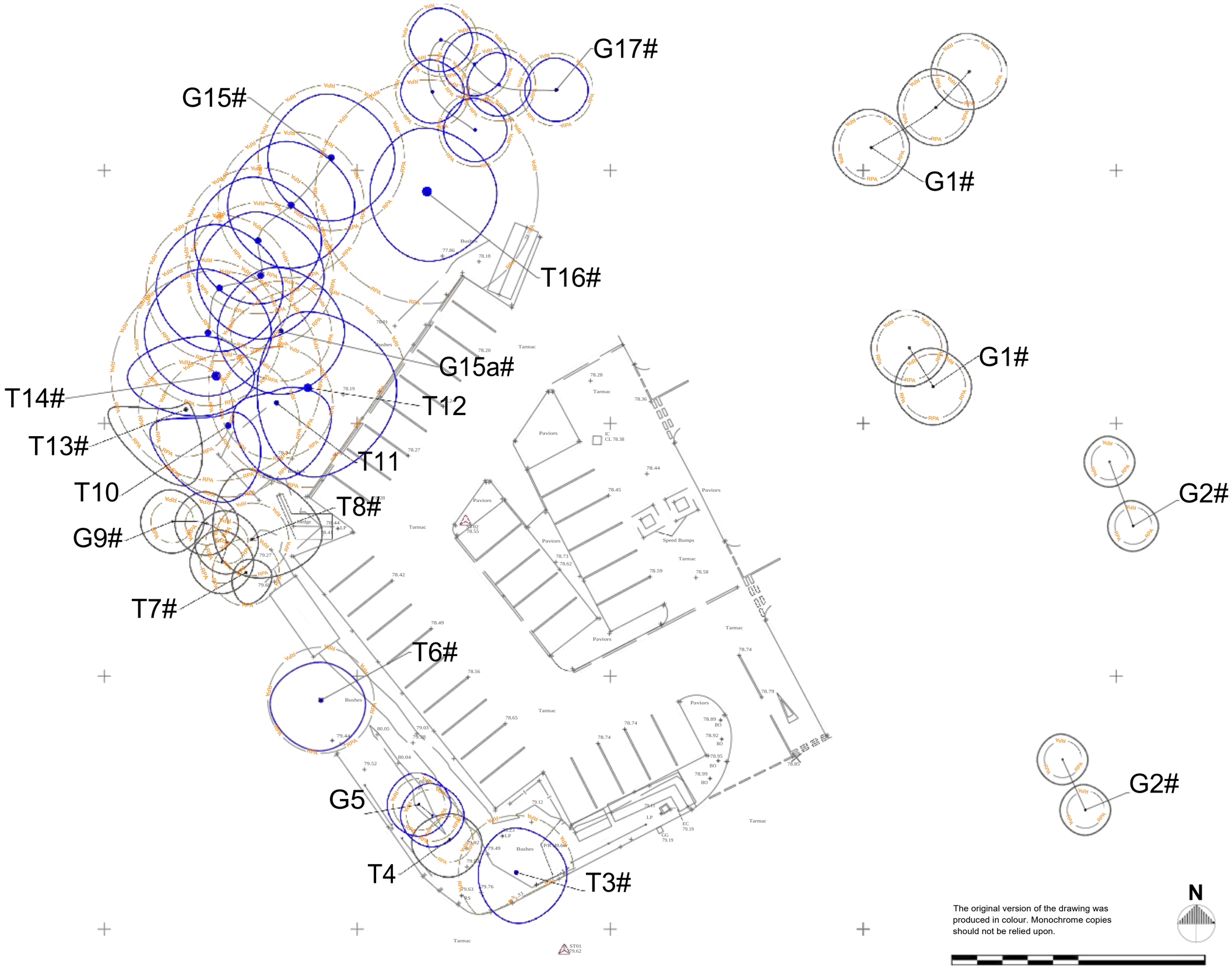


Plate 10: T16#



Plate 11: G17#

Appendix 3: Figures



The original version of the drawing was produced in colour. Monochrome copies should not be relied upon.

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SCALE BAR 1:200

GENERAL NOTES

- Drawing for Planning purposes only
- Refer to arboricultural report produced by Ecus Ltd titled 'Job Title – BS 5837:2012 Arboricultural Report, Impact Assessment and Method Statement'.
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KEY

Stem Location

Location Estimated

Tree Categories (BS 5837:2012)

Category A Trees

Category B Trees

Category C Trees

Category U Trees

Root Protection Area (RPA)

KEY PLAN (not to scale)

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1	Feb 24	M.L		

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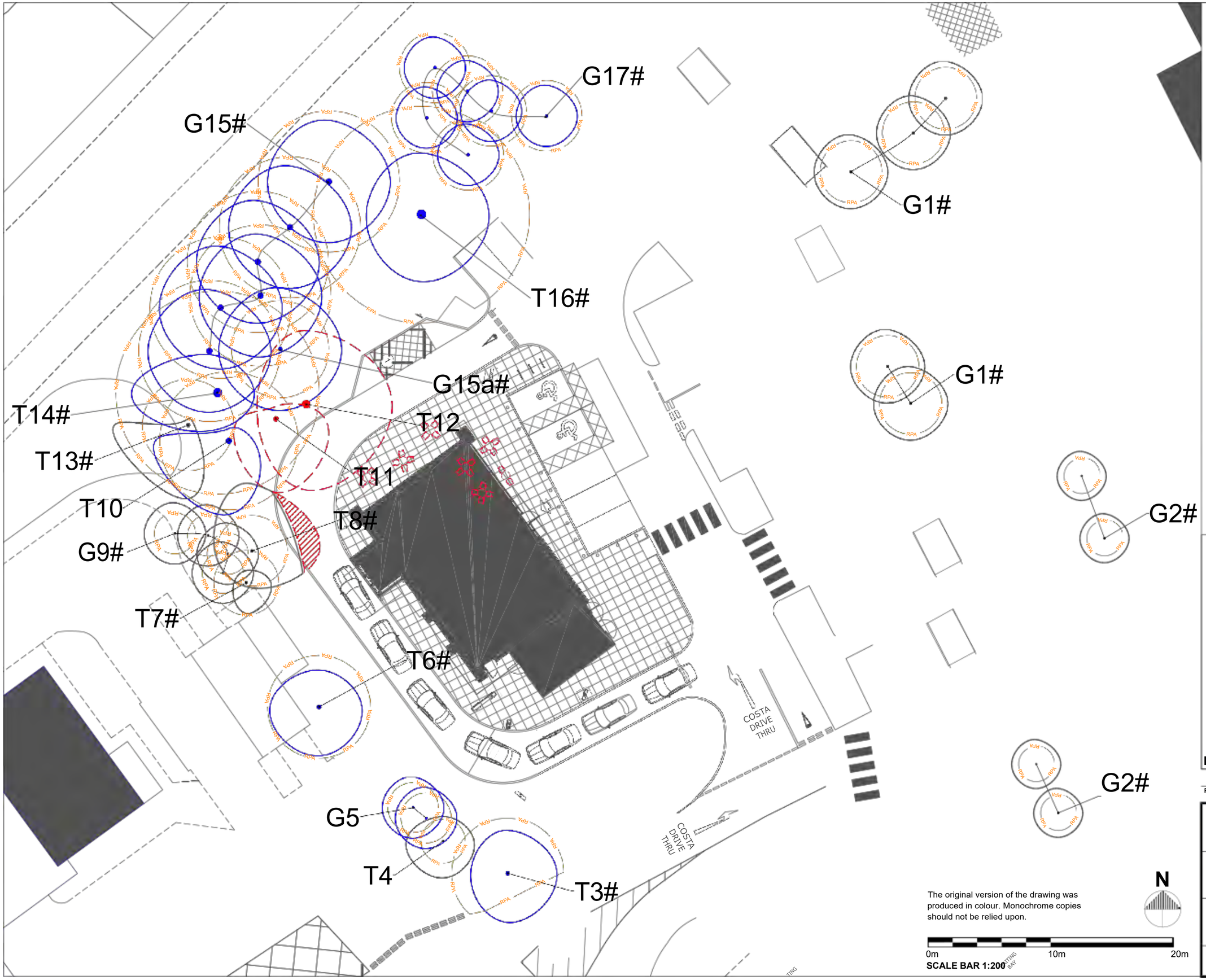
Job

LTM1100.AIA.01 - Border Retail Park

Title

Figure 3 - Tree Constraints Plan

By	Date	Scale @ A2	Drg. no.
ML	May 2024	1:200	TCP-ARB-01



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GENERAL NOTES

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- Building layout and masterplan provided by the client.
- Refer to Engineer's details for level and drainage information.
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KEY

Stem Location

Location Estimated

Tree Categories (BS 5837:2012)

Category A Trees

Category B Trees

Category C Trees

Tree to be Removed

Section of Crown to be Removed

Root Protection Area (RPA)

KEY PLAN (not to scale)

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Figure 4 - Tree Impacts Plan

By	Date	Scale @ A2	Drg. no.
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- Business Management Systems
- Carbon Advisory
- Habitats Management

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General

This Arboricultural Method Statement (AMS) details the specific measures to be adopted to ensure that the retained trees are suitably protected for the duration of the proposed development.

No equipment, machinery or materials shall be brought onto the site in connection with the development until this AMS has been submitted to and approved in writing by the Local Planning Authority.

Sequence of Events

For the purpose of protecting the retained trees, the development works on site should be completed in line with the following sequence of events:

- Pre-commencement site meeting
- Tree works
- Installation of tree protection measures
- Construction operations including suppervised excavation within the RPA of retained trees
- Removal of tree protection measures

Pre-Commencement Site Meeting

A pre-commencement site meeting should take place prior to any works being started, to finalise plans for the layout of the tree protection measures and to ensure that all potential issues are adequately considered.

The site developer and the project arboriculturist should be in attendance for the meeting. It may also be a requirement for the LPA tree officer to attend and so prior notification of the meeting should be provided to the LPA.

Tree Works

Prior to the commencement of any development operations and the storage of plant, machinery and materials on site, any required tree works should be carried out. The trees to be removed and any pruning works that are required to facilitate the development are detailed in the Tree Survey Schedule at Appendix 1 of the associated arboricultural report.

All tree works should be carried out by a suitably qualified and insured arboricultural contractor and in accordance with the recommendations of BS 3998:2010 Tree work – Recommendations.

It is recommended that trees should be checked in advance of any works by a suitably qualified ecologist to ensure there is no disturbance to nesting birds or roosting bats.

Tree Protection Fencing

Prior to the commencement of any development operations and the storage of plant, machinery and materials on site the tree protective fencing should be located as shown. Where possible this fencing should exclude all site activities from the RPA of retained trees, creating a sacrosanct Construction Exclusion Zone (CEZ).

It should be confirmed by the project arboriculturist that the fencing has been correctly set out on site, prior to the commencement of any other operations.

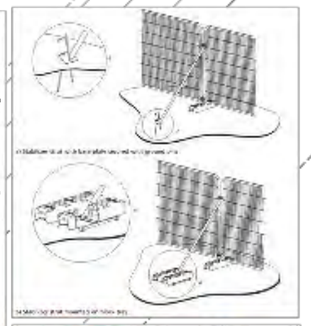
The default specification for tree protection fencing is not shown here. However, where the site circumstances and associated risk of damaging incursion into the RPA do not necessitate the default level of protection, an alternative specification should be prepared by the project arboriculturist and, where relevant, agreed with the local planning authority.

An example of an alternative specification is 2 m tall welded mesh panels on rubber or concrete feet seen in the adjacent diagram. In such cases, the fence panels should be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers should be at least 1 m and should be uniform throughout the fence. The panels should be supported on the inner side by stabilizer struts, which should be attached to a base plate secured with ground pins or mounted on a block tray.

All-weather notices should be attached to the fencing to indicate that operations are not permitted within the CEZ, with words such as "CONSTRUCTION EXCLUSION ZONE – NO ACCESS". As seen in the adjacent image.

Once the tree protection fencing has been installed it should not be altered or removed without prior consultation with the project arboriculturist. If the tree protection fencing needs to be re-positioned to allow for development operations to continue, this must be carried out under the supervision of the project arboriculturist and with prior consent from the LPA.

The tree protective fencing must remain in place until all construction operations on site have been completed and all plant and machinery has been removed.





Supervised Root Pruning and Excavation

As part of the development will encroach into the RPA of T17, supervised root pruning and excavation will be required to ensure the long-term retention of wellbeing of this tree is not adversely affected. The following points MUST be adhered to:

Excavation must be carried out using hand tools to avoid direct damage to the bark of the roots. It may be possible in some instances to use specialised equipment such as high air pressure machinery to excavate the soil with minimal disturbance to roots.

Exposed roots will be wrapped in moist, clean hessian to prevent the roots from drying out. In hot or dry weather, the hessian should be kept moist. The hessian must be removed before backfilling.

Roots less than 25mm diameter may be pruned back, preferably to a growing point. A sharp cutting tool such as bypass secateurs or a handsaw should be used to leave the smallest wound possible.
Roots greater than 25mm in diameter should be retained wherever possible, however in this circumstance the pruning of larger roots will be acceptable due to the distance of the excavation from the main stem and the large areas of unsurfaced ground for the roots to exploit.

Root pruning must be carried out under the supervision of the arboricultural consultant.

Backfilling of any excavation must be carried out by hand to avoid direct root damage or compaction, where possible. Builder sand must not be used in the backfill material.

Additional Precautions

Consideration should be given to site operations outside of the CEZ that could indirectly impact the retained trees, including the provision of adequate space for site cabins, welfare facilities and other temporary structures.

Site operations should take sufficient account of wide or tall loads in order that they can operate without coming into contact with retained trees. The movement of plant in proximity to trees should be supervised by a banksman, to ensure adequate clearance from trees is maintained at all times.

Fires on sites should generally be avoided. Where fires are unavoidable, they should not be lit in a position where heat could affect the foliage or branches of retained trees. The potential size of a fire and the wind direction should be taken into account when determining its location, and it should be attended at all times.

Any materials that could contaminate the ground around tree roots, such as fuels, oils or cement, should be stored and handled well away from the outer edge of the RPA.

Installation of Utilities and Services

Where possible all above and below ground utilities and services are to be directed away from the retained trees. Above ground services should be routed away from tree canopies, allowing sufficient space to allow for likely future crown growth. Below ground services should be grouped together and routed away from the RPA of retained trees.

Any below ground utilities or services that must be routed through the RPA should be installed in accordance with BS 5837:2012 clause 7.7.2 and NJUG 10: Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.

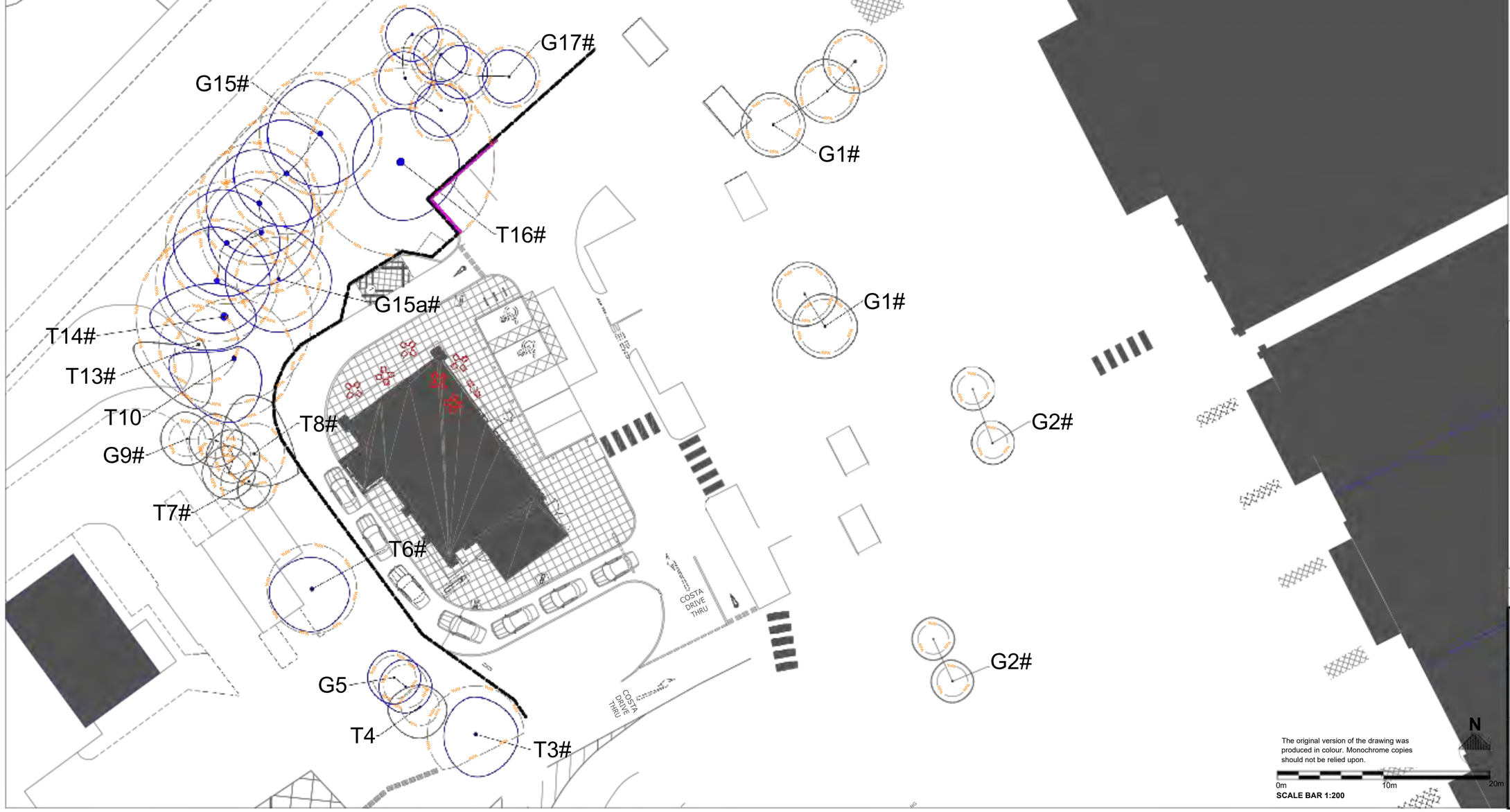
Arboricultural Site Supervision

Site monitoring and supervision by the project arboriculturist is likely to be required on a regular basis throughout the development. The specific site operations in close proximity of retained trees that will require supervision include:

- Tree removal and tree pruning works
- Installation of tree protection measures
- Installation of any service runs in proximity to retained trees

A minimum of one week's notice should be given to the supervising arboriculturist where possible before the start of any works within the RPA of retained trees, to allow the site visit to be scheduled.

All site visits will be recorded with the date and time along with any findings or comments relating to the tree protection measures and the specific operations supervised. These can be made available to the LPA tree officer on request.



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KEY

Stem Location

Location Estimated

Tree Categories (BS 5837:2012)

Category A Trees

Category B Trees

Category C Trees

Root Protection Area (RPA)

Tree Protection Fencing*

Supervised Excavation and Root Pruning.

***See note on drawing**

KEY PLAN (not to scale)

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Title
Figure 5 - Arboricultural Method Statement

By	Date	Scale @ A1	Drg. no.
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