

ENVIRONMENT - ARBORICULTURE

Tilstone Industrial Limited
Gellings Road,
Knowlsey

Arboricultural Impact Assessment Report

ENVIRONMENT - ARBRICULTURE

Tilstone Industrial Limited
Gellings Road,
Knowlsey

Arboricultural Impact Assessment

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Limitations

The assessments and interpretation have been made in line with legislation and guidelines in force at the time of writing, representing best practice at that time.

All of the comments and opinions contained in this report, including any conclusions, are based on the information obtained by BWB during our investigations.

There may be other conditions prevailing on the site which have not been disclosed by this investigation and which have not been taken into account by this report. Responsibility cannot be accepted for conditions not revealed by the investigation.

Except as otherwise requested by the Client, BWB is not obliged and disclaims any obligation to update the report for events taking place after:

- a) the date on which this assessment was undertaken; and
- b) the date on which the final report is delivered.

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1. INTRODUCTION

Instruction

- 1.1 BWB Consulting (BWB) was instructed Tilstone Industrial Limited ('the Client') to carry out an Arboricultural Survey on Land off Gellings Road in Knowsley (hereafter referred to as 'the Site'). The scope of work comprised an Arboricultural Survey undertaken on 26th February 2019 to support an Outline application (ref.19/00243/OUT) and a further assessment in July 2021 to support the application for the revised scheme.
- 1.2 The assessment has been produced to inform conceptual design and operational planning by highlighting the above and below ground constraints in the context of Proposed Development. It also provides an assessment on the potential impacts of the Proposed Development on existing trees and provides detail on appropriate protection measures and mitigation recommendations where necessary.

Objectives

- 1.3 The objectives of the report are:
- To complete an Arboricultural Survey on the Site;
 - To assess the impacts of the Proposed Development on the trees within the Site; and
 - To make recommendations for protection and mitigation measures for the trees within the Site in relation to the proposed site layout.

Scope of Works

- 1.4 The scope of work included:
- Arboricultural Survey undertaken on 26th February 2019 and review in July 2021;
 - Assessment of the impacts of the proposed site layout on the tree stock within the Site; and
 - Provision of recommendations for protection measures and/or mitigation measures as appropriate.

2. THE SITE

Location and Description

- 2.1 The Site is situated in an industrial area close to Junction 4 of the M57 in Knowsley. The Site includes an area directly east of the Nexus industrial unit and adjacent to Gellings Road. School Lane (5194) runs along the northern boundary and Randles Road provides access to the Nexus building from the south.
- 2.2 The area includes rough grassland with clumps of self-sown trees and shrubs along the northern boundary and a linear group of small amenity trees to the east alongside Gellings Road.
- 2.3 The location of the Site is shown in **Figure 2.1** and an overview of the Site and surroundings is shown in **Figure 2.2**.

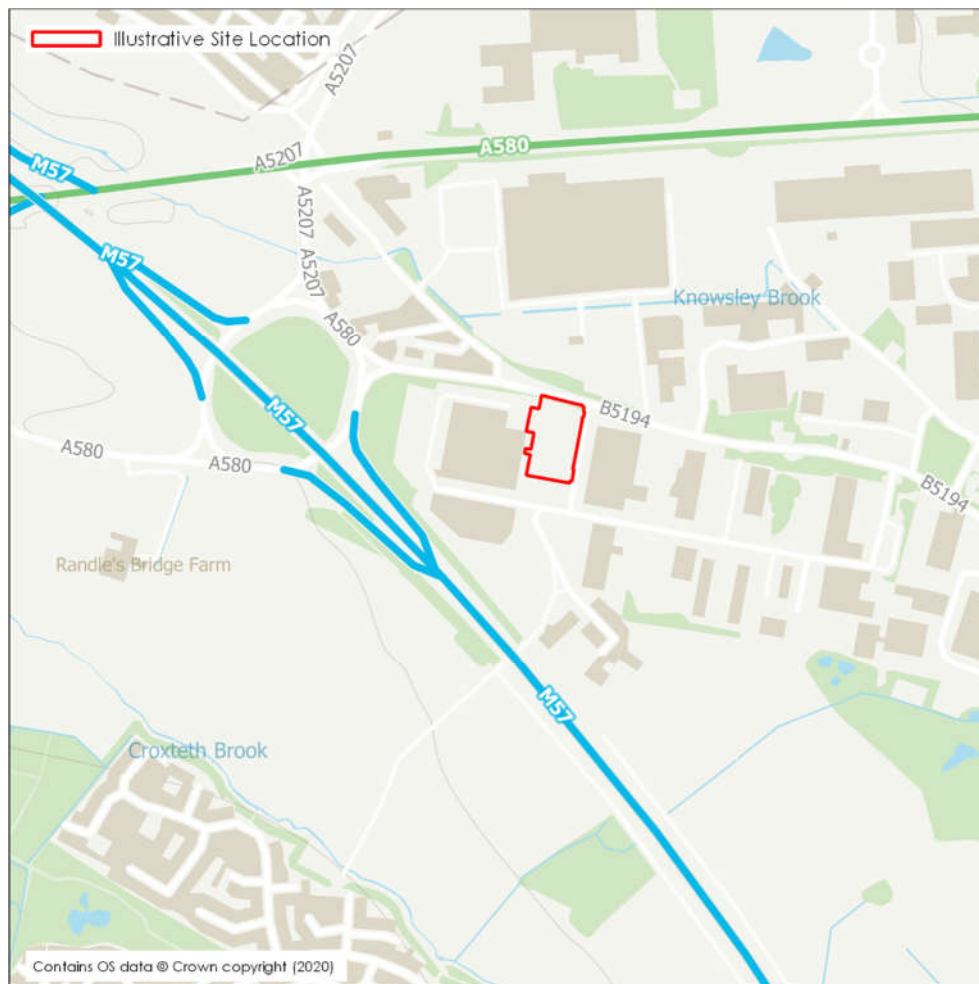


Figure 2.1: Site Location Plan



Figure 2.2: Overhead View of the Site and Surroundings

3. METHOD

- 3.1 The arboricultural survey covers those trees or groups of trees which are considered relevant for the brief. During the survey, all relevant individual trees and groups of trees located within and close to the boundary of the Site were assessed. Trees with an estimated stem diameter of 75mm or more that overhang the Site or are located within a distance of up to 12 times their estimated stem diameter were included in the survey.
- 3.2 The objective of the survey was to collect tree data relevant to the proposed works at the Site and to categorise individual trees or tree groups in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations', based on their condition, quality and future potential.
- 3.3 The purpose of the categories within BS 5837:2012 is not to determine whether retention of trees is desirable, "The purpose of the tree categorization method, which should be applied by the arboriculturist, is to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of the development occurring." (BS 5837:2012, Section 4.5.2). This survey should therefore be regarded as an initial appraisal with observations recorded for trees within and adjacent to the study area. Remedial tree works, foundation design and material specification are not covered within this report. A detailed inspection of the trees with respect to decay, defects and hazard is not included with this report.
- 3.4 The locations for the trees on the Site are shown on **Appendix 1: Tree Constraints Plan** and are based on the supplied topographical survey drawing. Where trees were not shown their position was approximated using on-site observations and measurements. The topographical survey should be updated to indicate accurate positions of any additional trees recorded as part of this tree survey. To maintain good practice, it is recommended that all measurements be checked on site prior to works commencing.
- 3.5 Groups have been defined by their similar characteristics such as species and age composition, condition and quality. Individual trees with a stem diameter below 75mm have not been recorded during the survey but broad areas of scattered self-sown shrubby trees and clumps have been recorded for completeness. Two Areas (A1-A2) were recorded for the purpose of this survey and these mainly include Hawthorn, Willow, Silver Birch and Gorse species.
- 3.6 The site survey was conducted on 26th February 2019 by R. O'Shea, who holds the formal qualification FdSc in Arboriculture and the LANTRA Certificate in Professional Tree Inspection. He has considerable experience in planning and development related projects and has completed advanced training in assessment and managing trees in accordance with BS5837:2012. He is also a Professional member of the Arboricultural Association.
- 3.7 Information collected during the survey included species, height, stem diameter, branch spread, height of crown clearance, age class, physiological condition, structural condition, estimated remaining contribution and category grade.

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- 3.8 The survey was undertaken from ground level using visual assessment of the tree canopy and stem. No removal of vegetation, digging or drilling was undertaken during the survey and parts of the stems of some trees remained partly obscured by vegetation. The weather conditions at the time of the survey were acceptable. Most parts of the Site were accessible with the exception of the dense area of Gorse shrubs in the West Area.
- 3.9 No liability can be accepted in respect of the trees or for events which happen after the time of the survey.

4. SURVEY FINDINGS AND GUIDANCE

- 4.1 The tree survey results are shown in **Table 2** (Tree Survey Schedule) and **Appendix 1**: (Tree Constraints Plan), which provides details of canopy spreads and Root Protection Areas (RPAs) of the trees included within the survey. The RPAs have been calculated in accordance with Section 4.6 of BS 5837:2012. Although the RPA attempts to identify the area of each tree's root system which should be protected, the simplistic circles do not take account of constraints such as buildings, land form, walls etc. which may have restricted or influenced root development. Circular RPAs are considered to provide a reasonable guide to the extent of the likely rooting areas which should ideally be protected.
- 4.2 A total of 2 trees (T1-T2), 5 groups (G1-G5) and 1 Areas (A1) have been recorded and assessed, on and adjacent to the Site.
- 4.3 In summary, the trees/groups/areas were categorised as follows:
- 2 Trees was classified as Category C;
 - 1 Group was classified as Category B; and
 - 4 Groups were classified as Category C.
- 4.4 Group G2 is a linear group of Purple Crab Apple located along the eastern boundary adjacent to Gellings Road. They are relatively short-lived ornamental species and their condition is generally fair, but they provide a moderate degree of visual amenity along the road edge and are assessed as Category B. The remaining trees/groups are assessed as low quality and value due to their young age, small size, impaired condition, or limited life expectancy.

Guidance

- 4.5 All A & B Category tree features (high & moderate quality) will under normal circumstances be retained, and should influence and inform conceptual design, Site layout, operational planning and construction methods to be used in proximity to trees. These features are largely irreplaceable in the short to mid-term, and the requirement to impact upon them must be justified by sound design rationale. The RPA and/or crown spread of trees will generally form a construction exclusion zone and must be safeguarded. Although under certain circumstances it may be possible to build or operate within these areas providing that appropriate measures and specifications have been formally agreed between the local planning authority, the consulting arboriculturalist and the developer/client.
- 4.6 Category A trees are of high arboricultural value by virtue of their large size, mature age, good condition and potential long term contribution to the landscape. Such trees are downgraded to B Category if they are of impaired condition or reduced life expectancy, but still afford arboricultural and landscape importance. Groups are similarly assessed but greater consideration is given to the collective landscape value and not necessary based on individual tree characteristics.

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- 4.7 Category C trees and groups are of low value usually due to their young age, small size, impaired condition, or limited life expectancy. It may not always be possible or desirable to retain low quality trees within the context of a proposed development, unless in such a location that they do not represent a significant constraint to the design brief. Young/early-mature trees, and those with a stem diameter of less than 150mm, will normally be placed in the C category, unless it is considered that they are of especially good form or are of a species that is particularly rare, in which case they may be upgraded.
- 4.8 Category U features are usually recorded due to the presence of significant hazardous defects and a reduced life expectancy of less than 10 years. These trees should generally be removed for reasons of sound arboricultural practice or health & safety, irrespective of any development proposals, unless they offer particular conservation value to the Site.

5. ARBORICULTURAL IMPACT ASSESSMENT

- 5.1 The Arboricultural Impact Assessment (AIA) considers the Proposed Development and how they relate to the trees on the Site. The Proposed Development is broadly the same as the approved outline planning permission (19/00243/OUT) but has changes that include the construction of only one unit instead of three, a relocated access point, a new link between the new and existing buildings, service yard alterations and associated alteration of the redline boundary.
- 5.2 This report provides a detailed assessment of the arboricultural impacts of development based on the updated proposals that are shown on the updated Tree Removal and Protection Plan appended to this document.
- 5.3 The Proposed Development would require the removal of Group G3 (Category C) and small sections of Group G2 (B Category) for the proposed access and car parking. It is considered that the loss of sections of the Category B Group G2 and the removal of G3 will have a negligible effect on local landscape amenity as the majority of the tree line is being retained alongside Gellings Road.
- 5.4 **Table 1** lists the number and quality of trees/groups that require removal in order to facilitate the Proposed Development.

Table 1: Arboricultural implications of the Proposed Development

Tree Quality Category					
	A	B	C	U	Totals
Trees to be removed	-	-	-	-	0
Groups to be removed	-	G2 (Part)	G3	-	2
Totals	<u>0</u>	<u>1 (parts groups)</u>	<u>1</u>	<u>0</u>	<u>2</u>

- 5.5 It is recommended that the Proposed Development include new tree planting within areas of green space, alongside the access road and adjacent to the car park as part of a landscape scheme. New planting should include mixed tree species of varied form, appearance and ultimate size, and plant selection and their planting locations are well-considered in relation to the Proposed Development and site conditions.

Tree Protection

- 5.6 All trees that have been selected for retention should be suitably protected with appropriate fencing for the duration of the construction phase of the Proposed Development (suitable protective fencing will comprise 2 metre high Heras® type galvanized weldmesh panels, which must be secured to the ground and appropriately

braced to prevent lateral movement). The alignment of protective fencing is shown on the Tree Removal and Protection Plan (**Appendix 2**) and standard specification is shown on **Appendix 3**.

- 5.7 Where fencing is required it should be erected immediately after the completion of any tree works but prior to bringing any construction vehicles or material onto the Site, and should not be removed until construction has been completed and all machinery has been removed from the Site.
- 5.8 Should any activities be required within the protection fencing during the construction phase then the advice of the project arboriculturalist should be sought.

Tree Works

- 5.9 All approved tree work should be carried out prior to fencing installation. Care must be taken to ensure that damage to retained trees during tree removal and disturbance to their RPA's is avoided.
- 5.10 All tree works should be carried out by suitably qualified and experienced contractors, and should conform to guidelines set out in British Standard 3998: 2010 'Tree work – Recommendations'.
- 5.11 Following Site development, regular inspections (annual or biennial) of retained trees, should be undertaken by a qualified Arboriculturalist.

6. STATUTORY OBLIGATIONS AND GUIDANCE

- 6.1 Works to trees which are covered by a Tree Preservation Order (TPO) require permission or consent from the Local Planning Authority (LPA). However, full planning consent would override the need for a separate application, providing details of all tree works were included in the submission and subsequently approved by the LPA.
- 6.2 A check with Knowsley Borough Council mapping portal ('My neighbourhood') has confirmed the Site is not situated within a Conservation Area and there are no trees subject to TPO protection on the Site. Further confirmation should be sought from the LPA prior to any tree work.
- 6.3 The Forestry Commission should also be informed if more than 5 cubic metres of timber in any one calendar quarter is being felled however, a felling licence is not required for felling to immediately facilitate a development authorised by full planning permission. Pre-emptive or enabling works undertaken prior to obtaining planning permission may require a felling licence.
- 6.4 Trees are a potential habitat for nesting birds and roosting bats and it is a criminal offence under normal circumstances to disturb or destroy – whether intentional or unintentional – the nesting or roost sites of bats. They are afforded protection under the 'Wildlife & Countryside Act 1981' and the 'Conservation of Species and Habitats Regulations 2010'. Therefore, avoid carrying out significant tree works during the bird nesting season [1st March to 31st July] and ensure that trees are professionally surveyed for signs of bat roosts and/or bat activity before starting any tree work.
- 6.5 The National Planning Policy Framework 2012 (NPPF), which was updated in July 2021, assumes protection of all ancient woodland and veteran trees unless it can be clearly demonstrated that the need of, or benefits of, development outweigh the loss. In this respect ancient woodland is defined as an area which has been wooded continuously since at least 1600 AD and a veteran as a tree of exceptional value for wildlife, in the landscape, or culturally because of its great age, size or condition. There are no ancient woodland or veteran trees.

Table 2: Tree Survey Schedule

No.	Species (common name)	Age class	Height	Crown spread :				Crown	Stem dia. (mm)	Physiological	Structural	Estimated Remaining	Comments	Recommendations	Ret. Cat. (sub cat.)	RPA (m)
				N	E	S	W									
INDIVIDUAL TREES																
T1	Ash	EM	11	6	5	5	2	1	360	G/F	G/F	20-40	Self sown tree, crown biased north-east, long low slender branches, minor deadwood. Suppressed by dominant Lombardy Poplar.		C1	4.32
T2	Ash	MM	14	5	5	3	5	2	390	G/F	G/F	40+	Self sown tree along edge of fence line. Forks at 2m; dominant stem with crown biased north, sub-stem has suppressed crown to the south. Lombardy poplar branch hung up within crown.		C1	4.68
GROUPS OF TREES																
G1	Purple Crab apple (7), Rowan (1)	MM	5-6					2	230-280	F/P	F	10-20	Tree line within path side verge and either side of car park entrance. Planted at approx 4m spacings. Varied form and condition; mainly single stemmed, fair condition, asymmetric crowns, minor dieback and deadwood. 2x dead trees and 1 Rowan that has poor form and condition.		C2	1m beyond canopy spread

G2	Purple Crab Apple (32), Ash (1)	MM	5-9					2	200-280	F	F	10-20	Linear group along eastern flank of the site adjacent Gellings Road. Planted at approx 4m spacings. Varied form and condition; mainly single stemmed, fair condition, past crown lifted, minor deadwood and slight crown bias east. 2 dead trees. 1x Ash growing through crown of the northernmost tree. Relatively short lived species but provide a moderate degree of visual amenity in location.		B2	1m beyond canopy spread
G3	Goat Willow, Ash	Y	3						75-100	G	F	10-20	Self sown trees, 1x multi-stemmed Willow and 1x young Ash. Gorse patch.		C2	1m beyond canopy spread
G4	Hawthorn (2)	MM	3						100-150	F	F	10-20	3x small trees along fence line. 2x single stemmed, 1x multi-stemmed. Crowns biased north east and shrubby form.		C2	1m beyond canopy spread
G5	Hazel, Ash, Sycamore, Hawthorn	EM-MM	4-9						100-380	G/F	G/F	10-20	Along highway verge. Mostly Hazel with occasional Sycamore, Hawthorn and Ash. Crowns biased north.		C2	1m beyond canopy spread
AREAS																

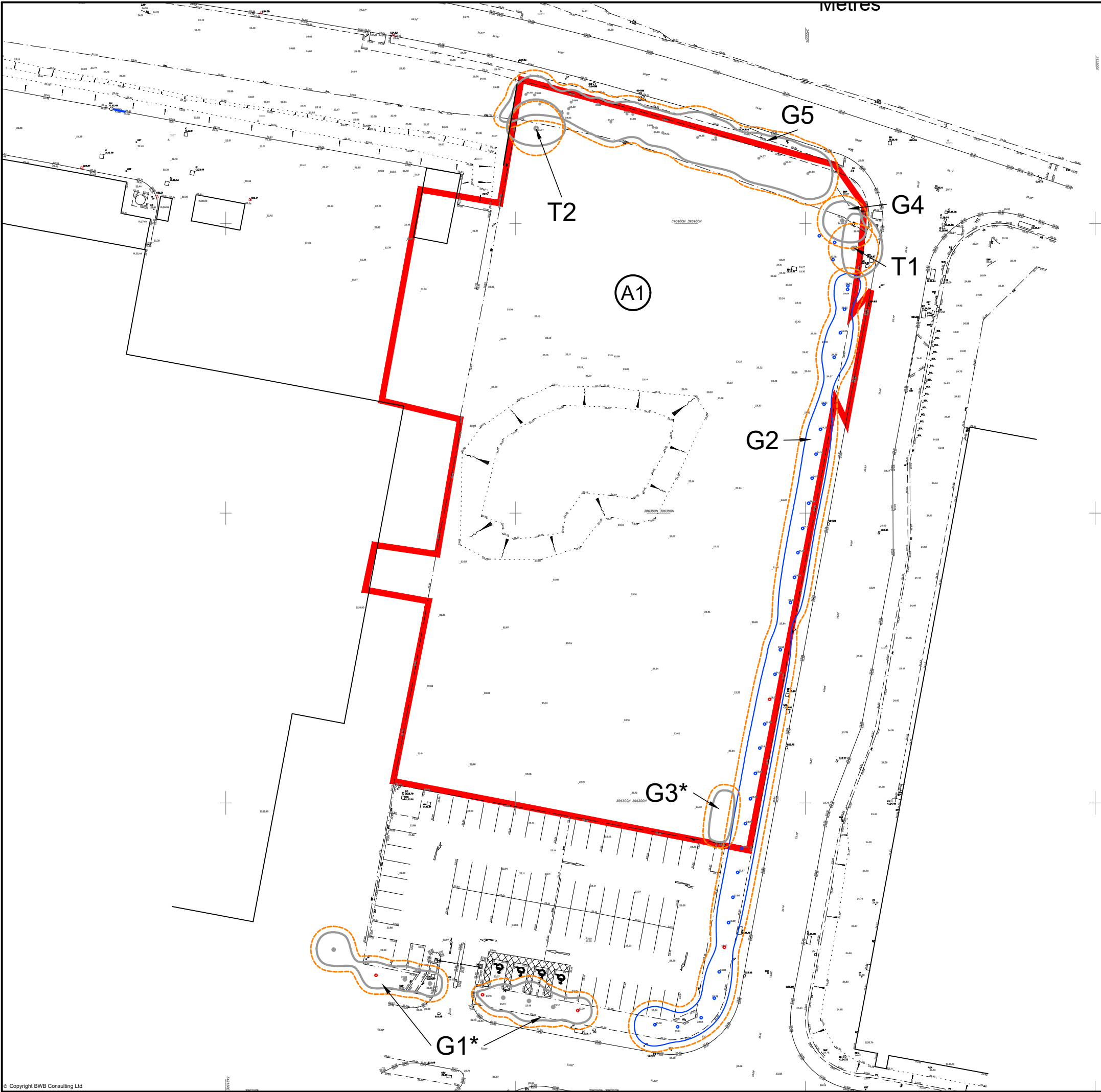
A1	Silver Birch, Goat Willow, Gorse	EM	4-7						75-150	G	G	20-40	Scattered self sown early-mature S.Birch, mainly 100mm stem diameter, amongst dense thickets of Gorse. Occasional G. Willow.		C2	n/a
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Key:

- Tree/ Group Ref No. – tree/group number, to be recorded on tree survey plan where necessary.
- Species – common and scientific names where possible.
- Age class – young (Y), young mature (YM), middle mature (MM), mature (M), over mature (OM).
- Height – overall height of tree in metres.
- Crown spread – in meters taken at the four cardinal points to derive an accurate representation of the crown (to be recorded on the tree survey plan where necessary).
- Crown clearance – in meters above adjacent ground level to inform on ground clearance, crown stem ratio and shading.
- Stem Dia – stem diameter, in millimetres at 1.5m above adjacent ground level (on sloping ground to be taken on the upslope of the tree base) or immediately above the roof flare for multi-stemmed trees.
- Physiological condition – e.g. good (G), fair (F), poor (P) and dead (D).
- Structural condition – e.g. collapsing, the presence of decay and any physical defect.
- Estimated remaining contribution – in years e.g. less than 10, 10-20, 20-40, more than 40.
- Management recommendations – including further investigations of suspected defects that require more detailed assessment and potential wildlife habitat. All tree work is based on current tree condition and the existing land use and will include work such as hazard abatement, encroachment pruning, thinning of groups/woods and good arboricultural practice.
- Cat grade – category grade – U or A to C, to be recorded in plan on the tree survey plan where possible.
- RPA – Root protection area calculated from BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations in sq/m. Where indicated, dimensions of radius of circle or sides of square based around centre point of trunk calculated for design purposes.

APPENDICES

APPENDIX 1: Tree Constraints Plan



- Notes
1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
 2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
 3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
 4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key Plan

Tree Categorisation:
(Tree quality assessment based on BS 5837:2012 Trees in relation to design, demolition and Construction - Recommendations)

- Crown spread of category A**
Trees/groups of high quality and value
- Crown spread of category B**
Trees/groups of moderate quality and value
- Crown spread of category C**
Tree/groups of low quality and value
- Crown spread of category U**
Trees/groups unsuitable for retention
- Root Protection Area (RPA)**
To be used to inform design proposals and assess potential tree impacts. It represents the minimum area around each tree that should be left undisturbed to ensure their survival.

Indicative site boundary

Approximate position
(where not shown on the topographical survey - includes some trees within groups)

A	09.04.19	Western end of tree group 4 amended	CA
Rev	Date	Details of issue / revision	Dnw Rev

Issues & Revisions

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Client

Tilstone Managing Warehouse REIT Plc

Project Title

Gellings Road, Knowsley

Drawing Title

Tree Constraints Plan

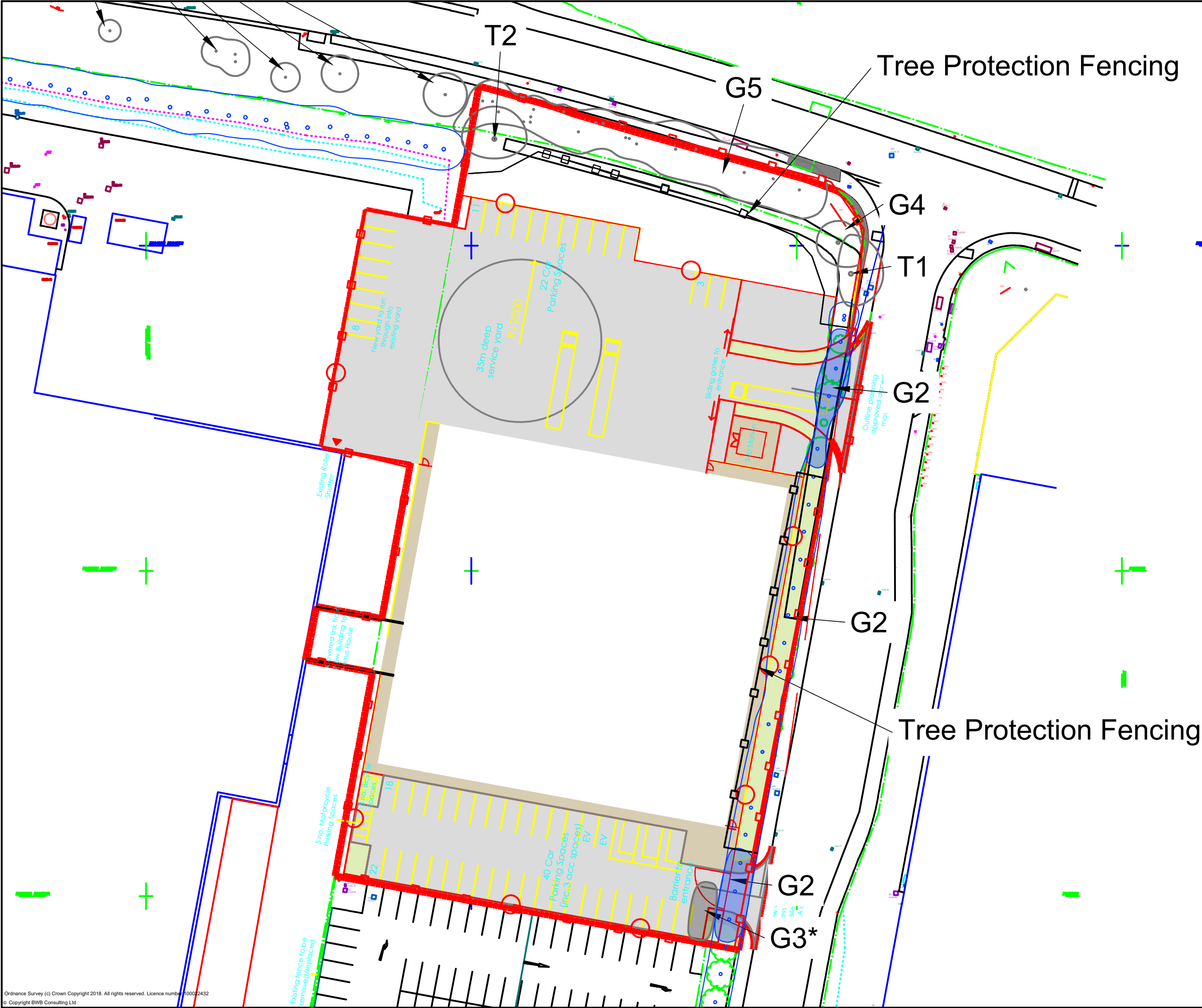
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Scale:	A3	NTS	

Drawing Status

PLANNING

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
BWB-040319-ARB	S#	B

APPENDIX 2: Tree Removal and Protection Plan



- Notes**
1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
 2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
 3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
 4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key Plan

Tree Categorisation:
(Tree quality assessment based on BS 5837:2012 Trees in relation to design, demolition and Construction - Recommendations)

Tree Retention

- Crown spread of category A**
Trees/groups of high quality and value
- Crown spread of category B**
Trees/groups of moderate quality and value
- Crown spread of category C**
Tree/groups of low quality and value
- Crown spread of category U**
Trees/groups unsuitable for retention

Tree Removal

- Crown spread of category A**
Trees/groups of high quality and value
- Crown spread of category B**
Trees/groups of moderate quality and value
- Crown spread of category C**
Tree/groups of low quality and value
- Crown spread of category U**
Trees/groups unsuitable for retention

Site boundary

Approximate position
(where not shown on the topographical survey - includes some trees within groups)

Tree Protection Fencing
This outlines the Construction Exclusion Zone (CEZ) and is defined by the Root Protection Area

Rev	Date	Details of issue / revision	Dwn	Rev

Issues & Revisions

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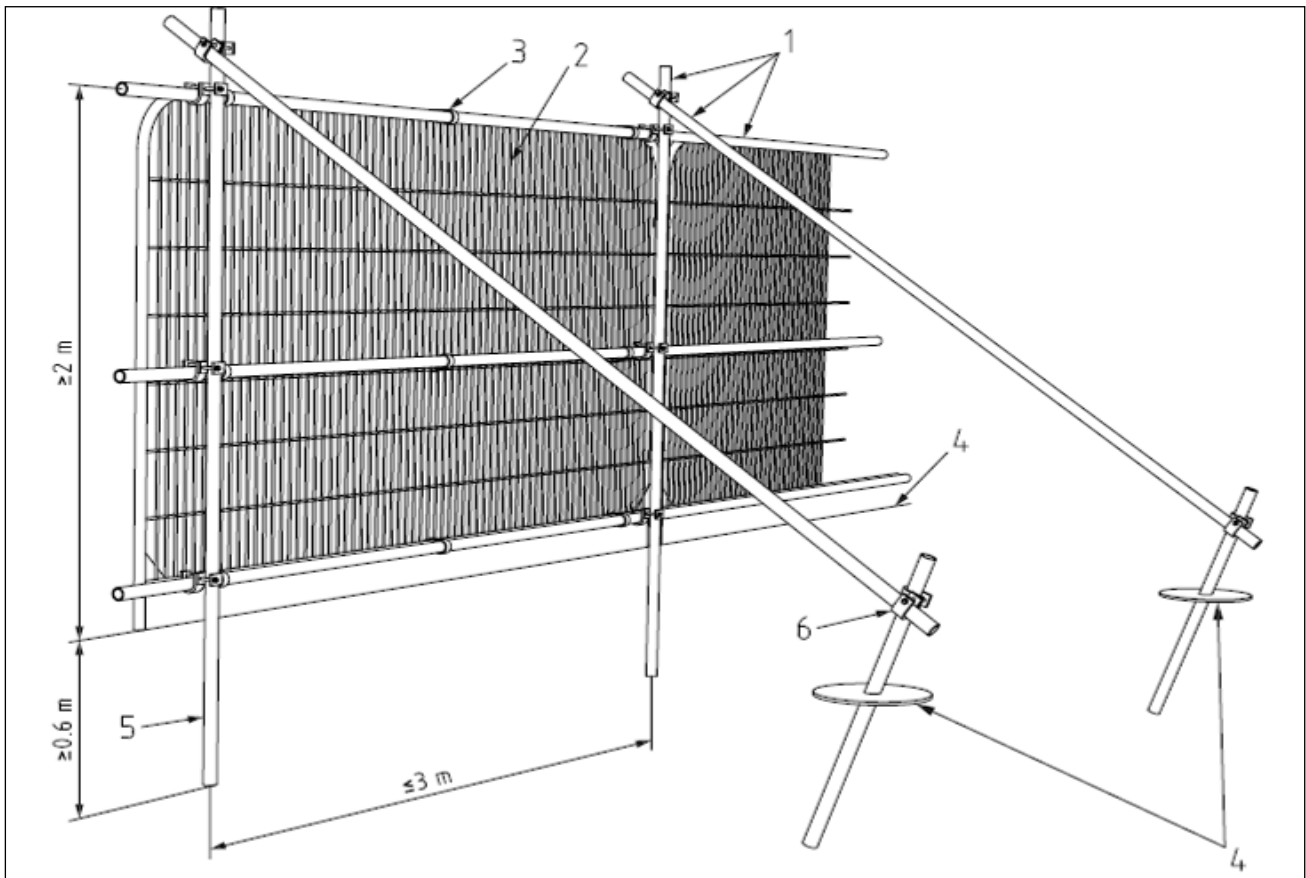
Project Title
Gellings Road, Knowsley

Drawing Title
Tree Removal and Protection Plan

Drawn:	ROS	Reviewed:	ABS
BWB Ref:	XXX 0000	Date:	09.12.21
Scale:	A3	Not to Scale	
Drawing Status	PLANNING		
Project - Originator - Zone - Level - Type - Role - Number	BWB-070921-ARB		
Status	S#	Rev	A

Appendix 3: Protective Barrier

Default specification for protective barrier



Key:

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

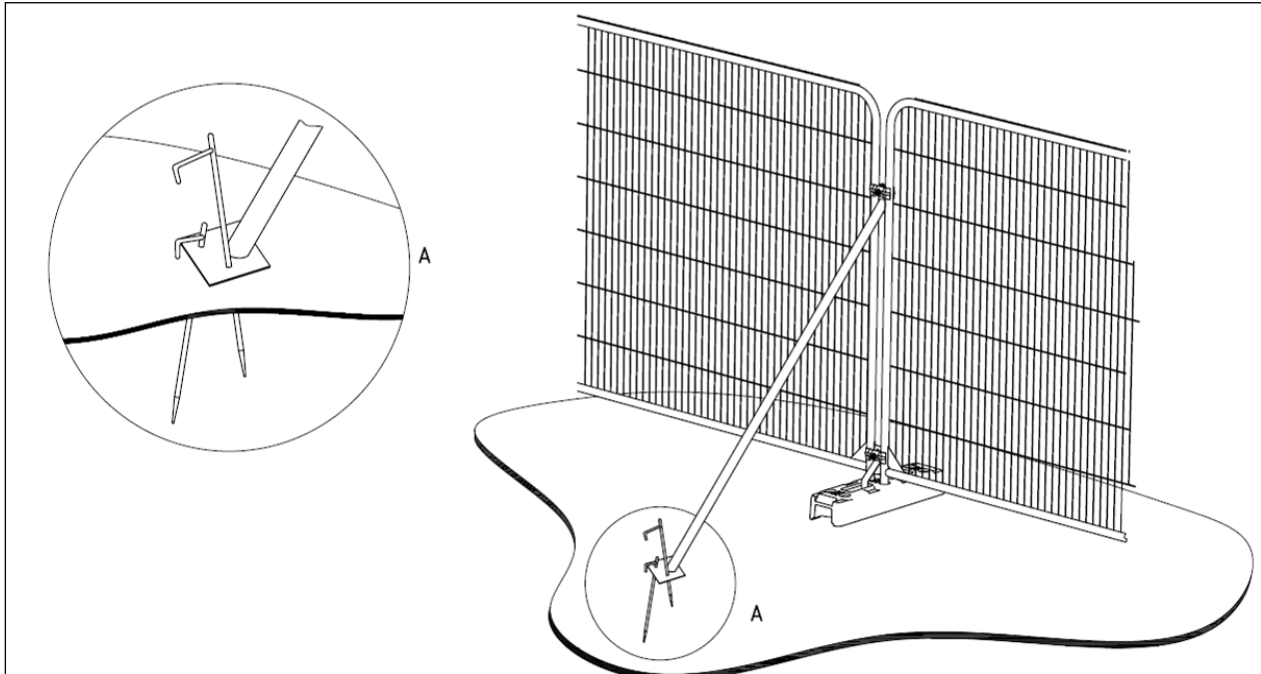
The fencing should be erected immediately after the completion of the tree works but prior to bringing any construction vehicles or material onto site and should not be removed until construction has been completed and all machinery has been removed from site.

All-weather notices should be attached to the barrier with words such as:

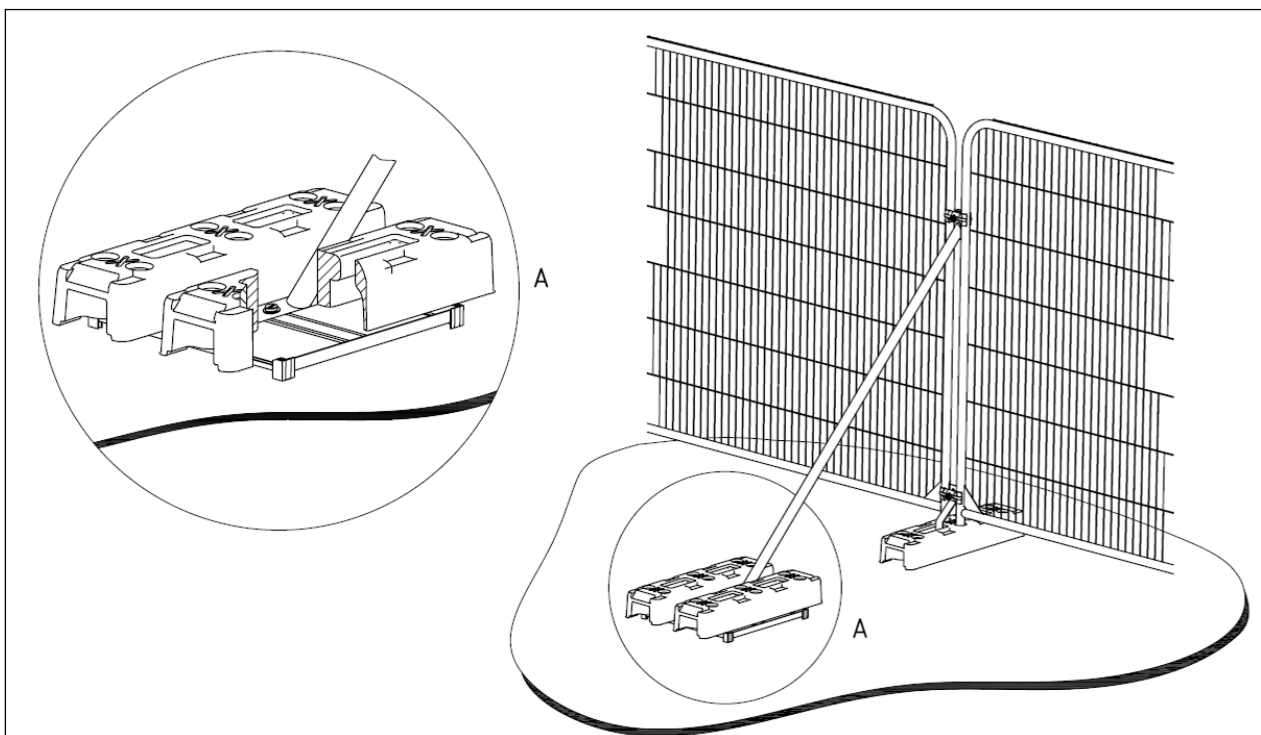
"CONSTRUCTION EXCLUSION ZONE – NO ACCESS".

Examples of above-ground stabilizing systems

Stabilizer strut with base plate secured with ground pins:



Stabilizer strut mounted on block tray:





BETTER SOLUTIONS, INTELLIGENTLY ENGINEERED