

## **Broad Oak Tree Consultants Limited**

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# ARBORICULTURAL IMPLICATIONS ASSESSMENT FOR PROPOSED CHILLER PLANT

**AT** 

13-15 SHERRINGTON WAY LISTER ROAD BASINGSTOKE RG22 4DQ

BY

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Our ref: J65.29 9th February 2024

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#### **APPENDICES:**

- 1. EXPLANATORY SHEETS, TREE INSPECTION SHEETS
- TREE CONSTRAINTS PLAN, DRAWING NO. J65.29/01
   TREE PROTECTION PLAN, DRAWING NO. J65.29/02
- 4. EXAMPLES OF FENCING SPECIFICATION AND SIGNAGE

#### 1. INTRODUCTION

- 1.1 Broad Oak Tree Consultants Ltd. received instructions from Leverton Helm to undertake an inspection of trees located on and immediately adjacent to the site referred to as Units 13-15 Sherrington Way, Lister Road, Basingstoke, RG22 4DQ. The purpose of the inspection was to produce a base inventory of the tree stock and an Arboricultural Implications Assessment of development proposals.
- 1.2 The proposals are for the construction of a new concrete base to support new chiller equipment associated with the upgrade in progress to Units 13-15 at Sherrington Way, Lister Road, Basingstoke, RG22 4DQ. Details of the proposals will have been submitted by Leverton Helm and others.
- 1.3 The trees were inspected on 1<sup>st</sup> February 2024 by Tim Laddiman, BSc.(Hons) M.I.C.For. M.Arbor.A., Chartered Arboriculturist and Principal Consultant of Broad Oak Tree Consultants Ltd.
- 1.4 At the time of reporting online checks with Basingstoke and Deane Borough Council's mapping system did not indicate the site to be within a Conservation Area and no Tree Preservation Orders are indicated to be present.

#### 2. GENERAL SITE DESCRIPTION

2.1 Units 13-15 Sherrington Way represent a section of linear warehousing/business units orientated north/south with access and parking to the east off Sherrington Way (to the north). To the west of the units is a landscaping strip comprising grass and linear tree planting with overgrown hedging beyond a perimeter fence running parallel with Lister Road. Levels drop down a shallow bank to the road.

#### 3. SCOPE OF TREE SURVEY

3.1 Only the trees and hedging immediately adjacent to the industrial units along their western flank were included in the inspections.

#### 4. DATA COLLECTION

4.1 All trees were inspected from the ground and no climbing or specialist investigations were undertaken. Only those trees within the site boundary could be basally inspected, with the structural integrity of the trees located outside the site unconfirmed. Each tree was inspected to the requirements of Section 4.4 "Tree Survey" of BS 5837:2012 "Trees in Relation to Design, Demolition and Construction - Recommendations".

- 4.2 The tree survey followed the numbered sequence from T1-T10 inclusive. Tree numbers, together with BS recommended colour coding of condition, have been added to the Tree Constraints Plan, our drawing no. J65.29/01 in Appendix 2. This drawing also includes crown spreads based on four compass points and BS calculated root protection areas.
- 4.3 The following categories of information were obtained for each tree. Separate detailed tree survey sheets are attached in Appendix 1, together with comprehensive explanatory sheets which cover the details of the categories listed below.
  - (1) Tree reference number
  - (2) Species
  - (3) Height in metres
  - (4) Stem count
  - (5) Stem diameter or equivalent in millimetres
  - (6) Branch spread in metres
  - (7) Age class
  - (8) Height of crown clearance in metres
  - (9) Physiological condition
  - (10) Estimated remaining contribution in years
  - (11) Category grading
  - (12) Structural condition
  - (13) Preliminary management recommendations
- 4.4 Within the assessment of physiological condition and remaining contribution, a visual inspection of each tree was undertaken to assess the crown and stem for any weak structures, deadwood, hollows, forks or other defects that might affect its stability and safety. The base of each tree was also visually inspected, together with tapping and probing, to search for signs of root lifting, bark death or decay. Where stems were heavily ivy clad, no full assessment of structural integrity could be undertaken. Clearance of the ivy would be necessary for confirmation of tree condition.

#### 5. RISK ASSESSMENT - INFORMATIVES

- 5.1 Although the potential risk to someone passing beneath a tree when the tree or part of it fails is relatively remote, the risk is present. This increases significantly in areas of consistent and regular usage on a year round basis, such as footpaths, gardens and roadways. Where static structures exist, the risks become constant and an assessment is made as to whether complete or partial failure of a tree could potentially cause physical damage to such structures.
- 5.2 Within the scope of any tree survey it is a fact that not all risks of stem or crown failure can be covered, particularly in relation to freak occurrences of weather when even healthy trees can suffer stem snap or windblow. There is also a well known propensity for mature trees to occasionally shed limbs for no discernible reason, even on calm days. Although relatively rare, limbs may occasionally be shed and this should be acknowledged as a risk that cannot entirely be mitigated.

#### 6. RESULTS OF TREE INSPECTIONS

6.1 A total of nine individual trees and one linear hedge were inspected. These all date from the construction of the industrial units, representing landscaping to soften the visual appearance of the large building. The hedge (G2) has been maintained in the past but appears to have been left to develop unchecked for a number of years. Emergent Sycamore and Ash dominate and have developed rapidly.



Extract from Google Street View: View of site from Lister Road looking north-east.

Note hedgeline and emergent Ash/Sycamore dominate

with Field Maple behind barely visible.

6.2 Of the trees inspected, the following is a breakdown of the various numbers of trees and groups in each BS category.

BS Category	Tree No.	Sub Total
Α	-	-
В	-	-
С	T1, G2, T3, T4, T5, T6, T7, T8, T9, T10	10
U	-	-
	TOTAL	10

#### 6.3 Interpretation of table

Category A Retention most desirable. Of high quality and value and in such a

condition as to be able to make a substantial contribution (a minimum

of 40 years is suggested).

Category B Retention desirable. Of moderate quality and value and in such a

condition as to make a significant contribution (a minimum of 20

years is suggested).

Category C Could be retained – of low quality and value. Poor crown form,

heavily asymmetric, large numbers of similar species/size. Currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested) or young trees

with a stem diameter below 150mm.

Category U Trees for removal. Dead/dying/dangerous trees due to structural

defects, fungal decay or root plate uplift. Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound

arboricultural management.

#### 7. BS CALCULATED ROOT PROTECTION AREAS (RPAs)

7.1 To provide an indication of the critical areas of root plate necessary for tree survival and longevity, BS 5837:2012 requires the calculation of RPAs for trees in the BS Categories A, B and C. Calculations are not made for Category U trees which will require removal on safety grounds within 10 years.

7.2 The table below has been calculated using the measured stem diameters and the formula as described in Section 4.6 in BS 5837:2012. These are represented as basic circles on the Tree Constraints Plan. Where buildings, walls, services and hard surfacing exist within the indicated RPAs it is likely that the architecture of root systems will have been affected. Foundations to walls and buildings can completely obstruct root development, depending on their depth and the nature of the underlying soils. In the absence of detailed site investigations the indicated RPA circles should be used for guidance only within any development proposals.

Tree		BS	Stem diameter or calculated equivalent	BS calc. radial equiv. root protection	BS calc. total RPA
no.	Species	Category	(mm.)	area (m.)	(m²)
T1	Sorbus sp.	C2	190	2.3	17
G2	Thorn, Sycamore	C2	<100	<1.2	<5
Т3	Field Maple	C2	300	3.6	41
T4	Field Maple	C2	370	4.4	61
T5	Ash	C2	c150	c1.8	c10
T6	Field Maple	C2	280	3.4	36
T7	Sycamore	C2	c200	c2.4	c18
T8	Ash	C2	c150	c1.8	c10
Т9	Ash	C2	c150	c1.8	c10
T10	Wild Cherry	C2	210	2.5	20

#### ARBORICULTURAL IMPLICATIONS ASSESSMENT

#### 8. DEVELOPMENT PROPOSALS

- 8.1 The proposals are for the construction of a new concrete base to support new chiller equipment associated with the upgrade in progress to Units 13-15 at Sherrington Way, Lister Road, Basingstoke, RG22 4DQ. Details of the proposals will have been submitted by Leverton Helm and others.
- 8.2 The supplied proposed site plan has been used as the base for the Broad Oak Tree Consultants Ltd. Tree Protection Plan, drawing no. J65.29/02 in Appendix 3. This indicates a tree for removal and measures to protect retained trees in accordance with BS5837:2012 requirements.

#### 9. TREE FOR REMOVAL

- 9.1 To construct the required concrete pad for the chiller equipment it will be necessary for the Field Maple (T6) to be removed. This is a BS category C tree due to its limited visual presence from Lister Road with elements of the Thorn/Sycamore hedge (G2) dominating public views. This is the smallest of the Field Maples present.
- 9.2 As a BS category C tree its loss should not represent a significant planning constraint.
- 9.3 The tree is indicated for removal with a blue dashed crown outline on the Tree Protection Plan. A replacement tree could be located between the Sorbus (T1) and the Field Maple (T3).

#### 10. TREE SURGERY REQUIREMENTS

10.1 To provide clearances and operational space minor tree works are proposed. These represent normal maintenance operations/low impact pruning which will not compromise tree health or visual appearance. Pruning back of the Thorn/Sycamore hedge (G2) would form part of the previous maintenance regime for the hedge, which has lapsed in recent years.

**Table: Tree Surgery Requirements** 

Tree No.	Species	Proposed Works
G2	Thorn, Sycamore	Prune back eastern canopy to fence line between trees
		T3 and T10.
T4	Field Maple	Prune back fine outer branches to south to 3.5m radius
	•	from stem to 4m height.

- 10.2 All tree work will need to be carried out by a competent tree surgeon to comply with BS3998:2010 "Tree Work Recommendations".
- 10.3 All trees recommended for felling or tree surgery works will need to be checked for the presence of bats or nesting birds prior to works commencing. Disturbance to bats or nesting birds could contravene the Wildlife and Countryside Act 1981 and result in prosecution.

#### 11. POTENTIAL IMPACT OF PROPOSALS ON TREES

- 11.1 The positioning of the chiller equipment has been modified to minimise potential impacts on the retained trees as far as possible. A necessary 1.2m fire exit route along the rear of the warehouse unit prevents the positioning of the concrete base any further east. However, the RPAs of the Thorn/Sycamore hedge (G2) and the Sycamore (T7) and Ash (T8) will not be compromised.
- 11.2 The positioning of the proposed chiller equipment concrete base has also been revised to avoid the RPAs of the Field Maple (T4) and Wild Cherry (T10) to ensure a minimal potential impact on tree root systems.
- 11.3 Any electrical connections will be to the east from the warehouse unit, remote from tree RPAs.
- 11.4 Overall the potential impact of the proposals on retained trees will be negligible, provided they are appropriately protected during the construction works.

#### 12. TREE PROTECTION MEASURES - FENCING

#### 12.1 Location of fencing

12.1.1 The Tree Protection Plan indicates the proposed location of protective fencing based on the calculated tree protection areas and space available.

#### 12.2 **Design of fencing**

- 12.2.1 The protective fencing is to be constructed of scaffold uprights driven into the ground to a minimum depth of 0.6m and at no greater than 3m spacing. Uprights to be braced with angled scaffold poles and anchors. On to the uprights weldmesh panels such as "Heras" or a similar product will be securely mounted with all weather notices attached to every 5th panel reading "Keep Out Protected Area". The fencing will form enclosed areas to which no access will be allowed. This design of fencing is considered appropriate to the site and scale of development proposed.
- 12.2.2 Examples of the fencing specification and signage required are included in Appendix 4.

#### 12.3 **Timing of fencing**

12.3.1 Protective fencing is to be erected prior to commencement of site works and remain in place until completion of construction. The location and suitability of the fencing can be confirmed to the local authority by an arboricultural consultant prior to commencement of construction. Any tree felling will need to be undertaken prior to fence installation to minimise risks to operatives. All tree surgeons' vehicles will be kept outside the indicated protection zones.

#### 12.4 Additional precautions

12.4.1 Potentially injurious materials such as fuels, oils, chemicals and cement will be stored at least 20m from any stem, or in a bunded storage vessel. No fires will be lit within 5m of the drip line of any retained tree. No level changes will occur, either raising or lowering within the protected areas. A list of these additional precautions are included on the Tree Protection Plan.

#### 13. GROUND PROTECTION MEASURES

- 13.1 In areas within root protection zones where access around the new building concrete base will be required during construction, specific ground protection measures will be necessary. For machinery access these should comprise interlocking, specifically designed load bearing temporary roadway plates, commonly made of steel or specialised plastics. They will minimise any risk of compaction whilst providing a running platform for machinery.
- 13.2 Where foot access only is required, ground protection measures should comprise a base layer of geotextile, over which 100mm of woodchip will be laid, topped by side butting scaffold boards or non-slip surfaced minimum 12mm thick OSB/plywood.
- 13.3 Installation of the ground protection measures should take place at the same time as the protective fencing and remain in place until completion of construction. The area requiring ground protection measures is indicated by cross hatching on the Tree Protection Plan.

#### 14. SITE OPERATIONS AND MATERIALS STORAGE

- 14.1 Details of site zoning cannot be specified by an Arboriculturalist as these are commonly determined by contractors on the basis of Health & Safety Assessments. However, the robust protective fencing will define the remaining site space available for storage and operations.
- 14.2 It is presumed that all materials and equipment will be stored to the east of the warehouse unit and access will be through the unit to the working area. Materials and the chiller equipment will presumably be craned in from Lister Road utilising gaps between the trees.

#### 15. ARBORICULTURAL METHOD STATEMENT

- 15.1 A separate Arboricultural Method Statement is not considered necessary for this site. Details of the protective fencing and ground protection specification, timing and location are indicated on the Tree Protection Plan, which can be referred to in a specifically worded condition.
- 15.2 Section 6.1 "Arboricultural Method Statement" of BS5837:2012 indicates that an Arboricultural Method Statement is only required if operations/access are required within the RPA of retained trees. Therefore, provided the Tree Protection Plan is adhered to, there is no requirement for an Arboricultural Method Statement and there should not be any conflicts between retained trees and the proposals.

#### 16. SUMMARY

- 16.1 The proposed chiller equipment will require the removal of one young BS category C Field Maple and minor pruning works to one tree and an overgrown hedge.
- 16.2 The positioning of the proposed chiller equipment has taken into account tree RPAs and avoids any impacts with robust tree protection measures, in accordance with BS5837:2012 proposed.
- 16.3 The Tree Protection Plan can be referred to as an approved drawing or in a specifically worded condition to ensure that the retained trees are appropriately protected during the construction works.

Tim Laddiman Chartered Arboriculturist Broad Oak Tree Consultants Ltd.

#### TREE SURVEY EXPLANATORY SHEET

Height in metres (estimated where ground uneven or access

restricted).

**Stem count** number of stems

**Stem diameter** in mm. at 1.5m. above ground level.

Branch spread radial spread in metres at four main compass points

(estimated where no access).

Age class Young - Y

Semi Mature - SM Mature - M Over mature - OM Veteran - V

Height of crown

clearance

in metres. Normally range of heights of outer branches

above ground level, e.g. 2-4m.

Physiological condition Good, Fair, Poor, Dead, Variable

**Estimated remaining** 

contribution

in years

e.g. less than 10, 10-20, 20-40, 40+

Category grading see attached sheet

**Structural condition** comment on presence of defects, decay, crown form, past

management, deadwood, other features worthy of note. N.B. If trees are ivy clad, no full structural assessment will

have been possible.

Preliminary management recommendations

requirements of further investigations, works necessary to alleviate potential hazards based on current setting and

levels of access.

NB: Works that may be necessary in relation to development

are not included here

#### CASCADE CHART FOR TREE QUALITY ASSESSMENT

		TREES FOR REMOVAL									
Category and definition	· ,										
Category U Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management	Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality										
		propriate (e.g. R category tree used as a bat roost: instal	ation of bat box in nearby tree.)								
	TREE	S TO BE CONSIDERED FOR RETENTION									
		Criteria - Subcategories									
Category and definition	Mainly arboricultural values	2. Mainly landscape values	Mainly cultural values, including conservation	Identification on plan							
Category A Those of high quality and value: in such a condition as to be able to make a substantial construction (a minimum of 40 years is suggested)	groups, or of formal or semi-formal	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or woodpasture)	LIGHT GREEN							
SUMMERIAN	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodland, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semiformal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	MID BLUE							
Category C Those of low quality and value: currently in adequate condition to remain until new planting could be established ( a minimum of		Trees present in groups or woodland, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit.	Trees with very limited conservation or other cultural benefits	GREY							
10 years is suggested), or young trees with a stem diameter below 150mm.	NOTE Whilst C category trees will usually a stem diameter of less than 150mm shou										

### TREE INSPECTIONS AT 13-15 SHERRINGTON WAY, LISTER ROAD, BASINGSTOKE, RG22 4DQ

Our ref: J65.29

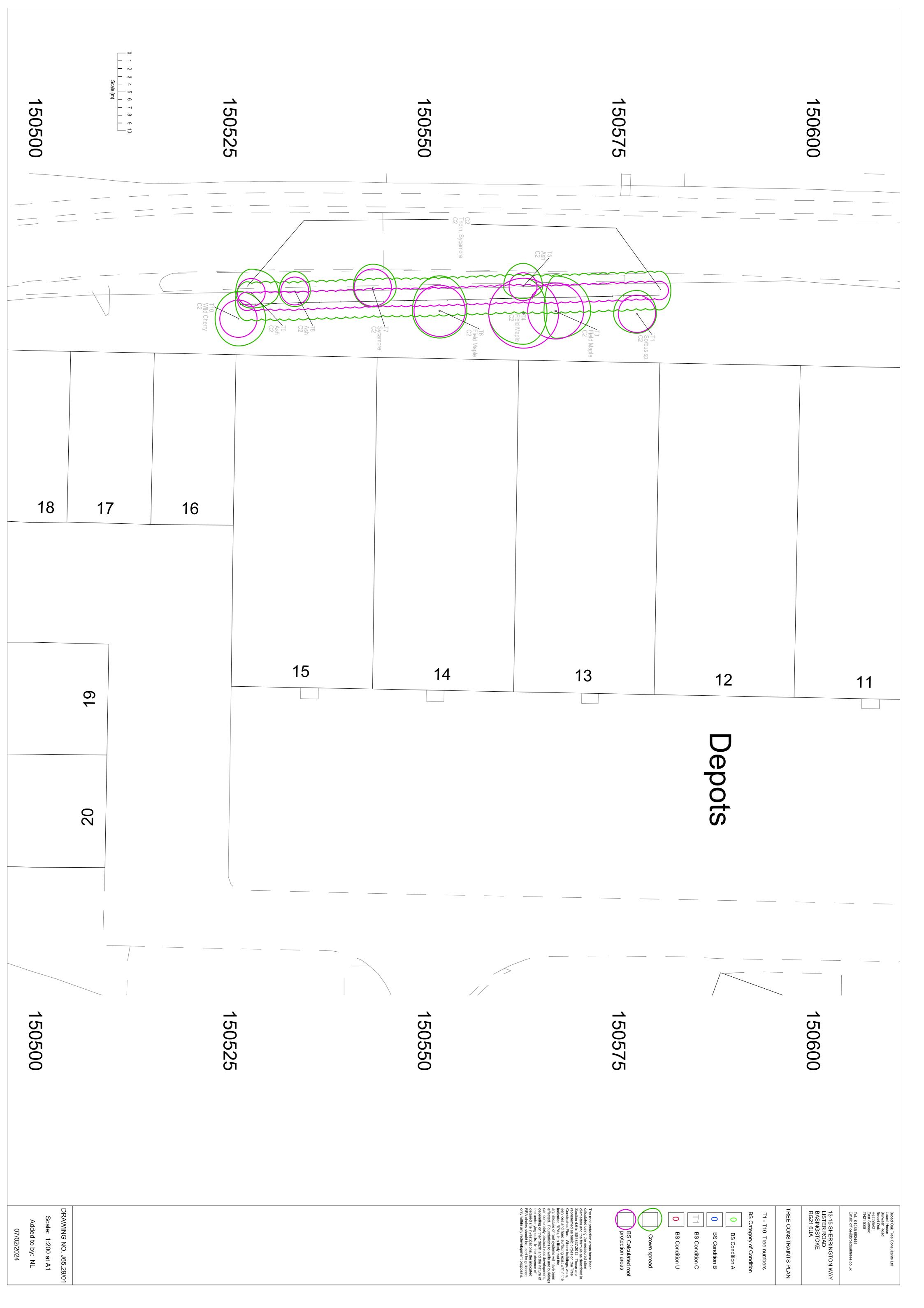
T				Stem	Br	anch sp	pread (m.)			Ht. of		Estimated remaining			Preliminary
Tree ref. no.	Species	Height (m.)	Stem Count	diameter or equivalent (mm.)	N	E	s	w	Age class	crown clearance (m.)	Physiological condition	contribution (years)	Category grading	Structural condition and Notes	management recommendations
T1	Sorbus sp.	6	1	190	2.5	2.5	3	3	Y	1.8+	Fair	10-20	C2	Slow growth. Lower canopy pruned in past. Deadwood.	
G2	Thorn, Sycamore	<8	1/Multi	<100	<1.5	<2.5	<1.5	<2.5	Y	0+	Fair	20-40	C2	Overgrown hedgeline. Ivy clad. Sycamore dominant.	
Т3	Field Maple	9	1	300	4.5	3.5	1.5	4.5	Y	2+	Fair	20-40	C2	Crowded to S. Minor deadwood. Multi stemmed at under 3m.	
T4	Field Maple	9	1	370	3	4	4.5	4.5	Y	1.9+	Fair	20-40	C2	Multi stemmed at under 3m. Crowded to N.	
T5	Ash	9	1	c150	2.5	1.5	2.5	3	Y	4+	Fair	10-20	C2	lvy clad. Drawn up. Crowded to E.	
Т6	Field Maple	7.5	1	280	3.5	3.5	3.5	4.5	Y	2+	Fair	20-40	C2	Twin stemmed at 2.5m. Compaction to N.	
T7	Sycamore	9	1	c200	3	2.5	2.5	3	Y	3.5+	Fair	10-20	C2	Ivy clad. Poor growth.	
Т8	Ash	10	1	c150	2	2	2	2.5	Y	3+	Unconfirmed	10-20	C2	lvy clad. Four stems from under 2.5m.	
Т9	Ash	9	1	c150	3.5	2	2	3	Y	3+	Unconfirmed	10-20	C2	Ivy clad. Multi stemmed at under 2.5m.	

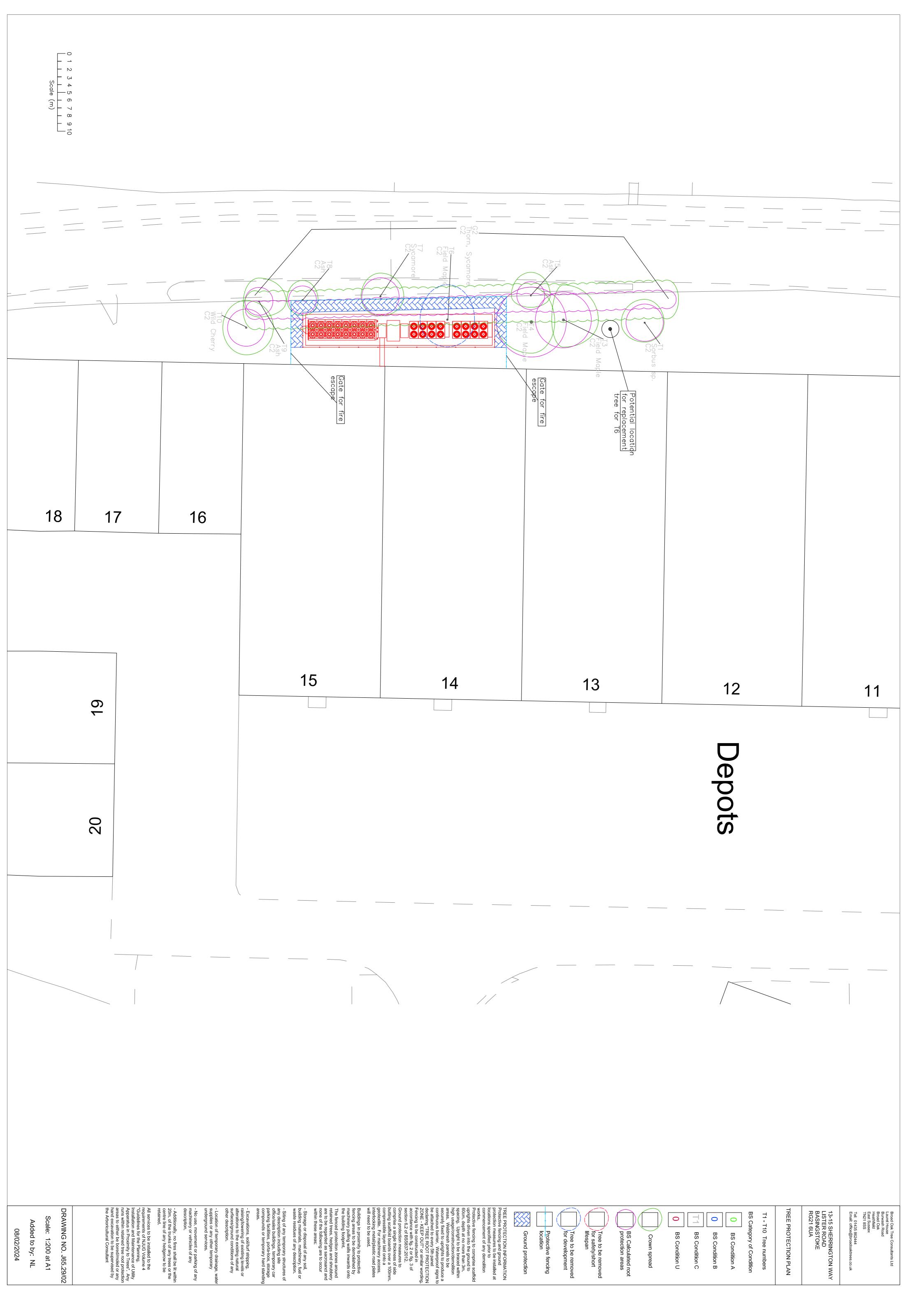
Broad Oak Tree Consultants Ltd. February 2024

### TREE INSPECTIONS AT 13-15 SHERRINGTON WAY, LISTER ROAD, BASINGSTOKE, RG22 4DQ

Our ref: J65.29

Tree				Stem	Br	anch sp	read (ı	m.)		Ht. of		Estimated			Dualiminan
Tree ref.		Height	Stem	diameter or equivalent					Age	crown clearance	Physiological	remaining contribution	Category	Structural condition and	Preliminary management
no.	Species	(m.)	Count	(mm.)	N	Е	S	W	class	(m.)	condition	(years)	grading	Notes	recommendations
														Multi stemmed at	
T10	Wild Cherry	6.5	1	210	3.5	3.5	3	3.5	Υ	2+	Fair	20-40		3.5m-4m.	





### **BS5837:2012: FENCING SPECIFICATIONS**

Figure 2 Default specification for protective barrier

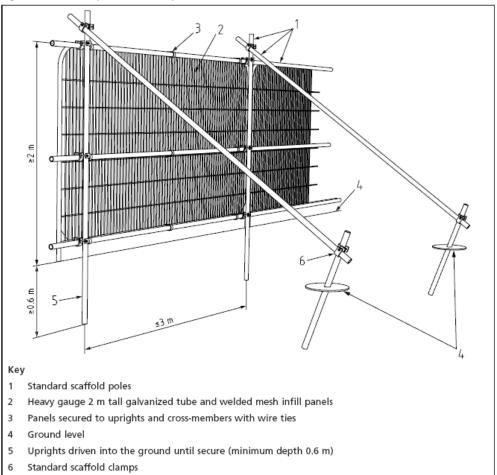
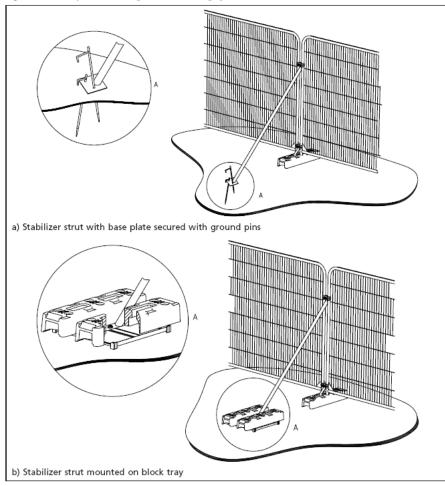


Figure 3 Examples of above-ground stabilizing systems



#### **EXAMPLE OF FENCING SIGNAGE**



