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Arboricultural Association
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ARBORICULTURAL IMPLICATIONS ASSESSMENT FOR PROPOSED 8 UNIT RESIDENTIAL DEVELOPMENT

AT

BRYANSTON ROAD
BITTERNE
SOUTHAMPTON
HAMPSHIRE
SO19 7AN

BY

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1. INTRODUCTION

1.1 Broad Oak Tree Consultants Ltd. received instructions from Doswell Projects Ltd and ABRI to undertake an inspection of trees located on and immediately adjacent to the site referred to as Bryanston Road, Bitterne, Southampton, Hampshire, SO19 7AN. 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 eight residential units comprising a pair of semi-detached units and two short terraces, together with associated parking, gardens and landscaping. The proposals utilise an existing entrance and include four replacement parking spaces for the adjoining residential units and a turning head. Details of the proposals will have been submitted by MH Architects and others.

1.3 The trees were inspected on 15th March 2023 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 Southampton City Council's online mapping system have indicated that a Woodland Group Tree Preservation Order, TPO No. T2-698 of 2018, applies to "…*All trees of whatever species within the curtilage of the land to rear of 47 Bryanston Road…*". As such any tree works recommended in this report will require permission from Southampton City Council before undertaking any works, this would include saplings. A copy of the TPO is included in Appendix 4. The Council's mapping system did not indicate the site to be within a Conservation Area. The Defra group ArcGIS online map did not indicate any Ancient Woodland to be present.

2. GENERAL SITE DESCRIPTION

2.1 The site is located at the north end of Bryanston Road, a cul-de-sac, with the site roughly the shape of an 'axe head' with the 'blade area' to the east with levels rising up to a steep bank representing an almost rectangular section of wooded ground.

2.2 The upper steep bank, with open ground to the east, is heavily covered in bramble and extensive debris. The main body of the site is relatively level, with levels falling gradually to the west towards a railway line to the north-west and a garden to the south-west. The site has been extensively used for dumping of building material and other waste, with scattered larger trees towards the west and areas of very dense young tree growth.

3. SCOPE OF TREE SURVEY

3.1 All trees and shrubs of 75mm diameter or more at 1.5m above ground level were included in the survey. This included trees immediately adjacent to the site.

3.2 For the offsite trees estimates of location, dimensions and condition had to be made.

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 BS5837:2012 “Trees in Relation to Design, Demolition and Construction - Recommendations”.

4.2 The tree survey followed the numbered sequence from G1 to T42 inclusive. Tree numbers, together with BS recommended colour coding of condition, have been added to the Tree Constraints Plan, our drawing no. J63.91/01 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 33 individual trees and nine small groups were inspected, ranging from young Cypress in an adjoining garden of less than 12 years of age through to maturing Oaks along the boundary with the railway line of upto 90 years of age. The majority of the trees are located on the bank to the east and all appear to be of similar age with Oak, Willow, Sycamore and occasional Birch being the main species, appearing to be self seeded.

6.2 A number of trees on the bank have structural defects, particularly the Willows, with a number of stems having collapsed mainly to the north or west and a number of the other trees with weak stem unions, rub wounding or squirrel damage in the canopies.

6.3 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
A	-	-
B	T11, T20, T30, T33, T39, T42	6
C	G1, T3, T6, T7, T8, T9, T10, G12, G13, G14, G15, T21, T22, T23, T27, T28, T29, T31, G32, T34, T35, G36, G37, T40	24
C/U	G4	1
U	T2, T5, T16, T17, T18, T19, T24, T25, T26, T38, T41	11
	TOTAL	**42**

6.4 ***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 C/U Trees that would be included in category C but have structural faults, areas of decay, etc. that require more detailed investigations or climbing inspections to ascertain whether or not they can be safely retained. Groups that include dead/dying/dangerous individuals.

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 in Appendix 3 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.

ARBORICULTURAL IMPLICATIONS ASSESSMENT

8. DEVELOPMENT PROPOSALS

8.1 The proposals are for the construction of eight residential units comprising a pair of semi-detached units and two short terraces, together with associated parking, gardens and landscaping. The proposals utilise an existing entrance and include four replacement parking spaces for the adjoining residential units and a turning head. Details of the proposals will have been submitted by MH Architects and others.

8.2 The supplied MH Architects "Proposed Site Plan" has been used as the base for the Broad Oak Tree Consultants Ltd. Tree Protection Plan, drawing no. J63.91/02 in Appendix 5. This indicates trees for removal and measures to protect retained trees in accordance with BS 5837:2012 requirements.

9. TREES FOR REMOVAL - DEVELOPMENT

9.1 Based on the supplied layout proposals the following trees would require removal for the development to proceed.

Table: Trees requiring removal – development

Tree No.	Species	BS Category	Comments
G4	Sycamore	C/U	Several stems dying. Squirrel damage in canopies and risk of failure.
G5	Rowan	U	Shattered crown. Extensive stem wounding. Short lifespan. Small tree.
T6	Sycamore	C	Heavily asymmetric crown. Potentially weak stem unions.
T7	Sycamore	C	Leaning N/NE. Heavily asymmetric crown.
T8	Common Oak	C	Crowded. Three stems bowed out to west.
T9	Sycamore	C	Crowded. Heavily asymmetric.
T16	Goat Willow	U	Three stems collapsed to N. Others bowed out to NW/W.
T17	Goat Willow	U	Four stems bowed out to SW/W/NW and one part collapsed.
T18	Sycamore	U	Stems bowed out to W/SW. Weak stem union.
T19	Goat Willow	U	Collapsed to N.
T23	Goat Willow	C	One stem leaning NE. Potential for failures.
T24	Goat Willow	U	One stem collapsed on to shed. Decay in others.
T25	Goat Willow	U	Collapsed to N on to shed.
T26	Goat Willow	U	Part collapsed.
T27	Sycamore	C	Young regrowth from stump.
T28	Wild Cherry	C	Potentially weak stem unions. Limited lifespan.
G32	2 No. Hazel	C	Small, multi-stemmed.
T38	Goat Willow	U	Advanced decay in base. Crown part collapsed to N.
T42	Sycamore	B	

9.2 All but one of the above are BS category C or U with eight individuals listed as BS category U. These trees should not represent a planning constraint, according to BS5837:2012. The majority of the BS category C trees for removal are poorly formed, heavily crowded Sycamores.

9.3 The one BS category B tree to be removed is a Sycamore, which would be unsustainable to retain with the proposed layout.

9.4 Several areas of small, very crowded, young saplings that have self seeded would also require removal. These are too small for consideration within BS 5837:2012 but would be covered by the Woodland Designation TPO and require mention.

9.5 The proposals indicate the planting of 32 new trees to replace those being lost and enhance other areas of the site, as well as softening the visual presence of the proposals from adjoining properties.

9.6 The trees for removal for the development are indicated as such with blue dashed crown outlines on the Tree Protection Plan.

9.7 Some of the felled material can be reutilised on site for invertebrate piles within the seven indicated Ecological Enhancement Buffer Zones.

10. TREE SURGERY REQUIREMENTS

10.1 The following tree works would be required to reduce shading/proximity issues and address safety concerns within retained trees.

Table: Tree surgery requirements.

Tree No.	Species	Works Recommended	Comments
T2	Common Oak	Pollard at 5m and remove collapsed stems.	High risk of failure of remaining stem in to gardens. Allows retention of BS category U tree.
G12	Sycamore	Remove cross limbs/wounded stem to E.	Avoid collapses to boundary and gardens.
T30	Common Oak	Lift crown to E to 4m ground clearance.	Improve garden conditions and separation.
T39	Aspen	Remove ivy. Raise crown base to 5m above ground level.	Improve light through crown and garden clearances.

10.2 All tree work should 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 should 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 RETAINED TREES

11.1 The positioning of the proposed residential units, retained parking bays and access road have all been designed around the indicated tree constraints. As such none of these elements overlap with any tree RPAs. The only very minor RPA overlaps thar arise are between access footpaths and the outer RPA of T33 Common Oak and T35 Lawson Cypress. These can be formed to a no dig design, accommodating the fall in levels towards the trees, utilising timber sleeper peg and board or I-beam King Pin design to minimise any root disturbance. This design and hand tool only installation is indicated on the Tree Protection Plan.

11.2 Overall the potential impact of the proposals on retained trees are nominal, provided they are appropriately protected during the construction process.

12. TREES AND SHADING

12.1 The potential for tree related shading of units is very limited due to the orientation of trees relative to the sun and proposed units. Shading would be limited to mid to late afternoon on sunny days when the mainly deciduous trees along the western boundary are in leaf. The majority of the day there will be minimal shading potential with no shading on cloudy days or when there are no leaves on the deciduous trees.

12.2 It is well known and publicised that tree related shading has health benefits. It provides a safer environment for young children to play in, where they are not fully exposed to harmful UV rays and do not get overheated. It has a similar value for fair skinned people and the effects of over-exposure to sunlight are well known in terms of risks to people's health.

12.3 Within BS5837:2012, Section 5.3 "*Proximity of Structures to Trees*", the benefits of some tree related shading are recognised.

12.4 The presence of the Woodland Designation TPO also affords the retained trees protection from inappropriate requests for tree surgery/removal works, which the Council can refuse.

13. TREE PROTECTION MEASURES

13.1 *Location of fencing*

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

13.2 *Design of fencing*

13.2.1 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.

13.2.2 Examples of the fencing specification and signage required are included in Appendix 6.

13.3 ***Timing of fencing***

13.3.1 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 utilising existing areas of hard standing and drive.

13.4 ***Additional precautions***

13.4.1 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.

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 As this is a small scale development the requirement for storage space is minimal and materials will be delivered on an "as and when" needed basis in appropriate quantities for the space available.

14.3 It is anticipated that the proposed parking areas will be initially installed to sub base level early in the construction process and utilised for temporary materials storage and contractor parking. Temporary site offices/welfare units will presumably utilise the proposed replacement parking spaces towards the entrance of the site to control access and operative/machinery interaction.

15. SERVICES/DRAINAGE/SOAKAWAYS

15.1 Based on the supplied layout, any new services, drainage or soakaway alignments will be located outside root protection areas. If incursion into the protective areas of retained trees is unavoidable, then the routing should be obtained either by hand tool excavation or air spade, supervised by an arboricultural consultant. Any works within the protective areas will need to be undertaken to the requirements of NJUG Volume 4 "Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees".

16. ARBORICULTURAL METHOD STATEMENT

16.1 A separate Arboricultural Method Statement is not considered necessary for this site. Details of the protective fencing specification, timing and location are indicated on the Tree Protection Plan, which can be referred to in a specifically worded Condition.

17. SUMMARY

17.1 The proposed eight unit residential development will require the removal of 16 trees and 3 small groups. Of these 8 are BS category U and of no planning relevance, according to BS 5837:2012. All but one of the remainder are BS category C trees, which should not represent a constraint within BS 5837:2012.

17.2 The proposals include for the planting of 32 new trees within 7 Ecological Enhancement areas to offset the proposed tree losses. These will represent a secondary developing canopy level and improve the structural diversity of the wooded eastern area of the site.

17.3 None of the units, parking spaces or access road will impact on retained tree RPAs with only a very minimal impact on two trees RPA from no dig path installations.

17.4 Robust tree protection measures are proposed to BS 5837:2012 requirements to ensure retained trees are appropriately protected during the construction works.

17.5 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.

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APPENDIX 1

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	Criteria			Identification on plan
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 that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate and irreversible overall decline. • 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 trees suppressing adjacent trees of better quality NOTE Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree.)			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria - Subcategories			Identification on plan
	1. Mainly arboricultural values	2. Mainly landscape values	3. Mainly cultural values, including conservation	
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)	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	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 wood-pasture)	LIGHT GREEN
Category B Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)	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 semi-formal 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 10 years is suggested), or young trees with a stem diameter below 150mm.	Trees not qualifying in higher categories	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
	NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation			

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
G1	Cypress	<2	Multi	<100	<1	<1	<1	<1.5	Y	0+	Good	40+	C2	Maintained screening except to W.	
T2	Common Oak	18	2	1060	1.5	8.5	8	5	SM	0+	Poor	<10	U	Crowded to N/NE. Twin stemmed from ground level with weak union. Several other large stems collapsed to W/NW.	Fell.
T3	Common Oak	14	1	440	3.5	8.5	2	0.5	SM	1+	Fair	20-40	C2	Contorted base curved to W. then twin stemmed at 2.5m and curved to E. due to crowding. Deadwood.	
G4	Sycamore	<14	1	<330	<1.5	<2.5	<3	<6	Y	3+	Variable	<10-20	C/U1	Crowded. Poorly formed. Ivy clad. Several dying. Squirrel damage.	
T5	Rowan	5	2	250	0.5	0.5	0.5	2	SM	0+	Poor	<10	U	Twin stemmed from ground level. Shattered crown. Extensive stem wounding.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
T6	Sycamore	18	Multi	610	1	7	5	7	M	3+	Fair	20-40	C2	Crowded. Three stems from ground level. Potentially weak unions. Deadwood.	
T7	Sycamore	18	1	300	5	3	0	1	M	5+	Fair	20-40	C2	Crowded. Part ivy clad. Lean to N/NE. Ascending crown. Minor deadwood.	
T8	Common Oak	18	Multi	600	7	1.5	0	9	SM	7+	Fair	20-40	C2	Crowded. Drawn up. Four stems from ground level. Three stems bowed to W. Deadwood.	
T9	Sycamore	14	2	320	2	0	1	8	Y	1+	Poor	10-20	C1	Twin stemmed from ground level. One stem leaning out W/NW with extensive wounding and decay.	
T10	Sycamore	18	2	300	1	0.5	4.5	3	SM	2+	Fair	20-40	C2	Twin stemmed at 80cm. Crowded. Minor deadwood.	
T11	Sycamore	18	Multi	600	2.5	5.5	5	3.5	SM	1.5+	Fair	20-40	B2	Multi stemmed near ground level. Crowded.	

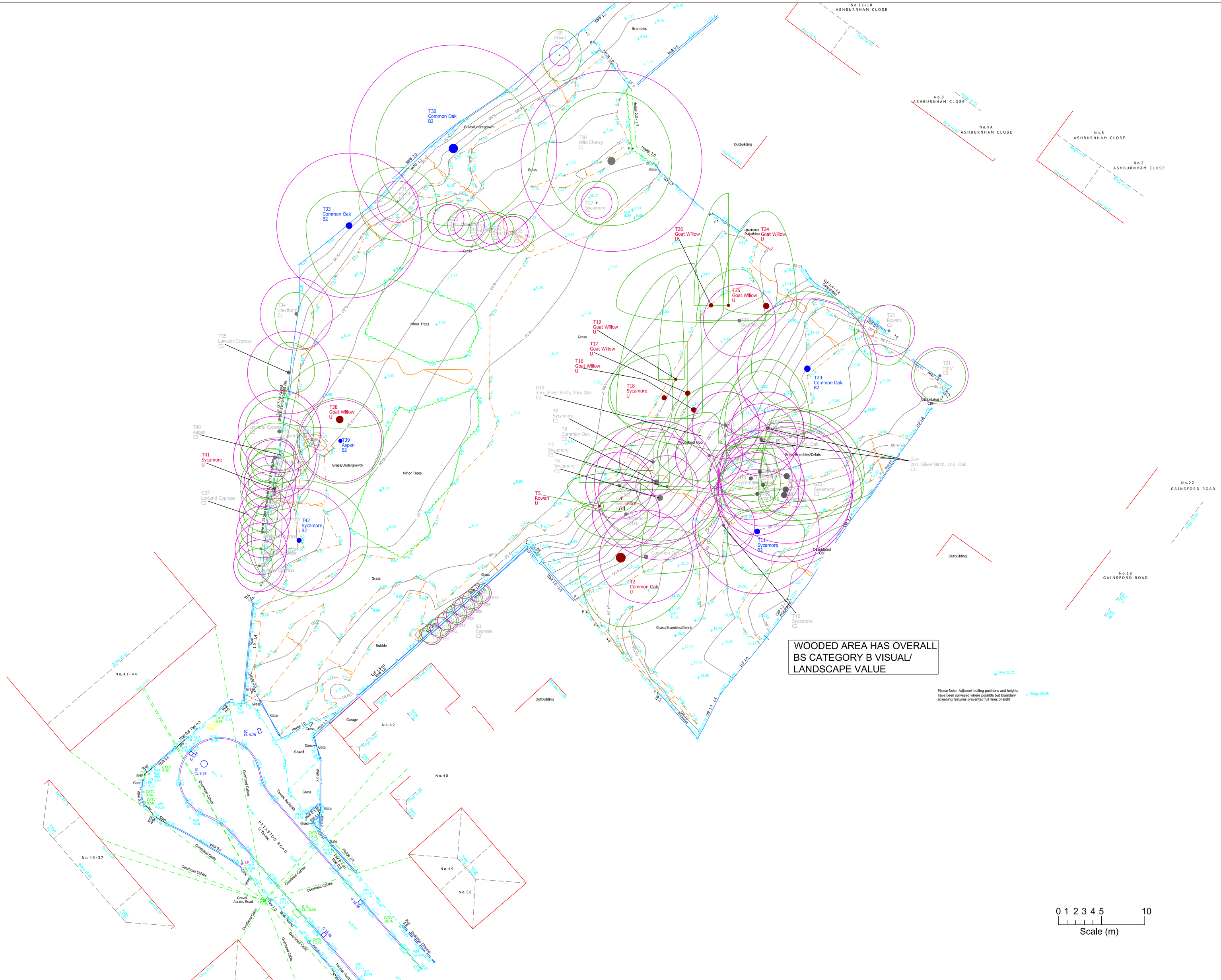
Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
G12	Sycamore	20	Multi	<640	<8	<9	<3	<3	SM	1.5+	Poor	10-20	C1	Crowded. Multiple stems from ground level. Several crossing stems and branch wounds.	Remove crossing limbs/wounded stems to E.
G13	Sycamore	<20	2	<400	<4	<2	<2	<5	SM	4+	Fair	20-40	C2	Crowded group. Drawn up stems. Deadwood.	
G14	2no. Silver Birch, 1no. Oak	<20	1/2	<360	<8	<5	<1	<5	Y/M	6+	Variable	10-20	C1	Crowded. Leaning N. Small Oak leaning NW. S. Birch twin stemmed at ground level with decay.	
G15	2no. Silver Birch, 1no. Oak	<20	1	<320	<5	<2	<3	<6	Y/M	2+	Fair	20-40	C2	Crowded. Drawn up. Part ivy clad.	
T16	Goat Willow	15	Multi	560	17	1	1	9	M	0+	Poor	<10	U	Multi stemmed from ground level. Three stems collapsed to N. One bowed out to NW. One to W.	Fell.
T17	Goat Willow	14	Multi	560	6	0	6	9	M	0+	Poor	<10	U	Four stems from ground level. All stems bowed out to SW/W/NW with one part collapsed.	Fell.

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
T18	Sycamore	20	2	530	5	1	4	6.5	M	1.5+	Poor	<10	U	Twin stemmed at under 1m with weak union. Bowed out to W/SW.	Fell.
T19	Goat Willow	8	1	300	12	1	0	2	M	0+	Poor	<10	U	Collapsed to N.	Fell.
T20	Common Oak	18	1	680	9	7.5	5	6.5	SM	2+	Fair	20-40	B2	Deadwood. Open crown form. Becoming ivy clad.	
T21	Holly	7	2	280	3	3	3	3	SM	1.2+	Unconfirmed	20-40	C2	Twin stemmed from ground level.	
T22	Rowan	8	Multi	c250	c3	2.5	4	4	SM	1+	Unconfirmed	20-40	C2	Multi stemmed near ground level. Reduced in past.	
T23	Goat Willow	15	Multi	350	6	3	0	5	SM	8+	Poor	10-20	C1	Three stems from ground level. One leaning NE.	
T24	Goat Willow	15	Multi	660	11	3.5	1	5	M	0+	Poor	<10	U	Multi stemmed from ground level. Decay in lower stems. One stem collapsed into shed.	Fell.
T25	Goat Willow	6	1	300	13	0	0	4	M	1+	Poor	<10	U	Collapsed to N. onto shed.	Fell.

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
T26	Goat Willow	15	Multi	430	7	1.5	2	11	M	0+	Poor	<10	U	Crowded. Three stems from ground level with split base and one bowed to NW. Part collapsed.	Fell.
T27	Sycamore	7	Multi	150	2.5	2.5	2.5	2.5	Y	0+	Fair	20-40	C2	Dense regrowth from stump.	
T28	Wild Cherry	12	Multi	870	c8	7	7.5	7.5	M	1+	Poor	10-20	C1	Multi stemmed at under 1.5m. Part ivy clad. Potentially weak unions.	
T29	Privet	4.5	Multi	100	3	2.5	3	2	M	1+	Fair	20-40	C2	Densely multi stemmed from ground level.	
T30	Common Oak	18	Multi	c1000	9	9.5	9	c9	SM	1.5+	Good	40+	B2	Multi stemmed at under 1m. Limbs cut back over railway in past.	
T31	Hazel	7	Multi	200	4	4.5	4.5	4.5	SM	1.8+	Fair	20-40	C2	Heavily ivy clad. Multi stemmed from ground level.	
G32	2no. Hazel	<6	Multi	<150	<2	<2.5	<2.5	<2.5	SM	0+	Good	40+	C2	Multi stemmed from ground level.	
T33	Common Oak	18	Multi	c700	4	7.5	8	c5	SM	1.5+	Unconfirmed	20-40	B2	Multi stemmed from ground level. Ivy clad.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
T34	Hawthorn	5	2	350	2.5	2	c4	2.5	M	1+	Unconfirmed	10-20	C1	Multi stemmed at under 1.5m Several dead stems.	
T35	Lawson Cypress	14	1	c400	3.5	3	c2.5	2.5	SM	0+	Unconfirmed	20-40	C2		
G36	Leyland Cypress	<13	1/2	<400	<4	<4	<3	<4	SM	1+	Unconfirmed	20-40	C2	Previously topped elements of a screen.	
G37	Leyland Cypress	<5	2	<250	<2	<1.5	<2	<2.5	SM	0+	Unconfirmed	20-40	C2	Variably topped screen. Limited foliage to W.	
T38	Goat Willow	10	1	c800	7	5	1	7	M	0+	Poor	<10	U	Advanced decay in base. Crown part collapsed to N.	
T39	Aspen	14	1	c400	5	5	5	5	M	3+	Unconfirmed	20-40	B2	Heavily ivy clad therefore no basal inspection. Slight lean to S.	
T40	Aspen	10	1	150	2	1.5	2.5	c4	Y	4+	Fair	20-40	C2	Crowded.	
T41	Sycamore	10	1	280	4.5	4	2.5	c4	Y	1.2+	Poor	<10	U	Multi stemmed at under 1.6m where pollarded in past. Squirrel damage.	
T42	Sycamore	12	1	500	7	8	6.5	5.5	SM	1.5+	Fair	20-40	B2		

APPENDIX 2



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BRYANSTON ROAD BITTERNE SOUTHAMPTON HAMPSHIRE

TREE CONSTRAINTS PLAN

T1 - T42 Tree numbers

BS Category of Condition

- T2 — BS Condition A
- T20 — BS Condition B
- T3 — BS Condition C
- T2 — BS Condition U
- Crown spread
- BS Calculated root protection areas

The root protection areas have been calculated using the measured stem diameters and the formula as described in Section 4.6 in BS5837:2012. 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 redevelopment proposals.

DRAWING NO. J63.91/01

Scale: 1:200 at A1

Added to by: NL

16/03/2023

APPENDIX 3

TABLE OF BC CALCULATED ROOT PROTECTION AREAS (RPAs)
AT
BRYANSTON ROAD, BITTERNE, SOUTHAMPTON, HAMPSHIRE

Tree no.	Species	BS Category	Stem diameter or calculated equivalent (mm.)	BS calc. radial equiv. root protection area (m.)	BS calc. total RPA (m²)
G1	Cypress	C2	<100	<1.2	<5
T2	Common Oak	U	-	-	-
T3	Common Oak	C2	440	5.3	88
G4	Sycamore	C/U1	<330	<4	<50
T5	Rowan	U	-	-	-
T6	Sycamore	C2	610	7.3	167
T7	Sycamore	C2	300	3.6	41
T8	Common Oak	C2	600	7.2	163
T9	Sycamore	C1	320	3.8	45
T10	Sycamore	C2	300	3.6	41
T11	Sycamore	B2	600	7.2	163
G12	Sycamore	C1	<640	<7.7	<186
G13	Sycamore	C2	<400	<4.8	<72
G14	2no. Silver Birch, 1no. Oak	C1	<360	<4.3	<58
G15	2no. Silver Birch, 1no. Oak	C2	<320	<3.8	<45
T16	Goat Willow	U	-	-	-
T17	Goat Willow	U	-	-	-
T18	Sycamore	U	-	-	-
T19	Goat Willow	U	-	-	-
T20	Common Oak	B2	680	8.2	211
T21	Holly	C2	280	3.4	36
T22	Rowan	C2	c250	c3	c28
T23	Goat Willow	C1	350	4.2	55
T24	Goat Willow	U	-	-	-
T25	Goat Willow	U	-	-	-
T26	Goat Willow	U	-	-	-
T27	Sycamore	C2	150	1.8	10
T28	Wild Cherry	C1	870	10.4	340
T29	Privet	C2	100	1.2	5
T30	Common Oak	B2	c1000	c12	c452
T31	Hazel	C2	200	2.4	18
G32	2no. Hazel	C2	<150	<1.8	<10
T33	Common Oak	B2	c700	c8.4	c222
T34	Hawthorn	C1	350	4.2	55
T35	Lawson Cypress	C2	c400	c4.8	c72
G36	Leyland Cypress	C2	<400	<4.8	<72
G37	Leyland Cypress	C2	<250	<3	<28
T38	Goat Willow	U	-	-	-
T39	Aspen	B2	c400	c4.8	c72
T40	Aspen	C2	150	1.8	10
T41	Sycamore	U	-	-	-
T42	Sycamore	B2	500	6	113

APPENDIX 4

Form of Tree Preservation Order

Town and Country Planning Act 1990

The Southampton (Bryanston Road) Tree Preservation Order) 2018

Southampton City Council, in exercise of the powers conferred on them by section 198 of the Town and Country Planning Act 1990 make the following Order—

Citation

1. This Order may be cited as The Southampton (Bryanston Road) Tree Preservation Order) 2018

Interpretation

2.— (1) In this Order "the authority" means the Southampton City Council.

(2) In this Order any reference to a numbered section is a reference to the section so numbered in the Town and Country Planning Act 1990 and any reference to a numbered regulation is a reference to the regulation so numbered in the Town and Country Planning (Tree Preservation)(England) Regulations 2012.

Effect

3.— (1) Subject to article 4, this Order takes effect provisionally on the date on which it is made.

(2) Without prejudice to subsection (7) of section 198 (power to make tree preservation orders) or subsection (1) of section 200 (tree preservation orders: Forestry Commissioners) and, subject to the exceptions in regulation 14, no person shall—

(a) cut down, top, lop, uproot, wilfully damage, or wilfully destroy; or

(b) cause or permit the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of,

any tree specified in the Schedule to this Order except with the written consent of the authority in accordance with regulations 16 and 17, or of the Secretary of State in accordance with regulation 23, and, where such consent is given subject to conditions, in accordance with those conditions.

Application to trees to be planted pursuant to a condition

4. In relation to any tree identified in the first column of the Schedule by the letter "C", being a tree to be planted pursuant to a condition imposed under paragraph (a) of section 197 (planning permission to include appropriate provision for preservation and planting of trees), this Order takes effect as from the time when the tree is planted.

Dated this 23rd August 2018

Signed on behalf of the SOUTHAMPTON CITY COUNCIL

Authorised by the Council to sign in that behalf

SCHEDULE 1

The Southampton (Bryanston Road) Tree Preservation Order) 2018

Individual Trees
(encircled black on the map)

No on Map	Description	Situation
	NONE	

Groups of trees
(within a broken black line on the map)

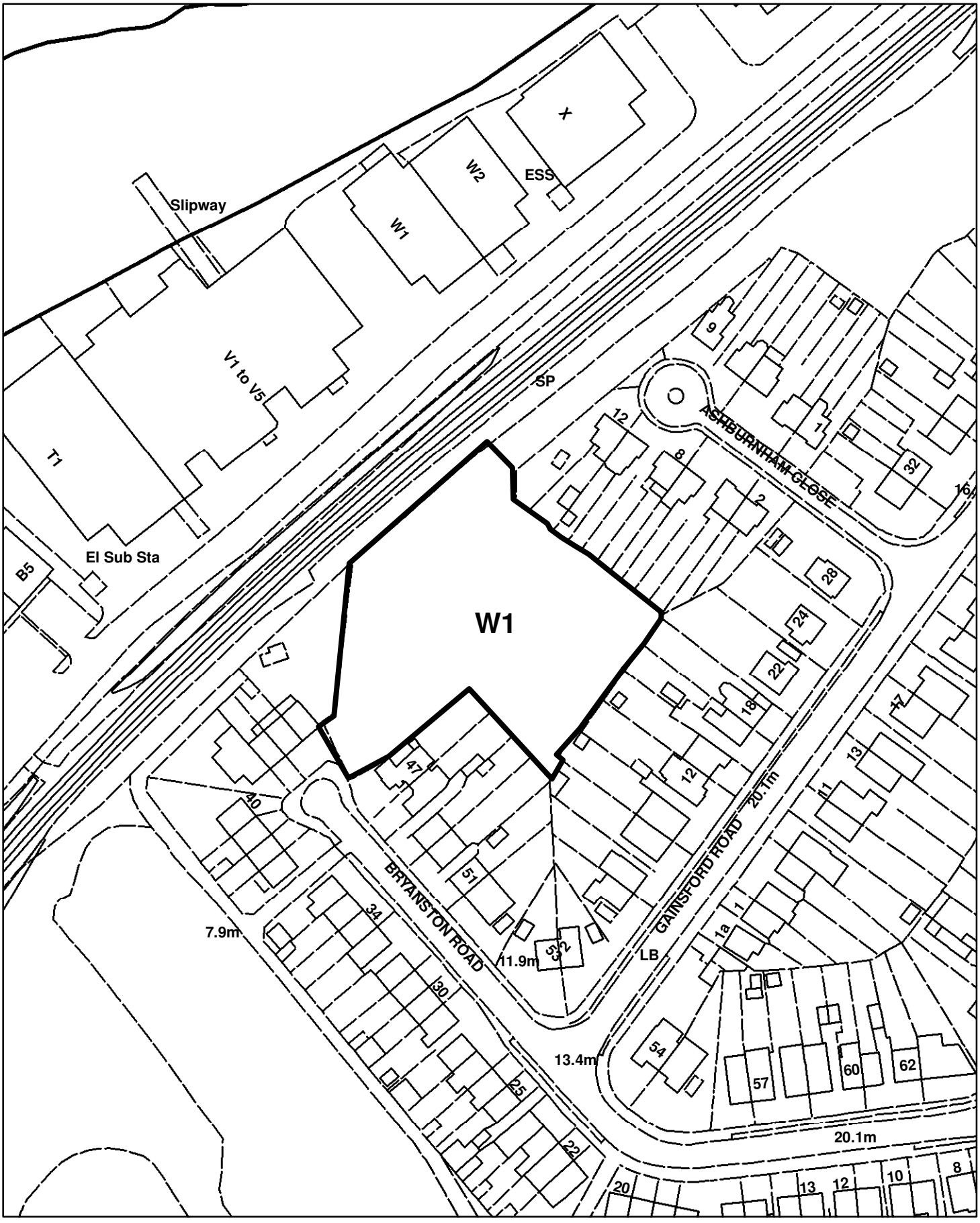
No on Map	Description	Situation
	NONE	

Woodlands
(within a continuous black line on the map)

No on Map	Description	Situation
W1	Mixed Species	All trees of whatever species within the curtilage of the land to rear of 47 Bryanston Road.

Trees Specified by Reference to an Area
(within a dotted black line on the map)

No on Map	Description	Situation
	NONE	



Key

- Individual Trees
- Group
- Woodland
- Area
- Not TPO'd

The Southampton (Bryanston Road) Tree Preservation Order 2018

TPO Ref: T2-698	Department: Trees team
Drawn: GCB	Scale: Not to scale

SOUTHAMPTON CITY COUNCIL

Mitch Sanders
Service Director
Transactions and Universal Services
Southampton City Council
Southampton SO14 7LY

CONFIRMATION OF ORDER

This Order was confirmed by Southampton City Council without modification on the 31st October 2018

Signed on behalf of the Southampton City Council

Authorised by the Council to sign in that behalf

APPENDIX 5

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BRYANSTON ROAD BITTERNE SOUTHAMPTON HAMPSHIRE

TREE PROTECTION PLAN

T1 - T42 Tree numbers

BS Category of Condition

- T2 BS Condition A
- T20 BS Condition B
- T3 BS Condition C
- T2 BS Condition U

Crown spread

BS Calculated root protection areas

Tree to be removed for safety/short lifespan

Tree to be removed for development

Protective fencing location

Ground protection

TREE PROTECTION INFORMATION

Protective fencing and ground protection measures to be installed at locations specified prior to commencement of any demolition works.

Protective fencing to comprise scaffold uprights driven into the ground to 60cm. depth at no more than 3m. spacing. Upright to be braced within high usage/construction/demolition areas. Weldmesh panels to be securely fixed to uprights to produce a continuous barrier. Waterproof signs to be attached to every 5th panel declaring "TREE ROOT PROTECTION ZONE - KEEP OUT" or similar wording. Fencing to be constructed in accordance with fig. 2 or fig. 3 of section 6.2 of BS5837:2012.

Ground protection measures to comprise a single thickness of side butting scaffold boards over a 100mm. compressible layer laid onto a geotextile. For machinery access, interlocking metal/plastic road plates will need to be used.

Buildings in proximity to protective fencing areas to be demolished by machinery pulling walls inwards onto the building footprint.

The fenced protection zones around retained trees, hedges and shrubbery are to be regarded as sacrosanct and none of the following are to occur within these areas:

- Storage or disposal of any soil, building materials, machinery, fuel or waste residues of any description.

- Siting of any temporary structures of any description including site office/sales buildings, temporary car parking facilities, porta-loos, storage compounds or temporary hard standing areas.

- Excavations, soil/turf stripping, raising/lowering of existing levels or alterations to the existing natural surfaces/ground conditions of any other description.

- Location of temporary drainage, water supplies or any other temporary underground services.

- No use, movement or parking of any machinery or vehicles of any description.

- Additionally, no fires shall be lit within 20m. of the trunks of any trees or the centre line of any hedgerow to be retained.

All services to be installed to the requirements of NJUG Volume 4 "Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees". Any runs within retained tree root protection areas to either be bored/moled or any hand excavation to be supervised by the Arboricultural Consultant

DRAWING NO. J63.91/02

Scale: 1:200 at A1

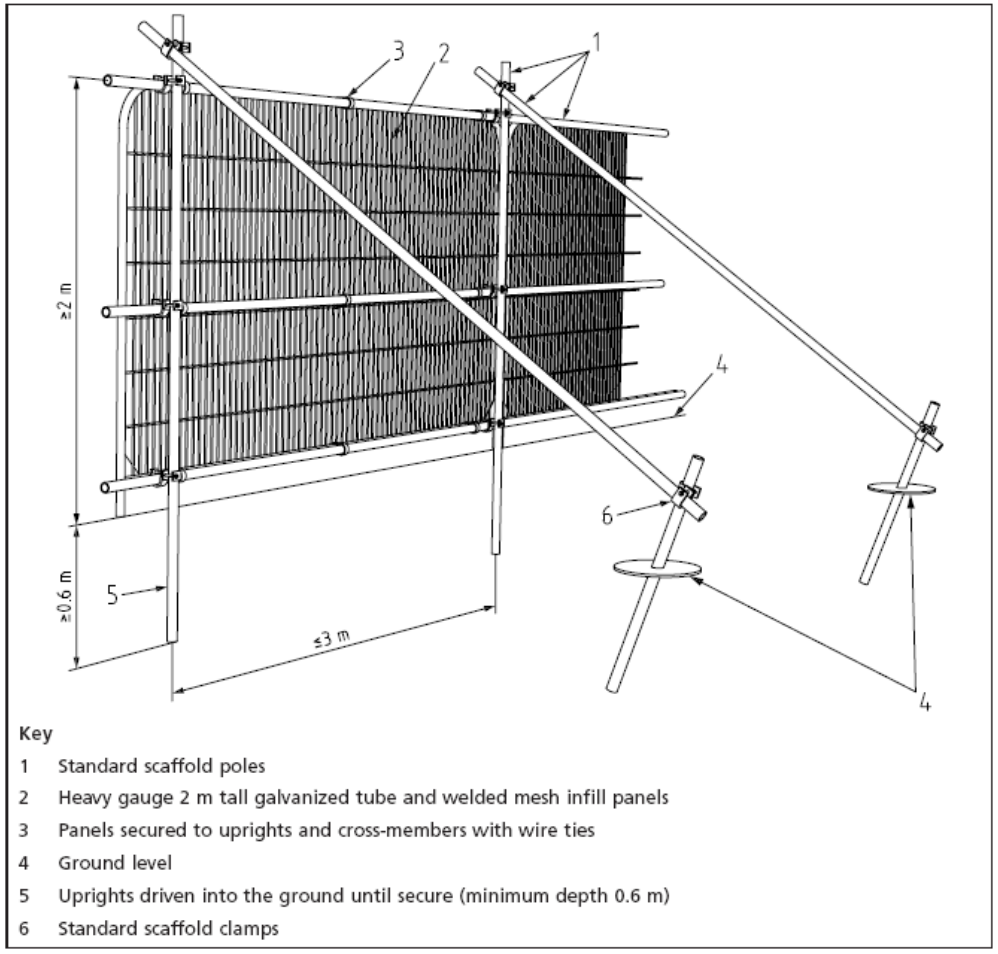
Added to by: NL

11/05/2023

APPENDIX 6

BS5837:2012: FENCING SPECIFICATIONS

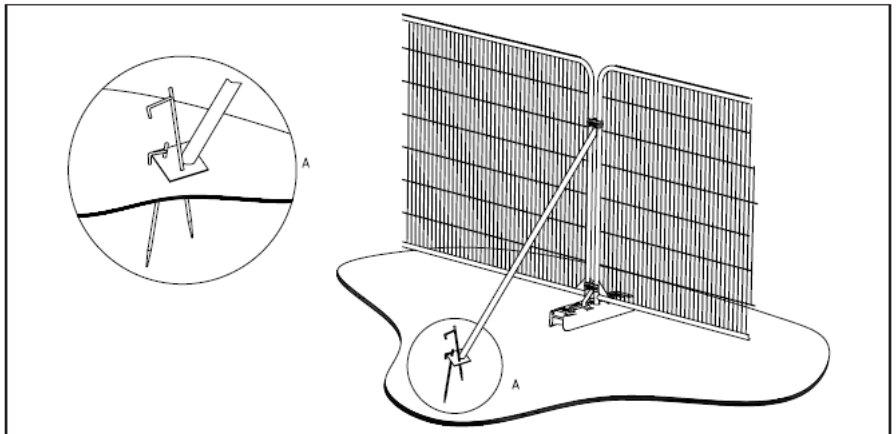
Figure 2 **Default specification for protective barrier**



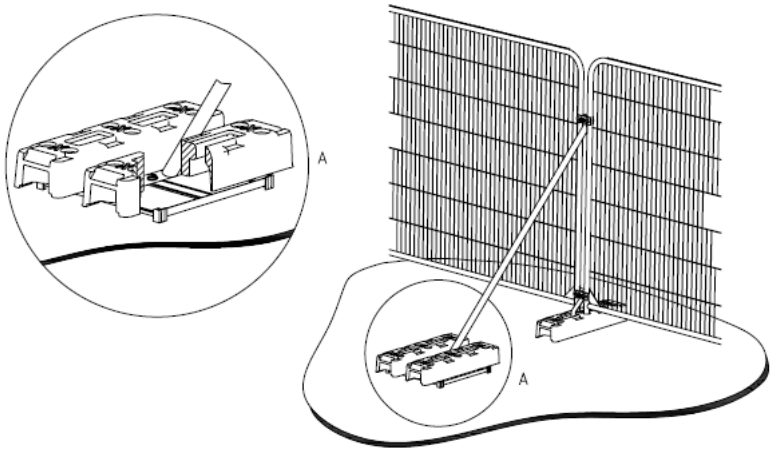
Key

1 Standard scaffold poles
2 Heavy gauge 2 m 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 until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Figure 3 **Examples of above-ground stabilizing systems**



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

PROTECTIVE FENCING.
THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT

TREE PROTECTION AREA
KEEP OUT!

(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE SUBJECTS OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY