ARBTECH

BS5837:2012
Trees in relation to design, demolition and construction – Recommendations

Tree Survey

Noviniti Dev Co 6 Ltd.

Queen Alexandra Hospital,

Southwick Hill Road,

Cosham,

Portsmouth,

PO6 3LY.

16 January 2021

Author: Matthew Middle Dip., (Arb.), Tech.Arbor.A.

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1. Introduction

Arbtech Consulting Limited (Arbtech) received written instruction on 14th January 2021 from Noviniti Dev Co 6 Ltd. to attend Queen Alexandra Hospital, Southwick Hill Road, Cosham, Portsmouth, PO6 3LY.; grid reference, SU 65473 05974 (site) to undertake an arboricultural survey a to BS5837:2012 guidance to assess trees, hedges and major shrub groups growing on and within influencing distance of the site and to produce a Schedule of trees, Tree Constraints Plan, Arboricultural Impact Assessment , Arboricultural Method Statement and Tree Protection Plan.

I am Matthew Middle, an arboricultural consultant at Arbtech Consulting Ltd. I undertook the tree survey on 14th January 2021 and subsequently have produced this summary of my findings.

I hold a National Diploma in arboriculture, I also hold the LANTRA Professional Tree Inspector certification and have professional experience in contracting and in arboricultural consultancy spanning more than twenty years.

The advice below and appended is underwritten by our Professional Indemnity insurance for the business practice of Arboricultural Consultancy in the sum of one million Pounds Sterling in each and every claim.

Table 1: Documents referred to.

Document	Reference No.
Survey base drawings	SORO18241 OS Tile
British Standard 5837:2012	“BS5837”
Tree Survey Schedule	Arbtech TS 01
Tree Constraints Plan	Arbtech TCP 01

2. Survey

Survey: An arboricultural survey to BS5837 of all trees within impacting distance of the site was undertaken by Matthew Middle on 14th January 2021.

During the survey I categorised the trees using “Table 1 – Cascade chart for tree quality assessment” of the BS5837:2012 (see Appendix 1).

A total of forty four (44) individual trees and three (3) groups of trees were surveyed. Details for each of the trees surveyed are provided in the Schedule of Trees (see Appendix 2).

Table 2: Documents upon which this tree survey has been based.

Document	Originator	Reference Number	Title
Topo	Sumo Survey Services	SORO18241	Topographical Survey
OS Tile	-	-	-

Limitations: The survey was made at ground level using visual observation only. Detailed examinations, such as climbing inspections and decay detection equipment were not employed, though may form part of the survey's management recommendations. Measurements were taken using specialist tapes, laser and GPS devices. Where this was not possible, measurements are estimated.

Scope: Pre-development tree surveys make arboricultural management recommendations based exclusively upon the individual tree or group of trees condition relative to their present context (*i.e. not in relation to the proposed development*).

Legal Status: No statutory protection check has been performed. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order ("TPO"), and those trees without. This is principally because a detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.

* For more information on the surveyed trees please see Arbtech Consulting Ltd, Tree Survey Schedule (Appendix 1), Tree Survey Report and Tree Constraints Plan.

Site description

The site is a NHS Trust Hospital, with a changing topography across the site with a gradual increase (N to S)

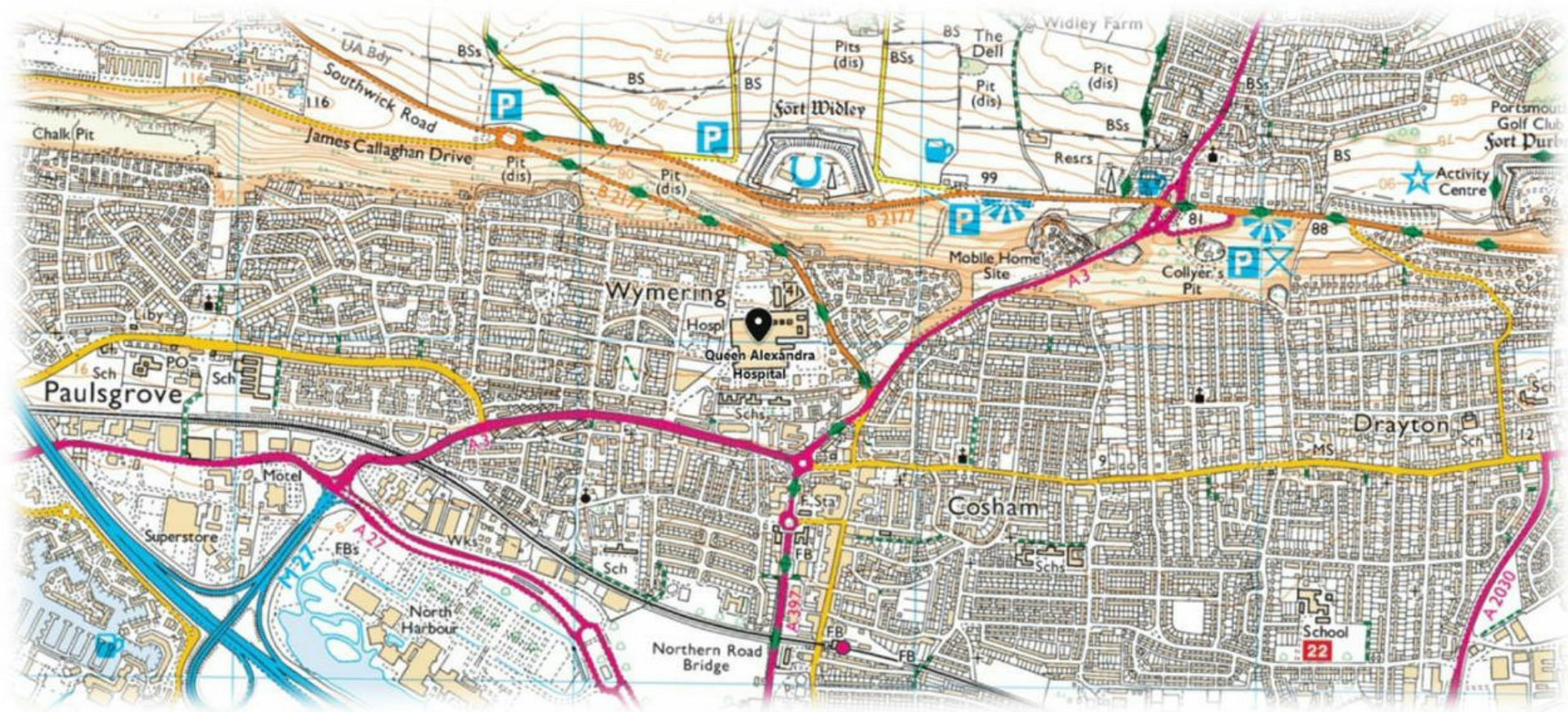

Figure 1: OS Map (Bing Maps)

It is likely that arboricultural impacts can be addressed with arboricultural methodology or minor amendments to the proposal.

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3. BS5837:2012 Scope

This standard recognises that there can be problems for development close to existing trees which are to be retained, and of planting trees close to existing structures. This standard sets out to assist those concerned with trees in relation to construction to form balanced judgements. It does not set out to put arguments for or against development, or for the removal or retention of trees. Where development, including demolition, is to occur, the standard provides guidance on how to decide which trees are appropriate for retention, on the means of protecting these trees during development, including demolition and construction work, and on the means of incorporating trees into the developed landscape.

4. Methodology

The methodology used to assess the trees was the British Standard 5837:2012 'Trees in Relation to Construction' tree survey method. The aim of the survey is to establish which trees are moderate and good quality; suitable for retention and justifying protection. And, which trees are low or poor quality; either undesirable or unsuitable to retain and protect.

The tree survey includes all trees included in the land survey red line boundary plan, as well as any that may have been missed, and it should categorize trees or groups of trees, including woodlands for their quality and value within the existing context, in a transparent, understandable and systematic way. Where the arboriculturist has deemed it appropriate, the trees have been tagged with small metal or plastic tags, placed as high as is convenient on the stem of each tree.

Whilst master plan proposals for the development of the site might be available, the trees have been surveyed without taking these into consideration. All detailed design work on site layout should take into consideration the results of the tree survey (and the TCP).

Trees forming groups and areas of woodland (including orchards, wood pasture and historic parkland) are identified and considered as groups where the arboriculturist has determined that this is appropriate, particularly where they contain a variety of species and age classes that could aid long-term management. It is often expedient to assess the quality and value of such groups of trees as a whole, rather than as individuals. However, an assessment of individuals within any group has been undertaken if they are open-grown or if there is a need to differentiate between them.

The quality and value of each tree or group of trees has been recorded by allocating it to one of the four categories; A, B, C, or U (highest to lowest quality respectively). The categories are differentiated on the tree survey plan by colour, or by suffixing the category adjacent to the tree identification number on the TCP.

The survey schedule lists all the trees or groups of trees. The following information is also provided:

a) reference number (to be recorded on the tree survey plan);
b) species (common or scientific names);
c) height in meters (m);
d) stem diameter in millimetres (mm) at 1.5 m above adjacent ground level or immediately above the root flare for multi-stemmed trees;
e) branch spread in meters taken at the four cardinal compass points;
f) height of crown clearance above adjacent ground level in meters (m);
g) age class (Newly planted, Young, Semi-mature, Early mature, Mature, Over mature);
h) physiological condition (e.g. good, fair, poor, decline and dead);
i) structural condition (e.g. good, fair, poor and ivy);
j) preliminary management recommendations, including further investigation of suspected defects that require more detailed assessment and potential for wildlife habitat; and
k) The retention category referring to the quality and useful contribution in years; **U** = <10yrs; **A** = >40yrs; **B** = >20yrs; **C** = >10yrs. The retention sub category referring to the type of amenity; 1 = Arboricultural; 2 = Landscape; 3 = Cultural including conservation (see Table 1 Cascade chart for tree quality assessment).

5. Definitions

Arboriculturist

An arboriculturist (or arboricultural consultant) is a person who has, through relevant education, training and experience, gained recognized qualifications and expertise in the field of trees in relation to construction.

Tree Survey

A tree survey should be undertaken by an arboriculturist and should record information about the trees on a site independently of and prior to any specific design for development. As a subsequent task, and with reference to a design or potential design, the results of the survey should be included in the preparation of a tree constraints plan, which should be used to assist with site layout design.

Tree Constraints Plan

A TCP is plan, typically delivered as an AutoCAD drawing (.file format), prepared by an arboriculturist for the purposes of layout design showing the root protection area and representing the effect that the mature height and spread of retained trees will have on layouts through shade, dominance, etc.

Root Protection Area

An RPA is a layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m².

Construction Exclusion Zone (also termed Tree Protection Zone)

A construction exclusion or tree protection zone is an area based on the RPA (in m²), identified by an arboriculturist, to be protected during development, including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long-term retention of a tree.

Arboricultural Impact Assessment

This is a study, undertaken by an arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

Tree Protection Plan

A TPP is plan, typically delivered as an AutoCAD drawing (.dwg file format), prepared by an arboriculturist showing the finalized layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement, which can be shown graphically.

Arboricultural Method Statement

This is a methodology for the implementation of any aspect of development that has the potential to result in loss of or damage to a tree. The AMS is likely to include details of an on-site tree protection monitoring regime.

6. Recommendations

I have not seen the proposed scheme and make the following recommendation to ensure that there are no irrevocable issues to the proposed retained trees and so that no conditions relating to arboriculture are attached to any planning consent secured; obtain an arboricultural report to include:

a) An arboricultural impact assessment (AIA);
b) An arboricultural method statement (AMS); and
c) A tree protection plan drawing (TPP).

7. Limitations

Trees were inspected from using visual observation from ground level only. Trees were not climbed or inspected below ground level. Inaccessible trees will have best estimates made about the location, physical dimensions and characteristics. Trees have been grouped where BS5837 guides us that it is expedient to do so. Trees have been excluded from the survey if they are found by us to be sufficiently far away from the proposed developable area or if they are outside of the red line boundary plan showing the expectations of our Client for the extent of the survey. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order ("TPO"), and those trees without. This is principally because a detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.

8. Appendices

The following documents were released to the Client as appendices to this report:

- Survey Schedule (.pdf)
- Tree Constraints Plan drawing (.dwg & .pdf)

If you require clarification of information contained herein, please do not hesitate to contact us via 01244 661170.

Yours Sincerely,

Senior Arboricultural Consultant

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Appendix 1: Table 1 Cascade chart for tree quality assessment

BS5837:2012 Trees in relation to design, demolition and construction – Recommendations

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories when appropriate			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. 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, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve; see 4.5.7.*			Dark red
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominate and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Light green
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remedial defects, including unsympathetic management and storm damage), such that they are unlikely to be suitable for retention of beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	Mid blue
Category C **Trees of low quality** with an estimated remaining expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape value	Trees with no material conservation or other cultural value	Grey

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Appendix 2: Schedule of Trees

Tree Survey Schedule
Queen Alexandra Hospital, Southwick Hill Road, Cosham, Portsmouth, PO6 3LY

Client	Noviniti Dev Co 6 Ltd.
Survey Date	14th January 2021
Weather Conditions	Overcast with continuous rain
Surveyor	Matthew Middle

Key:

Tree Number	A unique number or reference to identify trees or groups as shown on associated plans.
Species	Common and or taxonomic names.
Height	The height of the tree in meters (m).
Trunk Diameter	The stem diameter in millimetres (mm) taken at 1.5m above ground level unless otherwise specified.
Canopy Spread	The extent of the canopy taken in meters (m) to the principle points of the compass, North (N), East (E), South (S) and West (W).
Crown Clearance	The height of canopy clearance above ground level to the lowest point of the canopy, taken in meters (m).
Age Class	Age classification; Young (Y), Middle Aged (MA), Mature (M), Late Mature (LM), Veteran (V).
Physiological Condition	The general physiological condition of the tree; Average, Below average, Low, Dead.
Structural Condition	The general structural condition of the tree; Good, Moderate, Indifferent, Poor, Hazardous.
Comments	Notes and general comments on the structural condition of the tree, its environment and it estimated remaining contribution.
Category	The retention category referring to the quality and useful contribution in years; U = <10yrs; A = >40yrs; B = >20yrs; C = >10yrs. The retention sub category referring to the type of amenity; 1 = Arboricultural; 2 = Landscape; 3 = Cultural including conservation.

Tree No.	Species	Height (M)	Trunk Diameter (MM)	Canopy Spread (M)	Crown Clearance (M)	Age Class	Physiological Condition	Structural Condition	Comments	Category
1	Sycamore	5m	270mm	Up to N7m E4m S7m W5.5m	N4.5m E1m S1m W4m	Middle aged	Average	Average	Cavity on N side of trunk at the point of an old pruning wound; previously topped at 4.5m; one-sided crown as suppressed by adjacent tree	**C** (12)
2		10m	580mm						Dominant canopy	**B** (12)
3		9m	330mm						Slightly one-sided crown as suppressed by adjacent tree	**B** (12)
4		8m	430mm @1m				Low	Poor	Multiple un-occluded pruning wounds; previously topped at 7.5m; bark de-lamination and shedding throughout whole tree; exposed wood; black markings on exposed wood at base of tree are consistent with honey fungus "bootlaces"	**U**
5		8m	480mm @750mm				Low	Indifferent	Multiple un-occluded pruning wounds; previously topped at 5.5m	**C** (12)
6		8.5m	390mm @1m				Low	Indifferent	Multiple un-occluded pruning wounds; sparse bud density in upper crown; bark de-lamination and shedding	**C** (12)
7		10m	430mm				Average	Average	One-sided crown as suppressed by adjacent tree	**B** (12)
8		10m	480mm @750mm						Previously topped at 7m	**C** (12)
9		10m	660mm @1m						Dominant canopy	**B** (12)

Tree No.	Species	Height (M)	Trunk Diameter (MM)	Canopy Spread (M)	Crown Clearance (M)	Age Class	Physiological Condition	Structural Condition	Comments	Category
10	Corsican pine	17m	670mm	N4m E9m SE9.5m S5m W5m	8m	Middle aged	Average	Moderate	Wound on NE side of trunk at 0.5m - 1.7m, exposed wood; twin-stemmed from 5m; one-sided crown as suppressed by adjacent trees.	**B** **(12)**
11	Sycamore	14m	520mm	N6m E7m S5m W5m	4m	Middle aged	Average	Moderate	Twin-stemmed from 2.5m; slightly suppressed one-sided crown by adjacent trees.	**B** **(12)**
12	Beech	14m	740mm	N5m E7m S7m W7m	4m	Middle aged	Average	Good	700mm x 600mm inspection cover within 1m of base of trunk; slightly suppressed one-sided crown by adjacent tree.	**B** **(12)**
13	Sycamore	12m	610mm @1m	N5m E7m S6m W6m	4.5m	Middle aged	Average	Moderate	Managed as a pollard; sub-dominant limb to S at 0.5m.	**B** **(12)**
14	Prunus *sp.*	4m	100mm	1.5m	2m	Young	Average	Moderate	Small ornamental; growing within a 2m wide grass verge between parking areas.	**C** **(1)**
15	Flowering cherry	4.5m	370mm	5m	3m	Middle aged	Average	Moderate	Growing within a 2m wide grass verge between parking areas; Large surface and buttress roots.	**B** **(1)**
16			380mm							
17	Prunus *sp.*	3.5m	120mm	1.5m	2m	Young	Below average	Indifferent	Small ornamental; excessive deadwood; growing within a 2m wide grass verge between parking areas.	**U**

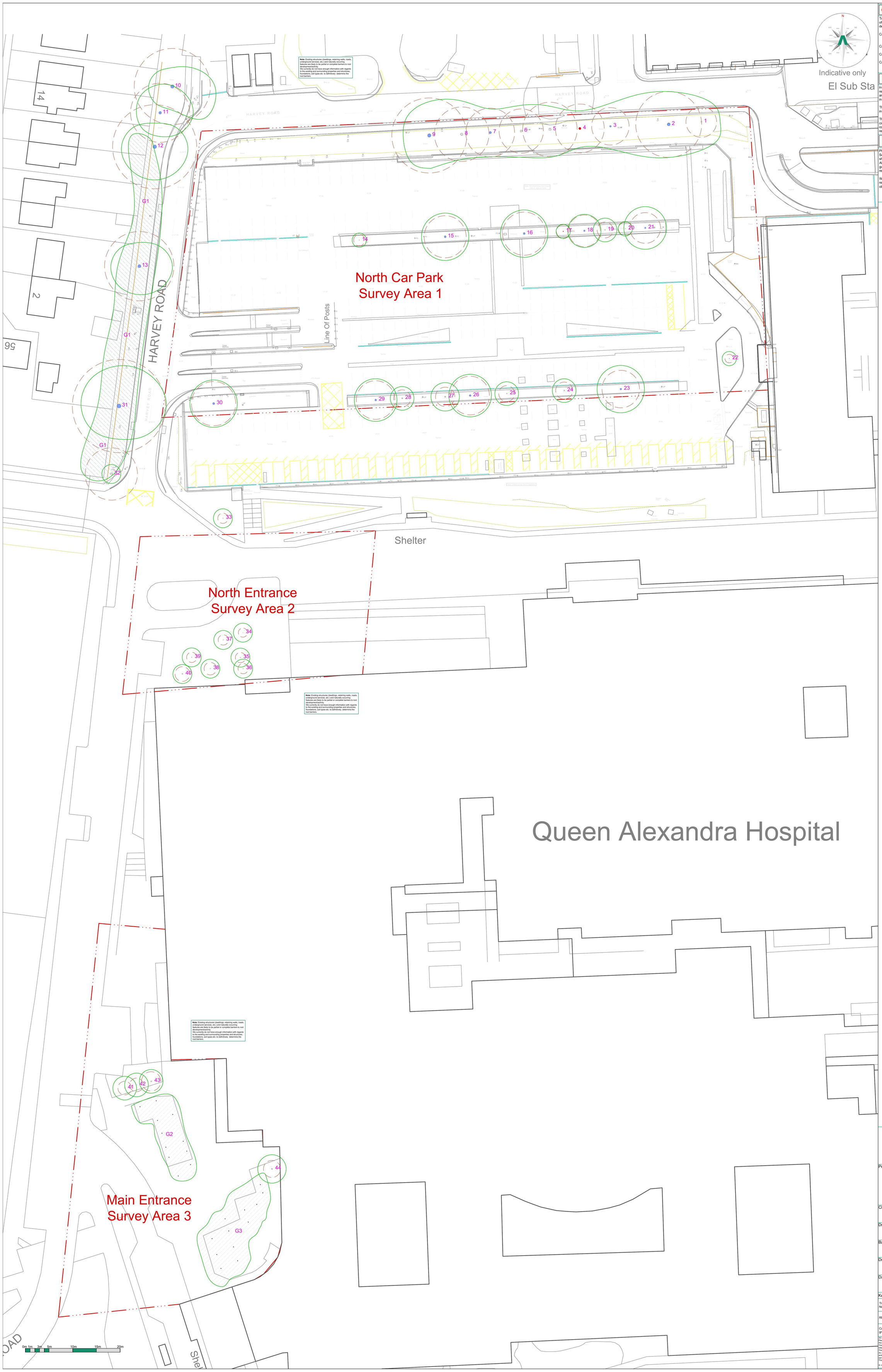
Tree No.	Species	Height (M)	Trunk Diameter (MM)	Canopy Spread (M)	Crown Clearance (M)	Age Class	Physiological Condition	Structural Condition	Comments	Category
18	Flowering cherry	4.5m	280mm	3.5m	3.5m	Middle aged	Average	Moderate	Growing within a 2m wide grass verge between parking areas; surface roots with damage on upper sides.	**B** (1)
19	Flowering cherry	3.5m	140mm	2.5m	2.5m	Middle aged	Average	Moderate	Growing within a 2m wide grass verge between parking areas; slightly suppressed one-sided and overtopped crown by adjacent tree.	**C** (1)
20	Prunus *sp.*	3.5m	120mm	1.5m	2m	Young	Average	Moderate	Small ornamental; growing within a 2m wide grass verge between parking areas.	**C** (1)
21	Flowering cherry	4.5m	270mm	4.5m	2.5m	Middle aged	Average	Indifferent	Growing within a 2m wide grass verge between parking areas; Large surface and buttress roots with upper surface damage; 600mm x 450mm inspection cover within 300mm of base of tree.	**B** (1)
22	Beech	4.5m	50mm	1.5m	0m	Young	Average	Good	Young tree (stem diameter less than 150mm); tree stake and tie still in situ.	**C** (1)
23	Whitebeam	8m	330mm	5m	3m	Middle aged	Average	Moderate	Multi-stemmed from 1.7m; recently crown lifted; growing within a 2m wide grass verge between parking areas.	**B** (1)
24	Whitebeam	4.5m	150mm	2.5m	2m	Young	Average	Moderate	Growing within a 2m wide grass verge between parking areas;	**C** (1)
25			140mm @500mm						Young trees (stem diameter less than 150mm).	

Tree No.	Species	Height (M)	Trunk Diameter (MM)	Canopy Spread (M)	Crown Clearance (M)	Age Class	Physiological Condition	Structural Condition	Comments	Category
26	Whitebeam	6.5m	340mm @1m	4.5m	3m	Middle aged	Average	Moderate	Growing within a 2m wide grass verge between parking areas; multi-stemmed from 1.6m; tight compression forks with included bark.	**B** (1)
27	Flowering cherry	4m	170mm @500mm	3m	3.5m	Young	Below average	Indifferent	Growing within a 2m wide grass verge between parking areas; multi-stemmed from 1m; tight compression forks with included bark.	**C** (1)
28	Cockspur thorn	3.5m	150mm @1m	2.5m	1.5m	Middle aged	Average	Moderate	Small ornamental; growing within a 2m wide grass verge between parking areas; three-stemmed from 1.5m.	**C** (1)
29	Whitebeam	8m	340mm @1m	4.5m	2.5m	Middle aged	Average	Moderate	Growing within a 2m wide grass verge between parking areas; multi-stemmed from 1.5m; tight compression forks with included bark.	**B** (1)
30	Flowering cherry	5m	390mm @1m	5m	2.5m	Middle aged	Average	Moderate	Growing within a 3m wide grass verge between parking area, footpath and road; multi-stemmed from 1.5m.	**B** (1)
31	Sycamore	16m	820mm @1.25m	N8.5m E10m S7m W8m	6m	Mature	Average	Moderate	Twin-stemmed from 2.5m; bat boxes installed on S stem on NE & SE sides; tight compression fork; dominant canopy.	**B** (12)

Tree No.	Species	Height (M)	Trunk Diameter (MM)	Canopy Spread (M)	Crown Clearance (M)	Age Class	Physiological Condition	Structural Condition	Comments	Category
32	Sycamore	8m	460mm	2m	6m	Middle aged	Below average	Poor	Hard surfacing within 300mm of base of trunk; 600mm x 600mm inspection cover within 1m of trunk; multiple pruning wounds on trunk not yet occluded, with visible pockets of decay; twin-stemmed from 2.5m; previously topped at 8m.	**C** (1)
33	Flowering cherry	4m	90mm	2m	3m	Young	Average	Moderate	Young tree (stem diameter less than 150mm); growing on a bank.	**C** (1)
34	Downy birch	6.5m	80mm	2m	2m	Young	Average	Moderate	Young trees (stem diameter less than 150mm); growing in stone covered panting pits within tarmac hard surfacing.	**C** (12)
35			90mm							
36			90mm							
37			90mm							
38			110mm							
39			90mm							
40			130mm							
41	Silver birch	6m	120mm	2.5m	2m	Young	Average	Moderate	Growing in a high level planting bed retained by a concrete retaining wall between 1m & 4m tall.	**C** (12)
42			120mm							
43			170mm							
44	Sitka spruce	8m	150mm	3m	0m	Young	Average	Moderate	Christmas lights within canopy.	**C** (12)

Tree No.	Species	Height (M)	Trunk Diameter (MM)	Canopy Spread (M)	Crown Clearance (M)	Age Class	Physiological Condition	Structural Condition	Comments	Category
G1	Various	Min. 4m Max. 15m	Min. 100mm # Max. 700mm #	5m	3m	Young to Middle aged	Average	Moderate	Offsite group, only visible over boundary fence; unable to inspect the tree 360° of the base, stem & canopy; all dimensions estimated.	**B** (2)
G2	Silver birch	6m	Max. 130mm	3.5m	2m	Young	Average	Moderate	Group of 11 closely planted trees, situated within planting areas adjacent to and within hard surfacing.	**C** (12)
G3	Silver birch	7m	Min. 30mm Max. 150mm	3.5m	2m	Young	Average	Moderate	Group of 13 closely planted trees, situated within planting areas adjacent to and within hard surfacing.	**C** (12)

Appendix 3: Tree Constraints Plan



Tree Categories

Trees are categorised in accordance with the cascade chart in Table 1 of the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'

Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.
Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category 'C' - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

Root Protection Area

In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Areas (RPAs) should be plotted around each of the category A, B and trees. This is a minimum area in m² which should be left undisturbed around each retained tree.

The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations.

The calculated RPA is capped to 707m², which is the equivalent to a circle with a radius of 15m. Where there appears to be restrictions to root growth the root protection area is reshaped to more accurately reflect the likely distribution of the roots.

Tree Survey Report

Please refer to Arbtech Consulting Ltd. Tree Survey Report and Tree Schedule for full details on all surveyed trees, hedgerows and major shrub groups.
All trees were surveyed and categorised in accordance with the guidance as set out in the British Standard BS5837:2012 Tree in relation to design, demolition and construction - Recommendations.

We make the following recommendation to ensure that no conditions relating to arboriculture are attached to any planning consent secured: obtain and arboricultural report to include:
a) An arboricultural impact assessment (AIA);
b) An arboricultural method statement (AMS); and
c) A tree protection plan (TPP).

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Project:
Queen Alexandra Hospital,
Southwick Hill Road,
Cosham,
Portsmouth,
PO6 3LY.

Client:
Noviniti Dev Co 6 Ltd.

Drawing:
Tree Constraints Plan (Site)

Based on:
SOR018241 & OS Tile

Drawing No:		Rev:
Arbtech TCP 01		
Date: Jan 2021	Scale: 1:250 @ A0	Drawn: MGM

Key:

Tree Nos.:	1	Tree Canopies:		Trunks:	
RPAs:		Category 'U' trees:		Category 'B' trees:	
Category 'B' groups:		Category 'C' trees:		Category 'C' groups:	

All dimensions should be checked on site. No dimensions are to be scaled from this drawing.
Please notify us of any discrepancies found. Arbtech Consulting Ltd. cannot be held responsible for inaccuracies in the base drawing in which this plan is based.
This drawing is designed to reflect the principles of the layout or design only, and relates only to the protection of retained trees.
This drawing is not to be read as a definitive part of the engineering or construction designs or method statement. An architect or structural engineer should be contacted over any matters of construction, detailing or specification and for any standards or regulatory requirements relating to proposed structures, hard surfacing or underground services.
This drawing was produced in colour - a monochrome copy should not be relied upon.

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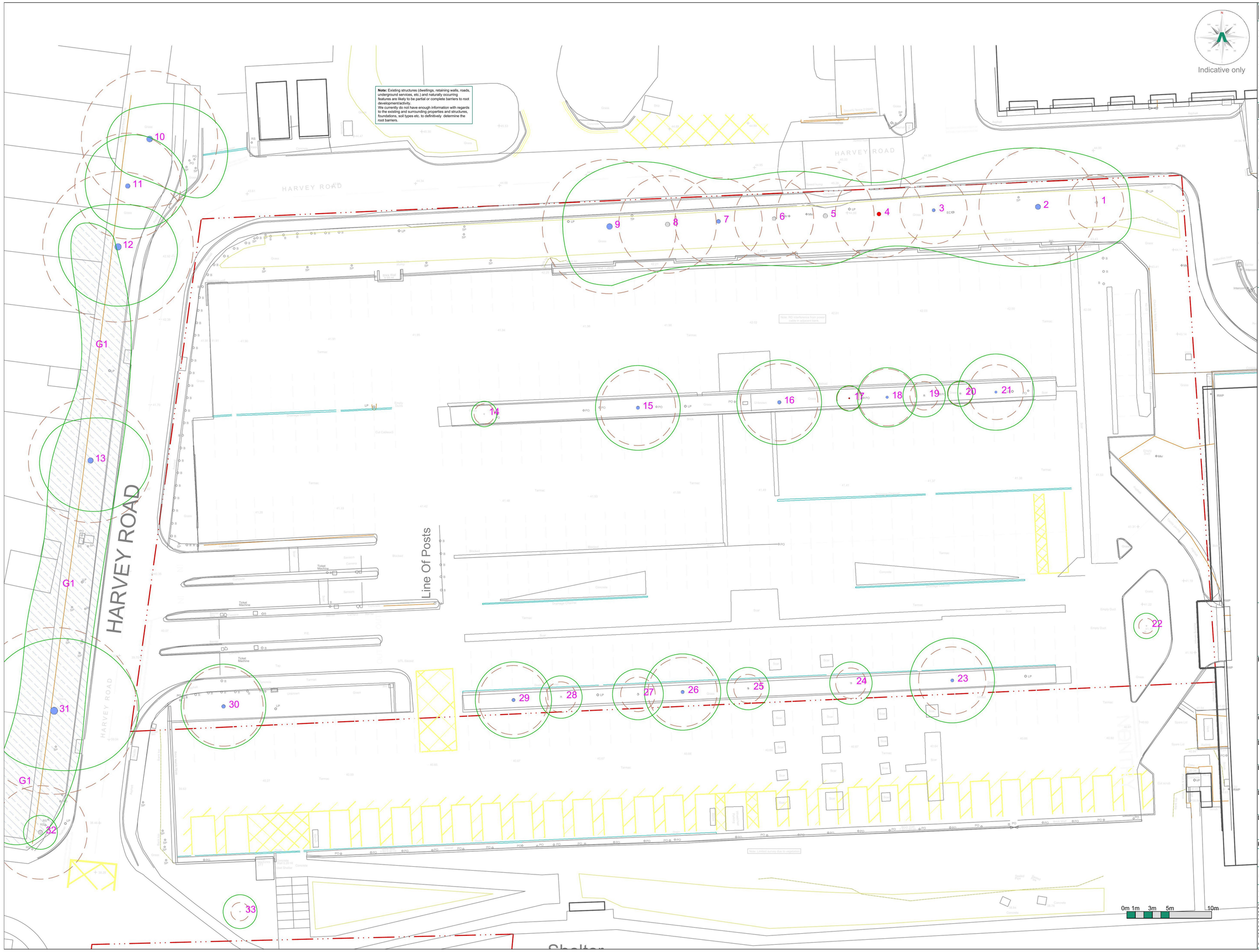

Note: Existing structures (dwellings, retaining walls, roads, underground services, etc.) and naturally occurring features are likely to be partial or complete barriers to root development/activity.
We currently do not have enough information with regards to the existing and surrounding properties and structures, foundations, soil types etc. to definitively determine the root barriers.

Tree Categories

Trees are categorised in accordance with the cascade chart in Table 1 of the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'

Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.
Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category ' ' - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

Root Protection Area

In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Areas (RPAs) should be plotted around each of the category A, B and trees. This is a minimum area in m² which should be left undisturbed around each retained tree.

The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations.

The calculated RPA is capped to 707m², which is the equivalent to a circle with a radius of 15m. Where there appears to be restrictions to root growth the root protection area is reshaped to more accurately reflect the likely distribution of the roots.

Tree Survey Report

Please refer to Arbtech Consulting Ltd. Tree Survey Report and Tree Schedule for full details on all surveyed trees, hedgerows and major shrub groups.
All trees were surveyed and categorised in accordance with the guidance as set out in the British Standard BS5837:2012 Tree in relation to design, demolition and construction - Recommendations.

We make the following recommendation to ensure that no conditions relating to arboriculture are attached to any planning consent secured: obtain and arboricultural report to include:
a) An arboricultural impact assessment (AIA);
b) An arboricultural method statement (AMS); and
c) A tree protection plan (TPP).

ARBTECH

Unit 3, Well House Barns, Chester, CH4 0DH
https://arbtech.co.uk, 01244 661170

Project:
Queen Alexandra Hospital,
Southwick Hill Road,
Cosham,
Portsmouth,
PO6 3LY.

Client:
Noviniti Dev Co 6 Ltd.

Drawing:
Tree Constraints Plan (North Car Park)

Based on:
SOR018241

Drawing No:		Rev:
Arbtech TCP 01		
Date:	Scale:	Drawn:
Jan 2021	1:200 @ A1	MGM

Key:

Tree Nos.:	1	Tree Canopies:		Trunks:	
RPAs:		Category 'U' trees:		Category 'B' trees:	
Category 'B' groups:		Category 'C' trees:		Category 'C' groups:	

All dimensions should be checked on site. No dimensions are to be scaled from this drawing.
Please notify us of any discrepancies found. Arbtech Consulting Ltd. cannot be held responsible for inaccuracies in the base drawing in which this plan is based.
This drawing is designed to reflect the principles of the layout or design only, and relates only to the protection of retained trees.
This drawing is not to be read as a definitive part of the engineering or construction designs or method statement. An architect or structural engineer should be contacted over any matters of construction, detailing or specification and for any standards or regulatory requirements relating to proposed structures, hard surfacing or underground services.
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Tree Categories

Trees are categorised in accordance with the cascade chart in Table 1 of the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'

Category 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.
Category 'A' - Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category 'C' - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

Root Protection Area

In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Areas (RPAs) should be plotted around each of the category A, B and C trees. This is a minimum area in m² which should be left undisturbed around each retained tree.

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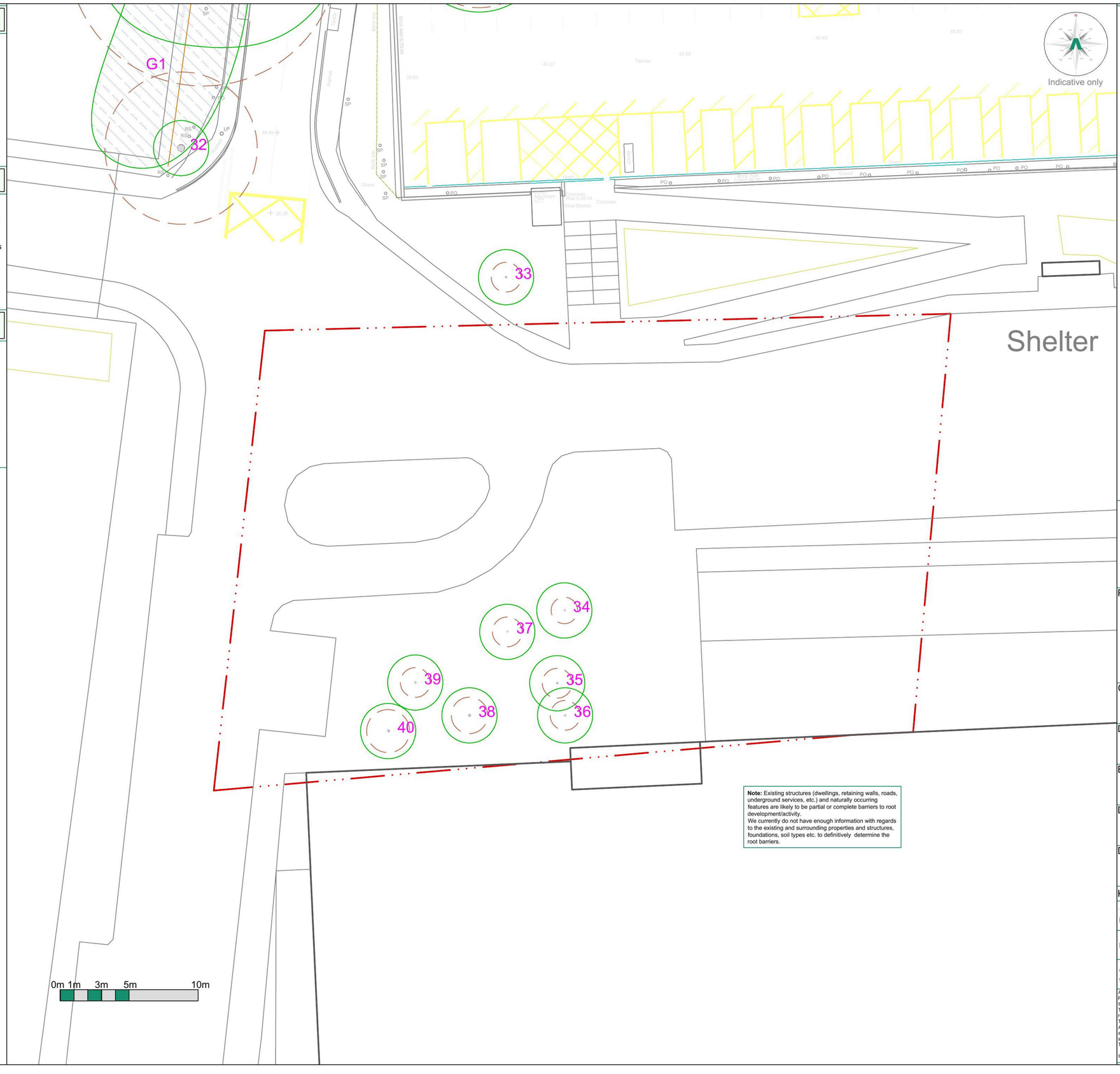

Note: Existing structures (dwellings, retaining walls, roads, underground services, etc.) and naturally occurring features are likely to be partial or complete barriers to root development/activity.
We currently do not have enough information with regards to the existing and surrounding properties and structures, foundations, soil types etc. to definitively determine the root barriers.

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Client:
Noviniti Dev Co 6 Ltd.

Drawing:
Tree Constraints Plan (North Entrance)

Based on:
OS Tile

Drawing No:		Rev:
Arbtech TCP 01		
Date: Jan 2021	Scale: 1:200 @ A2	Drawn: MGM

Key:

Tree Nos.:	1	Tree Canopies:		Trunks:	
RPAs:		Category 'U' trees:		Category 'B' trees:	
Category 'B' groups:		Category 'C' trees:		Category 'C' groups:	

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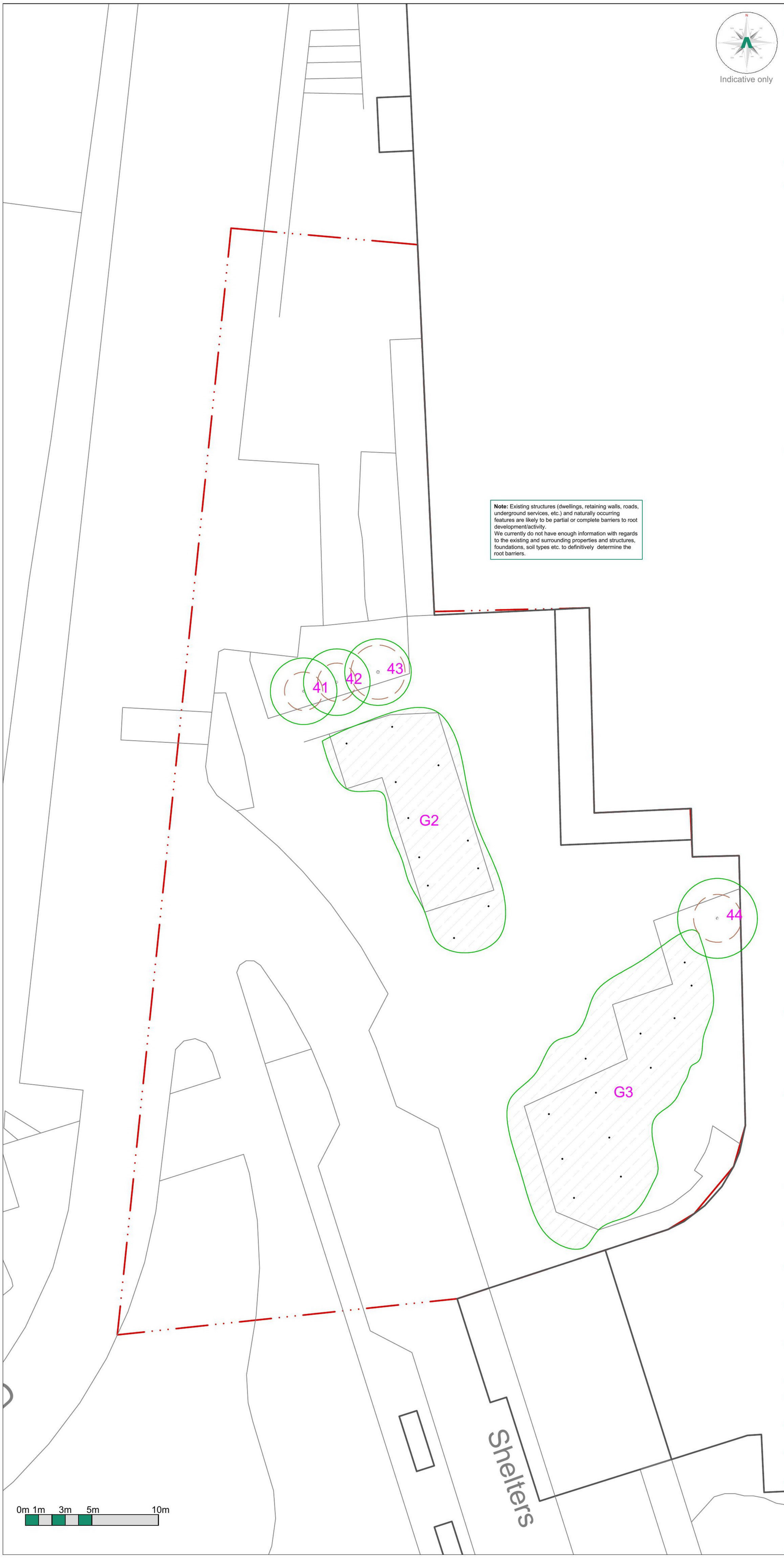

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We make the following recommendation to ensure that no conditions relating to arboriculture are attached to any planning consent secured: obtain and arboricultural report to include:

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Client:
Noviniti Dev Co 6 Ltd.

Drawing:
Tree Constraints Plan (Main Entrance)

Based on:
OS Tile

Drawing No:		Rev:
Arbtech TCP 01		
Date: Jan 2021	Scale: 1:200 @ A2	Drawn: MGM

Key:

Tree Nos.:	1	Tree Canopies:		Trunks:	
RPAs:		Category 'U' trees:		Category 'B' trees:	
Category 'B' groups:		Category 'C' trees:		Category 'C' groups:	

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9. Document Production Record

Document number	Editor	Signature	Position	Issue number	Date
Arbtech TSR 01	Matthew Middle	[redacted]	Senior oricultural onsultant	01	16/01/21

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