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ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

Site address:

Monks Lake, Grange Road, Netley Abbey, SO31 5FF

16 March 2023

Ref: AIAMS23-1003



- 1 -



ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

Site address: Monks Lake, Grange Road, Netley Abbey, SO31 5FF
Instructed by: Mrs Georgina Williams
Prepared by: Thomas Gregory DipArbL4 (ABC) TechArborA
Date: Thursday, 16 March 2023
Report Ref: AIAMS23-1003

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1 INTRODUCTION

1.1 SCOPE

I have been instructed by Mrs Williams of Monks Lake to prepare an Arboricultural Impact Assessment and Method Statement to cover all trees located within the site and those offsite that may influence development and to demonstrate that the proposed development is achievable in arboricultural terms. This report has been produced in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations (BS5837). It is intended to demonstrate the site's arboricultural constraints and assist in the design process. The objective is to assess the trees and other vegetation onsite and provide suitable recommendations regarding the proposal's potential impact on trees and vice versa.

1.2 TREE SURVEY OUTLINE

Visual inspection of the trees within the site boundary was undertaken from ground level using binoculars where necessary. All implicated trees have been given a unique reference number and their position plotted to a survey drawing. A schedule was prepared listing tree number, common name, stem diameter at 1.5m above ground level (or in accordance with Annex C of BS5837), approximate tree height, crown spread (cardinal points), crown clearance and age class. Any specific observations or recommendations with regard to management were also noted.

Each tree was assessed and assigned to one of the following categories:

- Category A: those of high quality and value with an estimated remaining life expectancy of at least 40 years.
- Category B: those of moderate quality and value with an estimated remaining life expectancy of at least 20 years.
- Category C: those of low quality and value with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter of less than 150mm.
- 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.

In order to avoid damage to the roots or rooting environment of retained trees, the root protection area (RPA) has been calculated for each of the Category A, B and C trees. This is a minimum area around a tree which is deemed to contain sufficient roots and rooting volume to maintain the tree's viability. Protection of the roots and soil structure in this area should be considered a priority. These figures have been calculated using the formulas within Section 4.6 and Annex D of BS5837.

Trees are living, dynamic organisms. Their size, health and overall condition changes as they grow and can be affected by external conditions. For this reason, the arboricultural development survey and any management recommendations given are valid for a period not exceeding one calendar year from the date of issue of this report.

No soil test was carried out whilst onsite and so the soil type is unknown.

1.3 STATUTORY TREE PROTECTION

No formal checks have been made by Plane Arboriculture Limited with the local planning authority in respect of statutory tree protection. It is strongly recommended that the local planning authority is contacted prior to any works being carried out and an application submitted if appropriate. This is to ensure that necessary permissions are sought if required to avoid an offence being committed.

2 ARBORICULTURAL DEVELOPMENT SURVEY

The 'Tree Survey Schedule' can be found in 'Appendix 1' and the 'Tree Constraints Plan' can be found in Appendix 2'.

2.1 TIME OF SURVEY

The survey was undertaken in the afternoon of Friday 3rd February 2023.

2.2 GROUND AND SITE CONDITIONS

The site in question is a residential property accessed via shared driveway from the road. At the entrance of the site are gate pillars with a compressed stone driveway leading to the dwelling. The dwelling is located in the centre of the plot with parking to the front and lawn to the rear leading down to a lake.

The site requires consideration from an arboricultural perspective due to the presence of multiple trees within and around the site.

2.3 TREE ASSESSMENT

A total of 21 individual trees and 2 groups are located within and around the site and the objective assessment resulted in BS5837 categories of 'A', 'B' and 'C' being attributed to them.

There are 13 low quality individual trees and 2 groups ('C' and 'U' category trees). They represent little importance from an arboricultural perspective and should not constrain the site layout.

There are also 8 individual trees ('A' and 'B' category trees) located within the site which have more individual importance and should be incorporated into the site layout if possible.

The survey data and site observations have been used to illustrate the site's arboricultural restrictions in the form of a Tree Constraints Plan (TCP) which can be found at Appendix 2.

3 ARBORICULTURAL IMPACT ASSESSMENT

The 'Arboricultural Impact Assessment Plan' can be found in 'Appendix 3'. In order to achieve the protection of trees which are suitable for retention, the potential impact on trees and their environment from the proposed development should be considered and vice versa.

3.1 DESIGN AND LAYOUT

The design and layout of the site aims to incorporate the components of all 'A' and 'B' category trees (crown and rooting area) and provides a suitable level of clearance to allow for their long-term safe retention, i.e. root protection area and crown clearance.

A new wall is proposed to run from the boundary within the RPA of T8 (offsite). It will just clip the edge of the RPA and is not considered likely to have any detrimental effect on the tree.

An extension to the driveway is proposed to create additional parking. This will involve new hardstanding within the RPA of T3, but the impact of the proposals on the trees and vice versa is considered to be acceptable in arboricultural terms. Proposals will require the removal of T4, T10, T11, G12, part of G13 and T23, which have all been categorised as category 'C' trees and so should not constrain the site. Their loss is unlikely to have a negative impact on local amenity and the development does provide an opportunity to implement a new landscape scheme.

3.2 UTILITIES AND SERVICES

Any underground services required will need to respect the root protection areas of the retained trees and should be carefully planned to avoid location within the root protection area.

3.3 CONSTRUCTION ACTIVITIES

All deliveries, parking, associated vehicle movements, materials storage and handling, and site welfare provision should also respect root protection areas of retained trees.

3.4 TREE WORK RECOMMENDATIONS

In the interests of maintaining good quality tree cover and in order to facilitate the development, one trees will be removed but no other tree work will be required.

3.5 CONCLUSION

I am content that this development is achievable in arboricultural terms subject to various tree protection measures specified and adhered to during the construction process.

I am also content that there is sufficient scope for suitable mitigation planting to overcome the loss of the trees that require removal to facilitate this development.

4 ARBORICULTURAL METHOD STATEMENT

The 'Tree Protection Plan' can be found in 'Appendix 4'.

The root protection areas of the principal trees have been assessed and the findings recorded in the tree survey and illustrated on the Tree Protection Plan. As some of these trees are vulnerable to inadvertent damage from this proposed development, the following guidance shall be observed to prevent damage or other long-term harm.

4.1 GENERAL REQUIREMENTS

A hard copy of the arboricultural method statement and tree protection plan shall remain onsite for the duration of demolition, construction and landscaping works and be available to site operatives at all times. All operatives at the site shall be briefed about tree related factors as part of their site induction.

Any variation from the methodology described in this method statement shall be discussed with the supervising arboriculturalist and agreed with the Local Planning Authority.

4.2 SITE ACCESS

The access to and from the site for development purposes shall be via the existing entrance. Depending on the type and size of vehicles accessing the site, a banksman shall be employed to oversee delivery arrivals and unloading to ensure that materials and plant are all delivered outside of the root protection areas.

Any inadvertent damage to trees and hedgerows which occurs shall be immediately referred to the Local Planning Authority and any pruning works deemed necessary and consented by the Local Planning Authority shall be in accordance with BS3998:2010 Tree Work – Recommendations.

4.3 TREE WORK RECOMMENDATIONS

The tree work recommendations are recorded in the 'Tree Survey Schedule' which can be found at Appendix 1.

This shall be carried out as the first stage of development and shall be in accordance with BS3998:2010 Tree Work – Recommendations.

Trees shall be checked for protected species before works are undertaken. It is against the law to disturb bats or their roosts under the Conservation of Habitat and Species Regulations. Nesting birds are protected by the Wildlife and

Countryside Act. If protected species are discovered, Natural England shall be contacted for advice.

4.4 TREE PROTECTION BARRIERS

The root protection areas of retained trees must be left free from disturbance and protected from contamination or compaction during the proposed works.

Following the initial tree works, but prior to any construction traffic entering the site, tree protection barriers shall be installed as per BS5837:2012 Figure 3 (a copy of which can be found in 'Appendix 6'). These barriers shall be robust and fit for purpose and shall be installed as shown on the 'Tree Protection Plan'.

Tree protection fencing notices shall be printed off in colour and laminated and shall be securely fixed to the tree protection barriers at 5m intervals, these can be found in 'Appendix 5'.

The areas protected by fencing or ground protection shall be referred to as the construction exclusion zones. The following actions shall be prohibited within the construction exclusion zones:

- Vehicular access;
- Regular pedestrian access unless on suitable ground protection;
- Storage of construction materials;
- Storage or handling of harmful chemicals;
- Any change in ground level;
- Construction activities including hard surfacing.

The barriers and notices are then to remain until such time as all external works in relation to the construction of the new development and any hard surfacing is complete. In the event that works are paused, the protection barriers may be temporarily removed until such time that works continue.

4.5 NO DIG / LOW IMPACT HARD SURFACING

Where the new hard surfacing is constructed within the root protection areas of the retained trees, hard surfacing laid over a cellular confinement system shall be used. This shall be designed so as to eliminate excavations in order to prevent direct damage to trees such as root severance and to spread the loading to minimise fibrous root death caused by ground compaction.

It should be noted that such solutions will involve an increase in levels of at least 50mm for pedestrians or 150mm for vehicular traffic.

An example of a suitable product is 'Cellweb® Tree Root Protection' which may be sourced from Geosynthetics Limited.

4.6 CONSTRUCTION ACTIVITIES

Materials storage and handling, contractor parking, site welfare activities etc shall be kept away from the root protection areas.

Provision needs to be made to avoid the storage and handling of harmful chemicals in proximity to trees. Harmful chemicals include fuels, oils, builder's sand (which has a high salt content) and cement. Cement mixing shall only occur where there is no potential for cement washings to leech into a root protection area. Provision shall also be made to prevent fuelling or the handling of cement from occurring in areas proposed for further planting.

A suitable location for site cabins, contractor parking and site facilities for operatives shall be agreed with the project arboriculturalist during a pre-commencement meeting. These facilities shall be located outside the root protection areas of retained trees (unless on retained tarmac surfaces). Provision must also be taken to prevent exhaust fumes or hot air from generators or kitchen facilities from damaging the canopies of retained trees.

4.7 UTILITIES AND SERVICES

All new above and below-ground services shall be arranged and routed to avoid the root protection areas of the retained trees. Any existing underground services etc. which are to be reused but are found to require work or renewal, shall be reinstated whilst respecting the root protection area requirements.

All machinery, materials and any operations shall be kept off the root protection areas and works shall be carried out in accordance with NJUG10 'Guidelines for the planning, installation and maintenance of utilities in proximity to trees' and BS5837: 2012.

4.8 RESTRICTED ACTIVITIES

During the course of works onsite, all potentially tree-harmful operations such as, but not restricted to: the mixing of concrete, cement, paint, stain or adhesives; the storage or handling of tools and materials; the provision of staff welfare facilities such as portable chemical toilets; or the storage of skips and construction waste – shall be restricted to areas outside the root protection areas of the retained trees. Particular care shall be taken to assess any levels and falls

across the site, and to prevent accidental run-off of potentially harmful substances into the root protection areas of the retained trees, and to neighbouring land. Specific areas for the storage and handling of materials, the mixing of products and the disposal of potentially plant-harmful substances shall be identified and specifically allocated for these operations and activities. There shall be no fires on the site whatsoever.

4.9 SUPERVISION

Arboricultural supervision will be required for the following stages of development:

- To sign off that the tree protection barriers have been installed in the correct locations and to the agreed specification.
- To review the routing of new services and to provide guidance on best practice for installation where necessary.

4.10 ARBORICULTURAL COMPLETION

Once the development is completed, the tree protective fencing shall be carefully dismantled by hand and the adjacent trees shall be visually inspected for any signs of damage related to the development. If any damage is noted, appropriate advice shall be sought.

These arboricultural details shall be referenced against Arboricultural Development Survey ADS23-1003 dated 3rd February 2023 and the Tree Protection Plan.

4.11 CONCLUSION

I am content that this development is achievable in arboricultural terms provided the above method statement is adhered to.

5 APPENDICES

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5.1 APPENDIX 1 – TREE SURVEY SCHEDULE

Survey date:		Surveyor:		Site:													Survey reference:		
03-Feb-23		Thomas Gregory		Monks Lake, Grange Road, Netley Abbey, SO31 5FF													ADS23-1003		
Tree reference number	Common Name	Height (m)	Number of Stems	73	Stem diameter 2 (cm)	Stem diameter 3 (cm)	Stem diameter 4 (cm)	Stem diameter 5 (cm)	Canopy Spread N (m)	Canopy Spread S (m)	Canopy Spread E (m)	Canopy Spread W (m)	Height of crown clearance (m)	Age class	Physiological condition	Structural condition	Category grading	Preliminary management recommendations	Notes
1	Oak	20	1	1180					13	10	12	8		3 Mature	Fair	Fair	A	Crown lift to 5m, remove major deadwood (over 50mm diameter / 0.5m length)	
2	Western red cedar	20	1	530					2	1	3	4		2 Semi-mature	Fair	Fair	C		
3	Western red cedar	20	2	550	1180				8	6	7	7		2 Mature	Fair	Fair	C		Powerline through crown
4	Holly	8	1	300					3	3	3	2		2 Semi-mature	Poor	Fair	C	Fell in order to facilitate development	
5	Lime	18	1	450					4	4	4	4		2 Early-mature	Fair	Fair	C		Offsite, stem diameter estimated
6	Sycamore	18	1	300					3	3	3	3		4 Early-mature	Fair	Fair	C		Offsite, stem diameter estimated
7	Juniper	14	3	350	300	500			8	4	6	6		3 Mature	Poor	Fair	C		Offsite, stem diameter estimated
8	Cedar	20	1	600					8	8	8	8		2 Mature	Fair	Fair	B		Offsite, stem diameter estimated
9	Lime	16	2	250	300				4	4	4	4		2 Early-mature	Fair	Fair	B		Offsite, stem diameter estimated
10	Holly	10	8	150*					3	3	3	3		2 Early-mature	Poor	Fair	C	Fell in order to facilitate development	* Average stem diameter

Tree reference number	Common Name	Height (m)	Number of Stems	Stem diameter 1 (cm)	Stem diameter 2 (cm)	Stem diameter 3 (cm)	Stem diameter 4 (cm)	Stem diameter 5 (cm)	Canopy Spread N (m)	Canopy Spread S (m)	Canopy Spread E (m)	Canopy Spread W (m)	Height of crown clearance (m)	Age class	Physiological condition	Structural condition	Category grading	Preliminary management recommendations	Notes
11	Laurel	9	2	330	340				2	1	3	4		2 Semi-mature	Poor	Poor	C	Fell in order to facilitate development	
G12	Apple	3	1	80					1	1	1	1		0 Young	Fair	Fair	C	Fell group in order to facilitate development	2no
G13	Apple	3	1	100					2	2	2	2		0 Early-mature	Fair	Fair	B	Fell part of group in order to facilitate development	7no
14	Birch	14	1	350					4	3	4	3		2 Early-mature	Fair	Fair	C		
15	Mulberry	5	1	130					2	2	2	2		0 Early-mature	Fair	Fair	B		
16	Western red cedar	22	1	1190					7	7	7	7		0 Mature	Fair	Fair	B		
17	Sycamore	14	1	430					5	5	5	5		4 Early-mature	Fair	Fair	B		
18	Beech	18	1	420					6	6	6	6		4 Early-mature	Fair	Fair	B		
19	Oak	18	1	710					10	12	10	10		4 Mature	Fair	Fair	C		
20	Ash	14	1	410					4	4	4	4		2 Semi-mature	Poor	Fair	C		

Tree reference number	Common Name	Height (m)	Number of Stems	Stem diameter 1 (cm)	Stem diameter 2 (cm)	Stem diameter 3 (cm)	Stem diameter 4 (cm)	Stem diameter 5 (cm)	Canopy Spread N (m)	Canopy Spread S (m)	Canopy Spread E (m)	Canopy Spread W (m)	Height of crown clearance (m)	Age class	Physiological condition	Structural condition	Category grading	Preliminary management recommendations	Notes
21	Ash	12	1	300					4	4	4	4		2 Early-mature	Fair	Fair	C		Offsite, stem diameter estimated
22	Western red cedar	20	1	600					4	4	4	4		0 Mature	Fair	Fair	C		Offsite, stem diameter estimated
23	Cherry	5	1	190					2	2	3	2		2 Early-mature	Fair	Fair	C	Fell in order to facilitate development	

KEY:

Height		Canopy Spread		Stem Diameter	
Overall height estimated in metres		Canopy spread measured in metres (Cardinal Points)		Measured to the nearest 10mm at 1.5m above ground level unless otherwise stated (*average stem diameter)	
Age Class		Physiological Condition		Structural Condition	
Young	tree within first quarter of average life expectancy	Good	no health problems	Good	no structural defects
Early-Mature	tree within second quarter of average life expectancy	Fair	symptoms of health problems that may be easily remedied	Fair	structural defects that may be easily remedied
Semi-Mature	tree within third quarter of average life expectancy	Poor	symptoms of health problems that cannot easily be remedied	Poor	structural defects that cannot realistically be remedied
Mature	tree within final quarter of average life expectancy	Dead	dead		
Over-Mature	tree beyond average life expectancy				

5.2 APPENDIX 2 – TREE CONSTRAINTS PLAN

Surface





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Site: Monks Lake, Grange Road, Netley	1:250 at A2
Drawing Title: Tree Constraints Plan	February 2023

Key:

● Category A

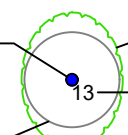
● Category B

● Category C

● Category U

Category

Root Protection Area



Crown Spread

Tree Number

5.3 APPENDIX 3 – ARBORICULTURAL IMPACT ASSESSMENT PLAN





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Site: Monks Lake, Grange Road, Netley	1:250 at A2
Drawing Title: Arboricultural Impact Assessment	Rev B, March 2023

Key:

Category A

Category B

Category C

Category U

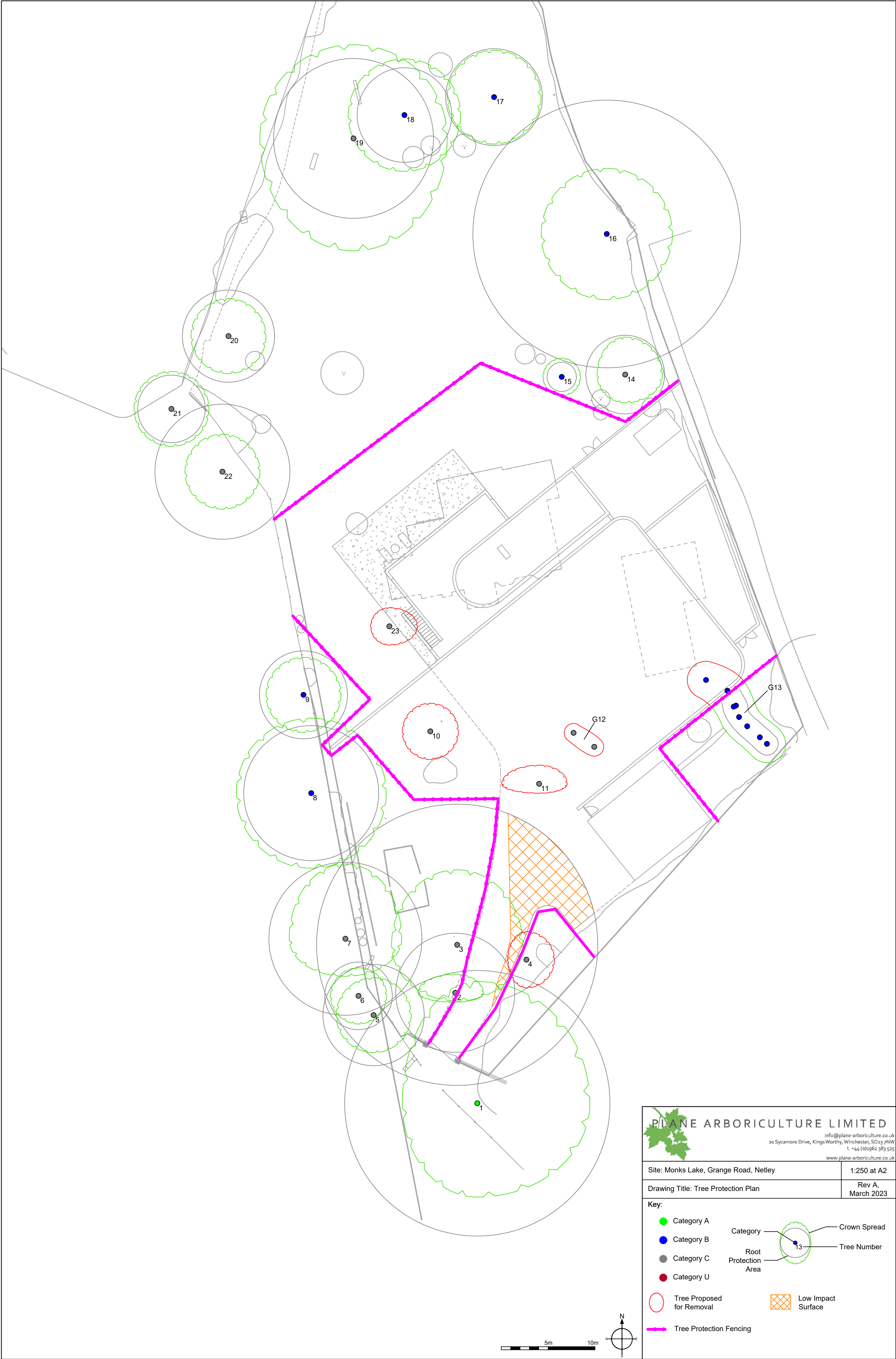
Category

Root Protection Area

Crown Spread

Tree Number

5.4 APPENDIX 4 – TREE PROTECTION PLAN





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Site: Monks Lake, Grange Road, Netley	1:250 at A2
Drawing Title: Tree Protection Plan	Rev A, March 2023

Key:

● Category A

● Category B

● Category C

● Category U

○ Tree Proposed for Removal

Tree Protection Fencing

Category

Root Protection Area

Crown Spread

Tree Number

Low Impact Surface

5.5 APPENDIX 5 – TREE PROTECTION FENCING NOTICE A4

CONSTRUCTION EXCLUSION ZONE

NO ACCESS

**NO STORAGE OR OPERATIONS
WITHIN FENCED OFF AREAS**

NO DIGGING OR TRENCHING

NO STORAGE OF PLANT OR MATERIALS

NO VEHICLE ACCESS

NO FIRE LIGHTING

NO CHEMICAL HANDLING



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5.6 APPENDIX 6 – ABOVE-GROUND STABILIZING SYSTEMS

Figure 3 Examples of above-ground stabilizing systems

