



NIGHTINGALE HOUSE HOSPICE CARPARK; ARBORICULTURAL METHOD STATEMENT

**Report Ref: RTA.51.002
September 2021**

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**Nightingale House Hospice Carpark, Wrexham
Arboricultural Method Statement
Report Reference: RTA.51.002
Version 2.0
September 2021**

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**NIGHTINGALE HOUSE HOSPICE CARPARK, WREXHAM
ARBORICULTURAL METHOD STATEMENT**

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1.0 INTRODUCTION

- 1.1 Enfys Ecology has been commissioned by TACP Architects produce Arboricultural Method Statement (AMS) for the construction of a new car parking area in proximity to existing trees at Nightingale House Hospice in Wrexham. This AMS report is provided in order to satisfy condition 4 of the planning permission granted on 26/01/2021 (Ref: WRR P/2020/073).
- 1.2 An arboricultural survey was carried out on the 25th of September 2020 by means of inspection from ground level by Rob Taylor FdSc MSc, a qualified Arboricultural Consultant. Trees were assessed in accordance with *BS 5837:2012 Trees in Relation to design, demolition and construction – Recommendations*.
- 1.3 This report should be considered in conjunction with Nightingale House Hospice Arboricultural Impact Assessment (Ref: RTA.12.001) produced in October 2020 to accompany the original planning application.
- 1.4 The instructions provided in this AMS are given to ensure the protection and healthy retention of retained trees. To ensure measures set in this document are made clear to all operatives involved, it must be made available to contractors prior to and during any demolition/construction activity.
- 1.5 This report includes the following:
- specifications and installation of temporary ground protection
 - removal of existing hard standing
 - excavations and the requirement for specialized trenchless techniques
 - installation of new hard surfacing – materials, design constraints and implications for levels
 - auditable/audited system of arboricultural site monitoring, including a schedule of specific site events requiring input or supervision

2.0 THE SITE AND SURROUNDINGS

- 2.1 The site lies off Grove Road, to the immediate north of Wrexham, approximately 0.5km north of Wrexham town centre, North Wales. The immediately surrounding area is characterised by buildings and car parks associated with health centres and care facilities.
- 2.2 A mowed lawn area occupies the majority of the site which is flanked to the south and east by mature trees. The southern facades of Nightingale House Hospice lie on the southern boundary and Coed Celyn care centres stands on the western side,
- 2.3 The survey area is mainly flat with minor undulations along the eastern and southern boundaries.
- 2.4 Weather conditions during the survey were dry and sunny.

Development Proposals

- 2.5 The proposed development includes the construction of a new 1000m² car park area. A gated vehicular entrance is proposed in the southeast corner of the new car park.
- 2.6 New pedestrian access from the car park to Nightingale House Hospice with steps, a ramp and associated retaining walls is proposed in the north of the site.
- 2.7 Detail of the proposals is shown on Drawing 2 and is based on the proposed site plan (Ref: 19071-Car Park Plan reduced version) supplied by TACP Architects.

3.0 STATUTORY PROTECTION

Tree Preservation Orders & Conservation Area Designations

- 3.1 Where it is considered expedient to do so, local authorities reserve the right to create Tree Preservation Orders (TPO) to protect the amenity value conferred to a location by a tree or group of trees. Where a TPO is in force, lopping, topping, felling, uprooting or wilful damage caused to a tree is prohibited and such actions may be prosecuted and incur an unlimited fine. Works to TPO protected trees must only be undertaken with the written consent of the local authority.
- 3.2 Trees also have a significant role in complimenting and enhancing the character, history and architectural form of those areas which have been designated with Conservation Area status. Prior to undertaking any tree work within a Conservation Area, there is a legal obligation to submit a six week 'Notice of Intent' to the LPA in accordance with section 211 of the Town & Country Planning Act 1990.

- 3.3 Consultation with Wrexham County Borough Council confirmed that at the time of writing, the site lies within Grosvenor Road Conservation Area. No trees on or immediately adjacent to the site were subject to Tree Preservation Orders.

4.0 IMPACT ON TREES

- 4.1 Five individual trees and two small groups of trees must be removed to facilitate the development. They stand within or are too close to the proposed car park and entrance driveway to be retained in a healthy and stable state. A number of items of tree surgery work are required to facilitate access to the proposed car park, improve visibility and prevent future encroachment. These are discussed in Section 5.
- 4.2 As per BS5837, a Root Protection Area (RPA) has been calculated for each tree to be retained and represents the minimum area around each tree that should be left as undisturbed as possible. On this site, a number of features have been identified that are likely to impede root growth. These are areas of predominantly hard surfacing, pathways and underground utility infrastructure. The RPAs of trees was offset accordingly to take potential barriers to root growth into account.
- 4.3 A number of construction activities are proposed within the RPAs of retained trees including the removal of existing surfaces, installation of new surfacing and regrading of land. Where this exceeds 20% of RPAs, conventional surfacing installation based on excavating and compacting a supporting sub-base is unacceptable due to the likelihood of killing roots, compacting soil structure, and impeding water/gas exchange through the soil. On this site, car parking bays in the south of the proposed car park will require sensitive construction. Due to likely restrictions on root growth in an easterly direction owing to underground services, it is anticipated that new surfacing and regrading for the entrance driveway will not exceed 20% of the RPAs of retained trees and the new curb alignment will not pass beyond the location of the existing underground duct. Strict protection of the remaining RPA will be vital during construction.
- 4.4 Important elements of an effective design include protecting roots and the rooting environment during installation, a load spreading capability to prevent localised compaction, and providing adequate permeability for water and gasses to support living roots.

5.0 ARBORICULTURAL METHOD STATEMENT

- 5.1 As per *BS 5837:2012*, the purpose of this method statement is to detail what actions need to be taken to prevent the proposed installation from causing any unacceptable damage to the trees to be retained adjacent to the site.
- 5.2 Unless otherwise agreed with the Local Planning Authority (LPA), the following actions are to be taken, in the order specified in the Sequence of Works at Table 4.
- 5.3 An arboricultural consultant will be appointed to oversee all aspects of tree care and protection for the duration of the construction works. The arboricultural consultant will liaise with the project manager to ensure that there are no conflicts between the construction method statements and this arboricultural method statement.
- 5.4 In addition to site visits during the works described below, it is anticipated that during the first month of development, weekly inspections by the project arboriculturist will be necessary to ensure that the contents of the AMS are followed and no unnecessary damage to retained trees has occurred.
- 5.5 Brief site visit reports will be drafted after visit which will describe findings and discuss any new or emerging issues.

Table 4: Sequence of Works (relevant to protection of existing trees)

Order	Works	Detail at Section	Arboricultural supervision required?
1	Tree removal and pruning	5.6-5.8 Drawing 1	No
2	Installation of tree protective fencing	5.10-5.16	Yes
3	Removal of existing pathway and utilities	5.19-5.23	Yes
4	Removal of existing soft surfaces	5.19	Yes
5	Use of ground protection during entrance driveway construction	5.17-5.18	Yes
6	Installation of new surfaces	5.24-5.29 Drawing 2	Yes
7	Post construction tree care and monitoring	5.30	Yes

Phase 1: Tree work

- 5.6 Five individual trees and two small groups of trees need to be removed to facilitate the development proposals. Crown pruning will also be necessary to facilitate the proposals. These should be carried out prior to the commencement of the car park construction works.
- 5.7 All tree works will be carried out in accordance with the recommendations given in the current *BS 3998:1989 Recommendations for Tree Work* or in accordance with current best practice.

- 5.8 Drawing D.RTA.51.02 and the table below provide detail of the necessary tree work operations.

Feature Reference	Tree Work Description
T3	Crown raise to height of 4m on path side
T10	Crown raise to achieve 6m clearance over entrance pathway
T11	Reduce large lower limb overhanging proposed car park entrance to achieve 6m height clearance
T12	Remove epicormic stem sprouting to height of 4m
T13	Crown raise to height of 5m on northern side
G3	Crown raise to height of 4m.

- 5.9 In addition to the above work items, it is recommended that hedge H1 (see Drawing 1) is cut a height of 1m. This is to improve future maintenance and visibility within the site and not to directly facilitate the development proposals.

Phase 2: Installation of tree protective fencing

- 5.10 Temporary protective barrier fencing will be required to demarcate a **Construction Exclusion Zone (CEZ)** around retained trees. This must be put in place prior to the commencement of any development works, including bringing machinery or materials onto site and the erection of site huts.
- 5.11 Protective fencing alignment is shown on Drawing 2.
- 5.12 No materials, vehicles, plant or personnel will be permitted into the CEZ at any time without the prior consent of the arboricultural consultant.
- 5.13 Any liquid materials spilled on site will be immediately cleared up and removed from the site. If liquid fuel or cement products are spilled within 2m of the CEZ, the contractor will report the incident to the arboricultural consultant immediately.
- 5.14 The fencing must be fixed into the ground to withstand accidental impact from machinery and to ensure that a sufficient protective area is maintained. A weatherproof notice stating 'Construction Exclusion Zone – Keep Out' must be fixed to each fencing panel. Details of recommended protective fencing are shown in Appendix 3.
- 5.15 Any alteration to the fencing alignment to allow for approved activities will be made in agreement with the project Arboriculturist.

- 5.16 The protective fencing must not be removed until the physical construction phase has been completed and all vehicles have been removed from site, to the satisfaction of the council's Arboricultural Officer.

Phase 4: Installation of temporary ground protection

- 5.17 Construction access may be required within the RPAs of trees in the southeast corner of the site. This may be facilitated by a set-back in the alignment of the tree protection barrier. Temporary ground protection should be installed as part of the implementation of physical tree protection measures prior to work within this area.
- 5.18 Ground protection must be fit for the purpose of supporting any machinery entering or using the site without being distorted or causing compaction of underlying soil.

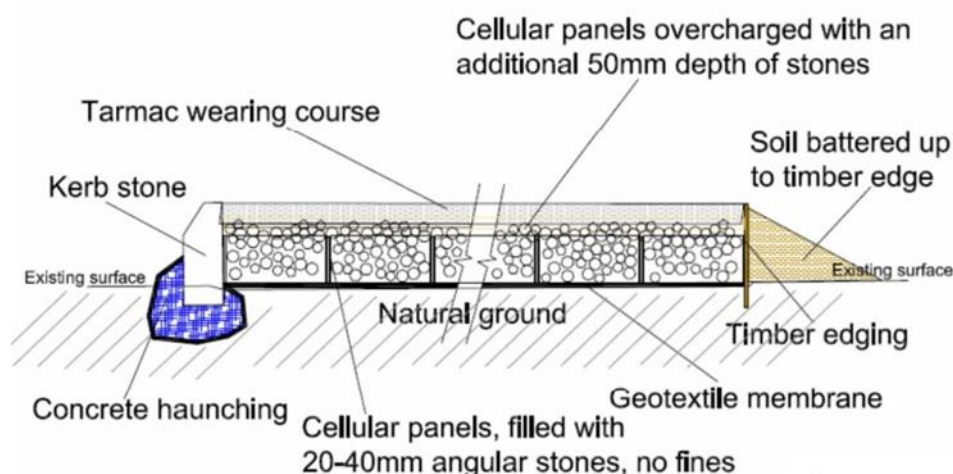
Phase 5: Removal of existing surfaces and regrading

- 5.19 When working within the RPAs of retained trees, any removal of the existing layer of turf must be carried out using hand tools only. Excavation into the underlying soil should not take place. Tree roots and grass roots rarely occupy the same soil volume at the top of the soil profile, so the removal of an established turf layer up to 5cm from the surface is unlikely to be damaging to trees.
- 5.20 The project arboriculturist should be present during the removal of the existing pathway and underground surfaces beneath (see Drawing 2). Careful removal of underground utility structures will be needed. The use of hand tools is preferable to remove existing surfaces and structures. However, should plant machinery be required, a long reach should be used which will allow the machine to sit outside the RPA.
- 5.21 Tree roots of less than 25mm diameter that are exposed will be pruned and removed but tree roots of diameter greater than 25mm must be retained undamaged wherever possible. Roots must be cut cleanly, to minimise the exposed root surface. Root pruning should be carried out under the supervision of the Arboricultural Consultant or the Local Authority Tree Officer to ensure that only roots necessary to facilitate the development will be removed and the long-term well-being of retained trees is maintained.
- 5.22 Exposed roots will be wrapped in dry, clean Hessian sacking to prevent desiccation and to protect from rapid temperature changes. In warmer weather, the sacking should be kept moist by regular watering. Sacking should be removed before backfilling.
- 5.23 Backfilling of any excavation should be carried out by hand to avoid direct root damage by excessive compaction and should include, where possible, the replacement of inert granular material mixed with sharp sand (not builder's sand) around retained roots.

- 5.24 Soil is to be battered up to the new driveway edge, the outer limits of which will not impede within 5 meters of tree T10 and 6 meters of T11. Compaction of underlying sub-base will not take place in these areas.

Phase 6: Installation of new parking bays within RPAs

- 5.25 Sub-base to be used for parking spaces within the RPA of retained trees will use a three-dimensional cellular confinement system that will avoid soil compaction. The area subject to this treatment is shown on Drawing D.RTA.51.03.
- 5.26 Geotextile matting will be laid across the full width of the driveway and parking spaces or other hard surfaces. This will prevent the intrusion of roots into the sub-base whilst still allowing nutrients and gaseous exchange.
- 5.27 The cellular confinement system will be laid over the geotextile matting and fixed into place with metal pins. Washed angular crushed stone (no fines) will be carefully pushed into the cellular confinement system to form an aggregate sub-base. No compaction is required of the infill. Do not use a whacker plate or other means of compaction. Encourage settlement of the stone with the use of a light roller. Further geotextile matting will then be laid across the full width of the sub-base.
- 5.28 Surface treatment may then be installed and will take the form of permeable tarmac.
- 5.29 Edge retention in RPAs will be designed to avoid any significant excavation into existing soil levels, with several approaches that are fit for this purpose. For block pavements, the use of pre-formed edging secured by metal pins is effective and can be reinforced by concrete supports if there is no excavation into the soil. Railway sleepers pinned in place or wooden boards offer alternative options, depending on the expected loading of the surfacing. If the edge retention needs to be battered down to lower surrounding ground levels, a permeable soil fill will be used, as agreed with the supervising arboriculturist.
- 5.30 A cross section diagram of a cellular confinement sub-base design is provided in Figure 1, below.



Phase 7: Post construction tree care and monitoring

- 5.31 Hazard recommendations are based on observations at the time of survey. Trees are dynamic living organisms whose structure is constantly changing. Even those in good condition can suffer from damage or stress. Following site development, regular (annual or biennial) inspections of all retained trees should be undertaken by a qualified Arboricultural Consultant.

6.0 REPLACEMENT TREE PLANTING

- 6.1 5 individual trees and 2 small tree groups must be removed to facilitate the development proposals. Mitigation for their loss and associated habitat will take the form of replacement tree planting.
- 6.2 Suitable locations for replacement tree planting are provided on Drawing 2.
- 6.3 It is proposed that 60m linear meters on new hedgerow will also be established. This is also shown on Drawing 1. It is recommended that beech (*Fagus sylvatica*) is used for new hedgerows. Beech is a hardy, non-thorny, native species that copes well with hedging and often retained brown leaf cover throughout winter thus providing a perpetual screen. Low hedgerows have also been shown to be an effective filter of vehicle derived particulate matter.
- 6.4 Within the banking area to the east of the proposed car park area, there is sufficient space to establish five trees of medium to large mature size which may provide substantial long-term benefits to the area. Recommended species include common lime (*Tilia x europaea*), sweet chestnut (*Castanea sativa*), silver birch (*Betula pendula*) and black locust (*Robinia pseudoacacia*).

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- 6.5 Four locations at the proposed carpark peripheries have been identified which are suitable for the establishment of ornamental trees of small to medium mature size. Recommended species for these locations include fastigate varieties of field maple (*Acer campestre*) and flowering cherry (*Prunus sp.*).
- 6.6 Upon reaching maturity, the above planting scheme would result in a net increase in tree canopy cover, quality and species diversity.

APPENDIX 1

ARBORICULTURAL SURVEY DATA SHEETS

No.	Species	Age class	Height (m)	DBH	FSB	N	S	E	W	Comments	SULE	Category
T1	Sycamore (<i>Acer pseudoplatanus</i>)	MA	13	470	2	4	3.5	7.5	2	Vigorous epicormic growth on main stem. Asymmetric crown due to previously removed tree to the south.	Long	B,1,2
T2	Sycamore (<i>Acer pseudoplatanus</i>)	M	12	720	1	6	2	3	7	Asymmetric crown due to proximity to neighbouring trees. Reasonable vitality. Stems bifurcate at 1m.	Long	B,1,2
T3	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	MA	6	420	1	1.5	2	2.5	1	Heavily suppressed and asymmetric crown due to position beneath T2. Reasonable vitality.	Medium	C,2
T4	Sycamore (<i>Acer pseudoplatanus</i>)	M	13	990	3	3.5	3	6.5	4	Existing tag number 03969. Stems trifurcate at 1.2m. Included bark at stem unions. Good vitality. Crown asymmetric due to previously removed tree to the north.	Long	B1,2
T5	Sycamore (<i>Acer pseudoplatanus</i>)	M	13	730	3	0	6	6.5	5.5	Stems bifurcate at 1.2m. Included bark at unions. Exposed surface roots with minor mower damage. Crown weighted to the south due to proximity to T4.	Long	B1,2
T6	Portugal laurel (<i>Prunus lucitanica</i>)	MA	1.5	210	0.5	1.5	1.5	1.5	1.5	Multi-stemmed, vigorous shrub.	Long	C,2
T7	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	MA	9	570	0.5	2.5	3	2.5	3.5	Dense, vigorous crown. Slightly asymmetric due to proximity to T5. No significant visible defects.	Long	C,2
T8	Sycamore (<i>Acer pseudoplatanus</i>)	M	13	810	3	5	5	6.5	3	Existing tag number 03964. Stems trifurcate at 2m. Included bark at unions. Crown density sparse. Moderate dead wood throughout crown.	Medium	C,1,2

No.	Species	Age class	Height (m)	DBH	FSB	N	S	E	W	Comments	SULE	Category
T9	Sycamore (<i>Acer pseudoplatanus</i>)	MA	10	340	3	1.5	4.5	4.5	3	Tree suppressed beneath T8. Dense and vigorous crown. No significant visible defects.	Medium	B,1,2
T10	Sycamore (<i>Acer pseudoplatanus</i>)	M	16	580	5	6	2	8.5	3	Existing tag number 03961. Asymmetric crown weighted to the north due to proximity to T11. Notably curved stem growth. Good vitality. No significant visible defects.	Long	B,2
T11	Horse chestnut (<i>Aesculus hippocastanum</i>)	M	16	1080	4	6.5	6	8.5	6.5	Existing tag number 03956. Broad, spreading and dominant tree. Good balanced form and vitality. Stem in good condition. Minor cavity development at pruning wounds.	Long	A,1,2
T12	Common lime (<i>Tilia x europeae</i>)	M	15	680	2	2	4.5	3.5	3	Existing tag number 03960. Slightly asymmetric crown due to T11. Vigorous epicormic growth on main stem- typical of species. Moderate dead wood above parking areas.	Long	B,1,2
T13	London plane (<i>Platanus x hispanica</i>)	M	15	1150	4	9	7.5	4	7	Densely ivy clad restricting full survey. Asymmetric crown weighted to the west due to T11. Good vitality. Moderate basal decay. Long, over-extended limbs.	Long	B,2
T14	Silver birch (<i>Betula pendula</i>)	MA	13	490	3	4.5	2.5	2.5	3	Existing tag number 03966. Crown slightly weighted due to neighbouring trees. Good vitality. No significant visible defects.	Long	B1,2
T15	Beech (<i>Fagus sylvatica</i>)	M	16	950	2	5	7.5	3	3	Dense ivy and vegetation restricting thorough survey. Stem in good condition. Dense, vigorous crown.	Long	B,1,2

No.	Species	Age class	Height (m)	DBH	FSB	N	S	E	W	Comments	SULE	Category
T16	Beech (<i>Fagus sylvatica</i>)	M	16	770	2	5	5	5	5	Existing stem number 03953. Iron fence in stem. Vigorous crown. Dense ivy restricting thorough survey.	Long	B,1,2
T17	Silver birch (<i>Betula pendula</i>)	MA	13	480	3	3	3	3	4.5	Good, open grown form. Good vitality. No significant visible defects.	Long	B,1,2
T18	Hawthorn (<i>Crataegus monogyna</i>)	MA	4	240	1.5	2	3	3	2.5	Ornamental garden tree. Good form and vitality. No significant visible defects.	Long	B,1,2
T19	Sessile oak (<i>Quercus petraea</i>)	M	13	640	6	10	0	8	4	Tree heavily weighted to the north. No sign of root plate lifting. Dense ivy restricting thorough survey. Reasonable vitality.	Medium	B,2
T20	Beech (<i>Fagus sylvatica</i>)	M	16	1070	4	6.5	6	4	4	Dense ivy restricting thorough survey. Good balanced form and vigorous, dense crown.	Long	B,2
T21	Sycamore (<i>Acer pseudoplatanus</i>)	MA	8	390	4	0	6.5	5	6	Growing on raised area and dislodging retaining dry stone wall. Crown weighted to the south due to proximity to T22. Stems bifurcate at base. Good vitality.	Medium	B,1
T22	Sycamore (<i>Acer pseudoplatanus</i>)	M	12	910	4	6	5	5	7	Good balanced open grown form. Spreading, multi-stemmed crown at 3m. Good vitality. Paladin fence across stem base. No significant visible defects.	Long	A,1,2
G1	Juniper (<i>Juniperus communis</i>)	MA	To 5	150 and 310						Suppressed due to proximity to neighbouring sycamores. Moderate crown die back. Exposed surface roots on embankment.	Medium	C,2

No.	Species	Age class	Height (m)	DBH	FSB	N	S	E	W	Comments	SULE	Category
G2	Holly (<i>Ilex aquifolium</i>); Laurel (<i>Prunus laurocerasus</i>)	Y-MA	To 5	To 140						Dense, vigorous ornamental shrubs.	Medium	C,2
G3	Common lime (<i>Tilia x europeae</i>)	MA	To 7	300; 150; 180						3 trees beside car parking area. Minor basal epicormic growth at old pruning wound. Overhanging parking bays. Good vitality. No significant visible defects.	Long	B,1,2
G4	Sycamore; beech	M	To 17	510; 540; 590						Dense ivy restricting thorough survey. Tall and slender trees due to close spacing. Iron fence occluded within main stems. Overhanging parking bays. No significant visible defects. Reasonable vitality	Long	B,1,2
G5	Elder (<i>Sambucus nigra</i>); laurel	MA	To 3	To 260						Dense vigorous ornamental shrubs. Laurel regrowth from dead stump.	Medium	C,1,2

APPENDIX 2

SURVEY METHODOLOGY

The survey of trees is conducted from ground level only. The nature of the soils on site is not assessed. Trees are dynamic living organisms with a constantly changing structure; even trees in good condition can suffer from damage or stress. The information recorded is presented as being correct at the time of survey. The following features of each tree, group of trees or wood may have been recorded in the Arboricultural Survey Data Sheets at Appendix 1.

Species	Common name and scientific name is given.
Height	Top height of tree recorded in metres.
Stem Diameter	For single-stemmed trees the measurement is taken at 1.5 metres above ground level and recorded in millimetres. For multi-stemmed trees an average all stems measured at 1.5m above ground level is used. For tree groups a range from minimum to maximum diameters is provided based on measurements taken using one of the aforementioned methods.
Crown Spread	The N, S, E and W branch spreads are recorded in metres to provide a representative crown shape.
First Significant Branch (FSB)	Crown clearance above ground level recorded in metres.
Age	Young Middle Age Mature Trees that can reasonably be relocated or replaced like for like, without undue cost; Trees in the established growth stage of their life with the potential to continue increasing in size; Trees that have reached their ultimate size, given their location and surroundings;
Comments	A brief evaluation and description of the tree with comments on form, vitality, health and any significant defects or symptoms of ill-health.

BS 5837 Tree Quality Assessment

The tree quality assessment is based on the Cascade Chart from of BS 5837:2012 (See below). Four categories (A, B, C and U) are used to denote tree quality (A= High, B = Moderate, C = Low, U= Unsuitable for retention). Subcategories (1-3) denote the specific function value of the trees and the reasoning behind the allocation of a specific category (the subcategories may be used in combination but do not accumulate collective weight).

Root Protection Area (RPA)

RPA is allocated to ensure that a sufficient area is left undisturbed during development. It is provided as an area (m²) and as the radius of a circle (m) typically plotted from the centre of the stem. The RPA is calculated using a mathematical equation included in BS 5837:2012 (Section 4.6 and Table D.1) and is based on a trees stem diameter. In some cases the RPA may need to be adapted to best reflect the likely area and position of roots required to ensure survival; this may be based on criteria such as the tree's condition, species, crown spread and any barriers to growth. Any alteration must be justifiable but is made at the Arboricultural Consultants discretion.

Recommendations

Recommendations for arboricultural works, etc. are based on the **current** land use, and take into account the tree or group attributes without bias to the proposed development.

Safe Useful Life Expectancy (SULE)

An estimation of the life expectancy as healthy functioning tree. This will be influenced by species and the condition of the tree at the time of survey.

Long > 40 years
Medium 20 – 40 years
Short less than 20 years

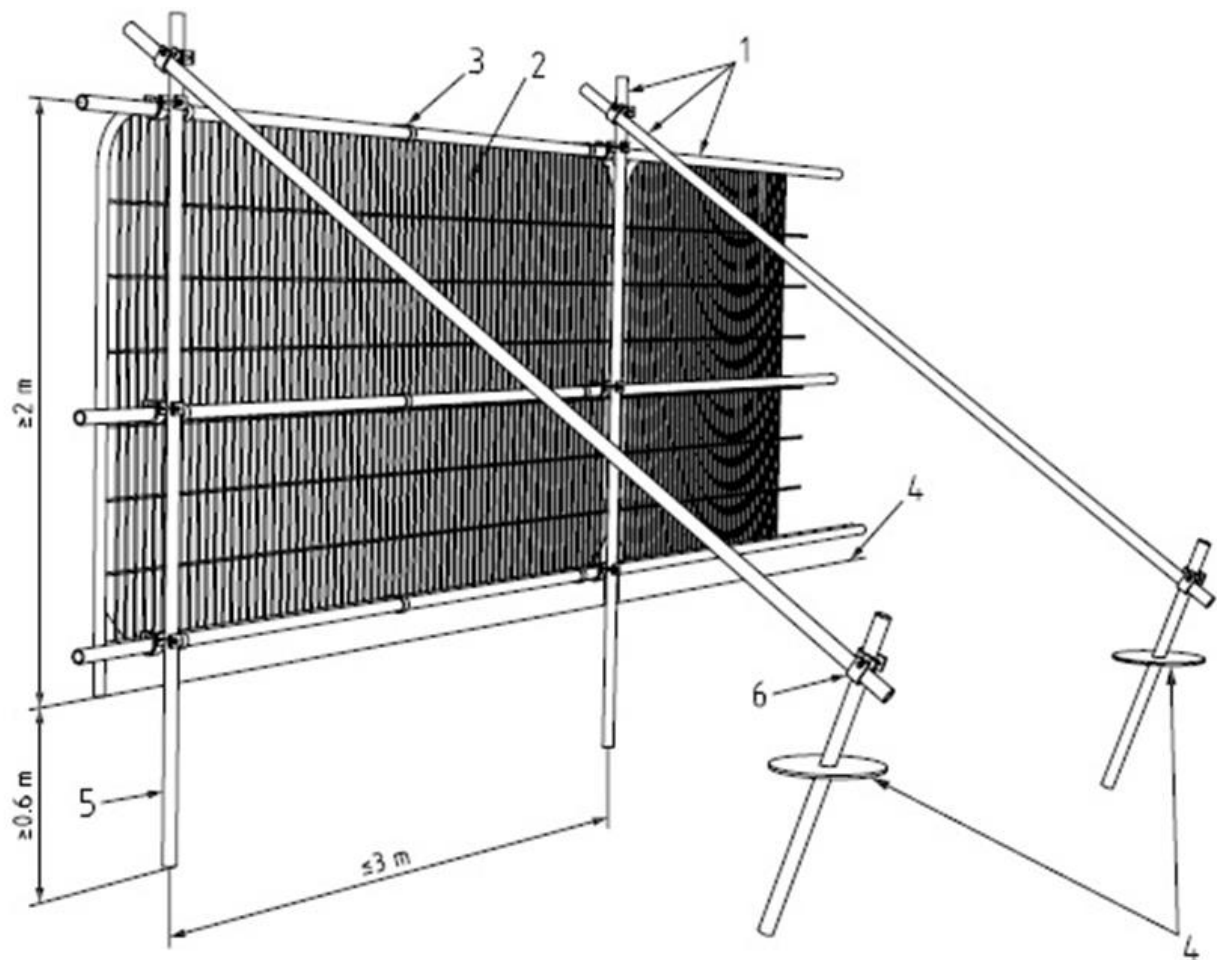
Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where 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 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 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 <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			See Table 2
	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 dominant 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)	See Table 2
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 remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for 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	See Table 2
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 150 mm	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 benefits	Trees with no material conservation or other cultural value	See Table 2

British Standards Institute (2012) BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations.*

APPENDIX 3

EXAMPLE OF TREE PROTECTIVE FENCING

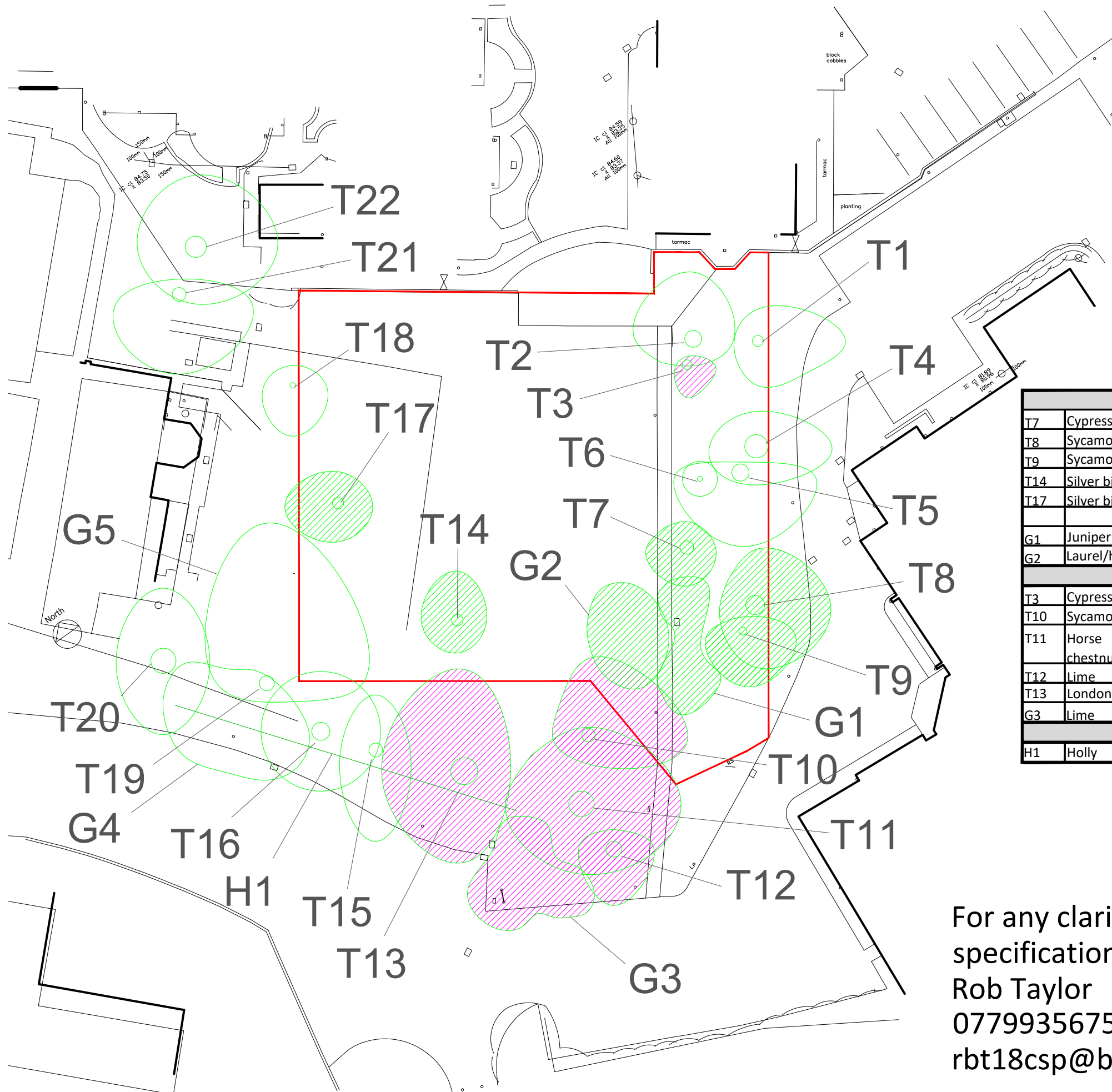


Key

- 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

DRAWING 1

TREE WORK SCHEDULE



KEY

T1

Individual trees

G1

Groups of trees

Trees to be removed

Trees to be pruned

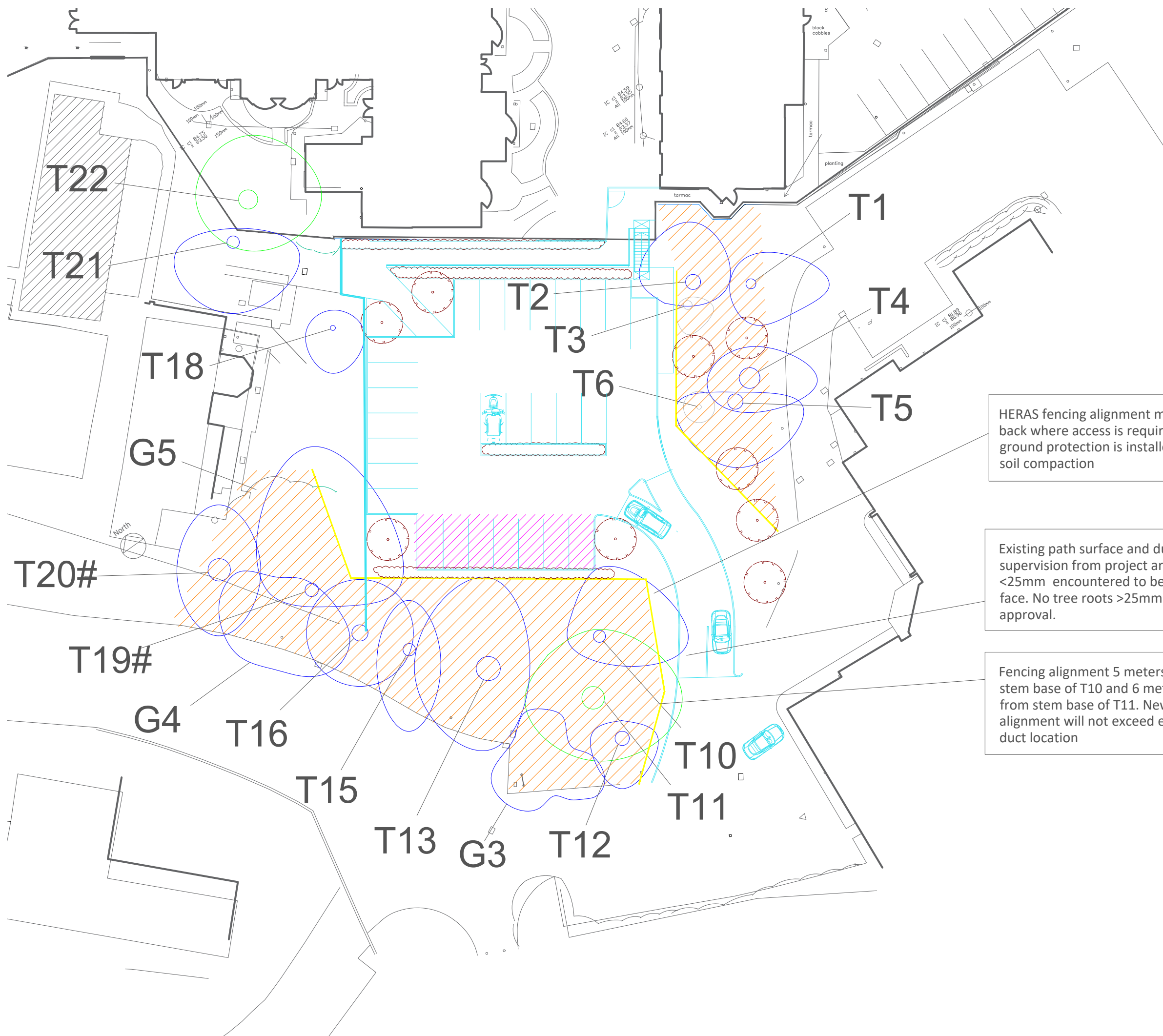
Trees to be removed to facilitate development		
T7	Cypress	
T8	Sycamore	
T9	Sycamore	
T14	Silver birch	
T17	Silver birch	
G1	Juniper	
G2	Laurel/holly	
Trees to be pruned to facilitate development		
T3	Cypress	Crown raise to height of 4m on path side
T10	Sycamore	Crown raise to achieve 6m height clearance over entrance pathway
T11	Horse chestnut	Reduce large lower limb to achieve 6m height clearance over entrance pathway
T12	Lime	Remove epicormic stem sprouting to height of 4m
T13	London Plane	Crown raise to height of 5m on northern side
G3	Lime	Crown raise by 4m
Hedgework (recomendation only - not to facilitate development)		
H1	Holly	Reduce to 1m height

For any clarification on specifications please contact:
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Amendments			
Rev	Date	Description	
		Enfys Ecology Llys Garth Garth Road Bangor LL57 2RT	
Project Nightingale House Hospice			
Drawing Title Tree Work Schedule			
Drawn by	Drawing number	Scale	Date
RNT	D.RTA.51.02	1:500 @ A3	15/09/21

DRAWING 2

TREE PROTECTION PLAN



KEY

T1 Individual trees

G1 Groups of trees

Design proposal

Construction Exclusion Zone

Use of permeable tarmac and cellular confinement sub-base
(refer to report RTA51.02)

Mitigation tree/hedge planting

Tree Protective Fencing

Tree Quality Categorisation

Category A trees/groups

Category B trees/groups

Category C trees/groups

Note: Categorisation based on BS5837:2012
This drawing should be read in conjunction with the respective Arboricultural Data Sheets

HERAS fencing alignment may be temporarily moved back where access is required provided suitable ground protection is installed to prevent underlying soil compaction

Existing path surface and duct to be removed with supervision from project arboriculturist. Any tree roots <25mm encountered to be cleanly cut back to trench face. No tree roots >25mm to be cut without prior approval.

Fencing alignment 5 meters from stem base of T10 and 6 meters from stem base of T11. New curb alignment will not exceed existing duct location

Amendments			
Rev	Date	Description	
		Enfys Ecology Llys Garth Garth Road Bangor LL57 2RT	
Project Nightingale House Hospice			
Drawing Title Tree Protection Plan			
Drawn by	Drawing number	Scale	Date
RNT	D.RTA.51.04	1:500 @ A3	18/09/21