Arboricultural Impact Assessment

Land at
Spire Yale Hospital
Croesnewedd Road
Wrexham

Ref:
AIA/SYH/11/16

Date:
1st December 2016

Commissioned by:
Mr K. O Hanlon
on behalf of
Lawray Architects LTD

Prepared by
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Arboricultural Impact Assessment

Spire Yale Hospital

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This Arboricultural Impact Assessment has been prepared in accordance with the protocols, standards and procedures set out in BS 5837: 2012 'Trees in relation to design, demolition and construction'.

Summary

Planning permission is being sought to provide extensions to the existing hospital building along with additional car parking and a new access.

There are a number of trees and shrubs on and adjacent to the site and an arboricultural assessment of the site has been undertaken in accordance with the procedures and protocols set out in BS 5837: 2012. This assessment has identified and recorded 13 individual trees, 5 groups of trees and 1 hedgerow, which are categorised as 3 cat. A (high value) 5 cat. B (moderate value) 8 cat C (low value) and 1 cat. U (unsuitable for long term retention).

The layout will require the removal of six individual trees (T1 – T6), two category B and four category C, a category C group (G9) and part of two category C groups (G11 & G12) as well as the category U group (G10). In the main the trees for removal are not particularly significant specimens in terms of their public amenity value, being either of low quality or relatively young and of small stature. It is accepted that there will be some level of impact to the amenity of the area, however this will be mitigated through significant new tree planting on the site.

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Instruction

1.1 Shields Arboricultural Consultancy received instructions from Mr K. O Hanlon on behalf of Lawray Ltd, to undertake an Arboricultural Impact Assessment at the above location. The client or their agents may copy and distribute this report as required for the purpose of applying for planning permission for or preparing any documents or plans for this or future applications at this site.

1.2 Planning permission is being sought to provide extensions to the building and additional car parking along with a new vehicular access.

Scope & Limitations

2.1 The purpose of the report is to assess the environmental and amenity values of all trees on or adjacent to the area affected by the proposed development. The report will assess the long-term contribution that the trees can make to the area and the arboricultural implications of retaining them and seek to find a satisfactory juxtaposition between the trees and the new development. The report will assess the potential impact that may arise as a result of the proposed construction works and make recommendations for protecting trees, hedges and shrubs where appropriate

2.2 The report is prepared in accordance with the recommendations of the British Standard Document BS 5837: 2012 'Trees in Relation to Construction'.

2.3 This report is not an ecological assessment and does not identify habitats or constitute a protected species survey.

Statutory Controls & Obligations

3.1 Forestry Act; the felling of trees is controlled by the Forestry Act, which requires that a felling licence is obtained prior to cutting down any trees. The Forestry Act does not apply to the felling of trees growing within an orchard, private garden, churchyard or public open space. The Forestry Commission has the responsibility for enforcing the Forestry Act.

3.2 Tree Preservation Orders & Conservation Areas; Local Authorities have specific powers under the Town & Country Planning Act 1990 as amended, to protect trees through the use of Tree Preservation Orders. Where trees are protected under such orders it is a criminal offence (subject to any exemptions for which provision may be made by the act or order) to undertake, cause or permit the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of trees except with the consent of the local planning authority. Similar controls apply to all trees growing within a designated Conservation Area.

3.3 Bats, wild birds and other protected species; The Wildlife & Countryside Act & the Conservation (Natural Habitats & C.) Regulations make it an offence to disturb or destroy bats and bat roosts and wild birds and their nests. Other species of plant and animal are also protected. These creatures often inhabit trees and

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sufficient care must be taken to ensure they are not affected during forestry and arboricultural works.

Site description

4.1 The Spire Yale Hospital is situated in Wrexham Technology Park, adjacent to the Wrexham Maelor Hospital Complex on the outskirts of the town. The site comprise staff and visitor car parking along with the hospital buildings and is accessed from the Croesnewedd Road. The site extends to approximately 1ha and is generally level, although the landscape area between the site and the adjacent road is slightly elevated.

4.2 There are a number of trees on the site, mainly early mature specimens planted as part of the original landscaping along with a significant avenue of trees on third party land adjacent to the north boundary.

Soils

4.3 Most the site is occupied by the existing building or is under hard standing. Where soft landscape is present, soils appear to be free draining. Geological maps indicate a glaciofluvial drift over coal measures.

*NB. This soil assessment is undertaken in situ using visual and manual techniques and is **only** for the purpose of establishing the influence of site soils on tree growth. The assessment **must not** be relied upon to inform any engineering decisions.*

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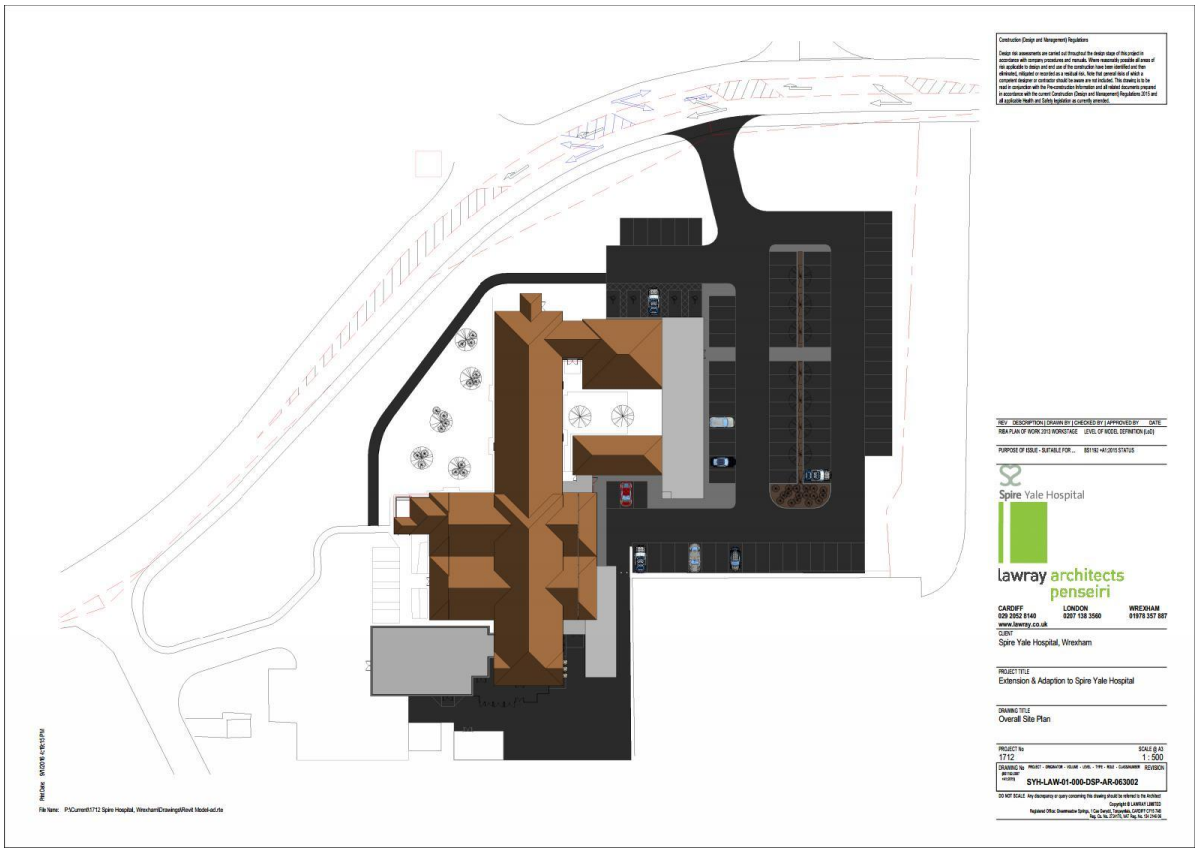
Development Proposal

5.1 It is proposed to develop the site to provide extensions to the existing building and additional car parking areas along with a new vehicular access.



Tree Survey Methodology

6.1 All trees within and adjacent to the site have been assessed where they are within 15 m of any area that may be disturbed as a result of the proposed development and have a stem diameter over 75mm at 1.5 metres. Measurements have been taken in accordance with the procedures and protocols set out in BS 5837: 2012 and the Forest Mensuration Handbook. Height measurements are approximate unless otherwise stated. Trees have been assessed as individuals, groups or woodlands as appropriate. Where access to trees has been restricted, either as a result of their situation on private land or where vegetation or ground conditions are unfavourable, an estimation of trunk diameter has been made. This entails using a set of callipers to approximate the measurement. Estimates are rounded up to provide a margin. This technique has only been used where there is a sufficient buffer between the RPAs and any area disturbed by development. Where trees are in woodlands or groups only the outside edge trees are assessed unless there are larger trees with RPAs or crowns that would overlap the edge trees.

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6.2 BS 5837: 2012 provides the framework through which tree can be categorised in terms of their health, amenity value and long-term viability for retention on a development site. There are four categories, A,B,C & U.

Category A: Trees of high quality and value in such a condition as to be able to make a substantial contribution (a minimum of 40 years)

1 Trees that are particularly good examples of their species, or essential components of groups or formal arboricultural features.

2 Trees, groups or woodlands that 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.

3 Trees, groups or woodlands of significant conservation, historical, commemorative or other value.

Category B: Trees of moderate quality and value in such a condition to make a significant contribution (a minimum of 20 years)

1 Trees that might be included in a higher category but are downgraded because of impaired condition.

2 Trees present in numbers, usually as groups of woodlands that form distinctive landscape features.

3 Trees with clearly identifiable conservation or other cultural benefits.

Category C: Trees of low quality and value currently in adequate condition to remain until new planting could be established. Trees in this category would not usually be retained if they would pose a significant constraint to development.

Category U: Trees in such a condition that their existing value would be lost within 10 years and which should, in the current context be removed for arboricultural reasons.

The most significant or valuable trees are placed in the categories, A & B. Site design should make provision to retain trees in these categories and most Local Planning Authorities will insist upon this (or in exceptional circumstances will require that significant compensation planting is incorporated into the design), whilst trees that should not be a constraint to development are recorded with a C category. Trees categorised as U are in a poor condition and should be removed prior to the commencement of work.

6.3 Where trees are to be retained, it is necessary to ensure that they are suitably protected to avoid damage during the construction phase of the development. It is also important to consider any long term implications; such as issues with shading or leaf litter that may arise as a result of tree retention.

6.4 To ensure that trees are not adversely affected by the construction works it is necessary to:

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a. The avoidance of physical damage to the aerial parts of the trees (i.e. Impact and other damage to trunk and branches)

b. The avoidance of damage to retained trees as a result of the severance or other physical damage to their roots

c. Preserve of the character of the soil, through the avoidance of any activity that would cause it to become compacted or otherwise disturbed or disrupted, and to avoid contamination by potentially harmful substances

d. To ensure free gaseous exchange is permitted between the upper layers of soil and the atmosphere

e. To ensure adequate (but not excessive) water supply to the soil and hence to tree roots

This would normally be achieved by establishing an area, known as a construction exclusion zone (CEZ) around each tree. The CEZ is derived from the root protection area (RPA) and the crown spread of the tree. The RPA represents the area occupied by the tree's root system and is calculated for each tree based on its stem diameter and the ground conditions present taking account of and any impediment to rooting. The RPA should represent the most probable position of the tree's root system.

The CEZ must be considered sacrosanct and be maintained completely undisturbed. No construction should take place within this area and it should not be used for storage of materials or fuels. Access for vehicles machinery or personnel is prohibited and to ensure that it is not damaged by construction activity it must be suitably protected during the construction phase, using robust fencing or alternative ground protection methods, to prevent disturbance and damage occurring.

6.5 In addition to the implications that a new development may have for existing trees it is also important to assess any long term issues or concerns that may arise as a result of retaining trees close to a new dwelling or structure. This can include problems associated with leaf litter and other debris that may fall from trees, the potential that a tree has to cause damage to a structure in the future, any on-going maintenance requirements that may arise and the level of shade that the tree may cast, it is particularly important to consider the effects of shading where trees are to the south of houses and gardens. Trees can also cause feelings of apprehension to the occupiers of nearby buildings and can have an over bearing impact on a property if adequate space is not provided.

6.6 The report assesses all trees with regard to their size, position and natural characteristics, and taking into account of their future growth makes provides recommendations as to their long term suitability for retention.

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Arboricultural Assessment

7.1 Full details of the tree surveyed are provided in appendix A. and their relative positions, crown spreads, root protection areas are indicated on the attached plans.

7.2 No checks have been undertaken to establish the status of the trees with regards to Tree Preservation Orders or Conservation Areas, however all the trees will be subject to the Forestry Act (see section 3.1) and all hedges subject to the Hedgerow regulations (see section 3.3). No trees or hedges should be felled, lopped, topped or in otherwise removed or damaged without prior permission from the relevant authority.

7.3 The survey recorded 13 individual trees, 5 groups of trees and 1 hedgerow which were categorised as follows:

Category	Quantity
Category A: Trees of high quality and value in such a condition as to be able to make a substantial contribution (a minimum of 40 years)	**3**
Category B: Trees of moderate quality and value in such a condition to make a significant contribution (a minimum of 20 years)	**7**
Category C: Trees of low quality and value currently in adequate condition to remain until new planting could be established. Trees in this category would not usually be retained if they would pose a significant constraint to development.	**8**
Category U: Trees in such a condition that their existing value would be lost within 10 years and which should, in the current context be removed for arboricultural reasons.	**1**

Arboricultural merits and the significance of the trees in the landscape

7.4 The most significant trees on the site are the formal avenue of lime and the large sycamore. There are some prominent groups along the west boundary that provide screening and help to break up the lines of the building from views outside the site, however some of these trees are in poor condition. There are also a number of younger trees planted in drifts along the west and north boundaries of the site. There are no veteran trees or areas of ancient woodland or ancient woodland sites within 500m of the site.

Arboricultural Impact of the Development

7.5 The layout will require the removal of six individual trees (T1 – T6), two category B and four category C, a category C group (G9) and part of two category C groups (G11 & G12) as well as the category U group (G10). In the main the trees for removal are not particularly significant specimens in terms of their public amenity value, being either of low quality or relatively young and of small stature. It is accepted that there will be some level of impact to the amenity of the area, however this will be mitigated through significant new tree planting on the site.

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7.6 The proposed development indicates that a car park will be situated immediately adjacent to G8, this will require that an area of hard standing, suitable to allow the parking of cars and light vans be constructed. It is proposed to use a 'no dig' CCS method of construction for the hard standing, within the area marked as a precautionary zone on the tree protection plan ref: SYH/TPP/OL/11/16 to ensure that the root system of this important group of trees is not harmed. Full details are provided in section 9. Some reduction of the lower crowns of some of the trees will be required to reduce encroachment into the site and provide clearance for the parking bays. This will be limited to selected branches on the lower south portion of the crown and will be undertaken in accordance with good practice recommendations meeting the standards of BS3998: 2010. The proposed crown reduction work will not be significantly detrimental to the health, appearance or overall amenity of the trees. Some minor shrubs, mainly holly, will also be removed from beneath the tree canopies. This will not significantly impact on G8.

Landscaping of the Development

7.7 To mitigate the impact of tree loss associated with this development a tree planting scheme will form part of the landscaping of the provided as part of the new development. There is opportunity to undertake significant levels of tree planting in soft landscape areas along the west boundary of the site, is prominent positions that will contribute to the local landscape and provide a degree of screening for the building and car park. Additional planting can be undertaken within the car park. This new planting will ensure that future canopy cover levels in the local area are maintained or improved and will safeguard the landscape in the longer term and is compatible with the premise of sustainability. Any grant of planning permission can be conditional to a detailed landscape scheme being prepared and submitted.

Arboricultural Operations

Permission to remove any tree must be obtained from the Local Planning Authority and must not be undertaken until all pre-commencement conditions have been discharged.

8.1 Tree removal and pruning will be required, subject to a grant of planning permission, to implement this development. It is recommended that the work should be undertaken by a suitably qualified person, holding public liability insurance for the sum of £5,000 000. All operators must hold relevant NPTC certificates. A site specific risk assessment must be prepared and operators must work to a health and safety method statement. The use of Arboricultural Association Approved Contractors www.trees.org.uk/find-a-professional/Directory-of-Tree-Surgeons is recommended.

8.2 The contractor undertaking the work is responsible for any loss or damage arising as a result of the operations and agrees to indemnify the owner against such occurrences.

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8.3 All tree protection measure specified in the following section and shown on the accompanying TPP are to be fully installed prior to the commencement of the arboricultural works. Where access is required to the trees, then suitable ground protection must be used in lieu of the tree protection fences.

Formation of No Dig CCS Hard Standing

NB Where no dig construction is specified this must be installed prior to any machinery access in the area or an alternative temporary ground protection system must be used.

9.1 A pre-commencement meeting is to take place between the contractors and an arboriculturist from Shields Arboricultural Consultancy. This meeting will discuss the tree protection requirements.

9.2 It is recommended that a proprietary no-dig driveway system, such as the cell web TRP cellular confinement system (*Geosynthetics Limited, Fleming Road, Harrowbrook Ind Est, Hinckley, Leicestershire, LE10 3DU. Tel: 01455 617139*) be used to construct the driveway within the Precautionary Area, as indicated on the Tree Protection Plan.

9.3 Essentially no-dig CCS are installed over existing ground levels and without the need for compacting the sub-base. This ensures that the tree's root system is not damaged by excavation and the soil structure is maintained. Using a porous tarmac or other porous top surface ensures that water can permeate through the footpath to the root system and the exchange of gases and oxygen between the soil and the air is unaffected and is recommended. In this case the ground is reasonably level and any discrepancies between the finished surface of the new and existing driveway can be graded out on the existing drive.

9.4 The area where the no-dig system is to be used is identified on the site plan and should be marked out on the ground. Prior to installation commencing the tree protection fences are to be installed as shown on the TPP.

9.5 Initial preparations require ground vegetation to be carefully removed. This should be undertaken using hand tools under the supervision of the arboriculturalist. The next step requires filling small undulations to provide even ground on to which the cell web system is laid. This should be achieved using a fill medium of clean sand spread to a maximum depth of 100mm. This should be loose tipped into the PA and levelled using hand tools only. Where required, the sand is to be retained using treated timber edging.

9.6 Once an even surface has been achieved a 3 dimensional cellular confinement system is to be used to form a sub-base for the foot path. This should be installed in accordance with the manufacturer's instructions but usually requires that a layer of geo-textile is placed over all fill soil. On to this is laid the 3 dimensional grid, which is pegged into place using proprietary pegs. The cells are then filled using 40/20 mm clean angular stone, of neutral pH, with no fines. This should occur from the outside edge working in and the charged cells

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used as a working platform. A second layer of geo-textile is then laid and the topped with the finished surface material. The geo grid structure and surface layer are retained and edged using treated timber edging held in place by short wooden stakes. The edges can then be incorporated into the existing landscaped as required.

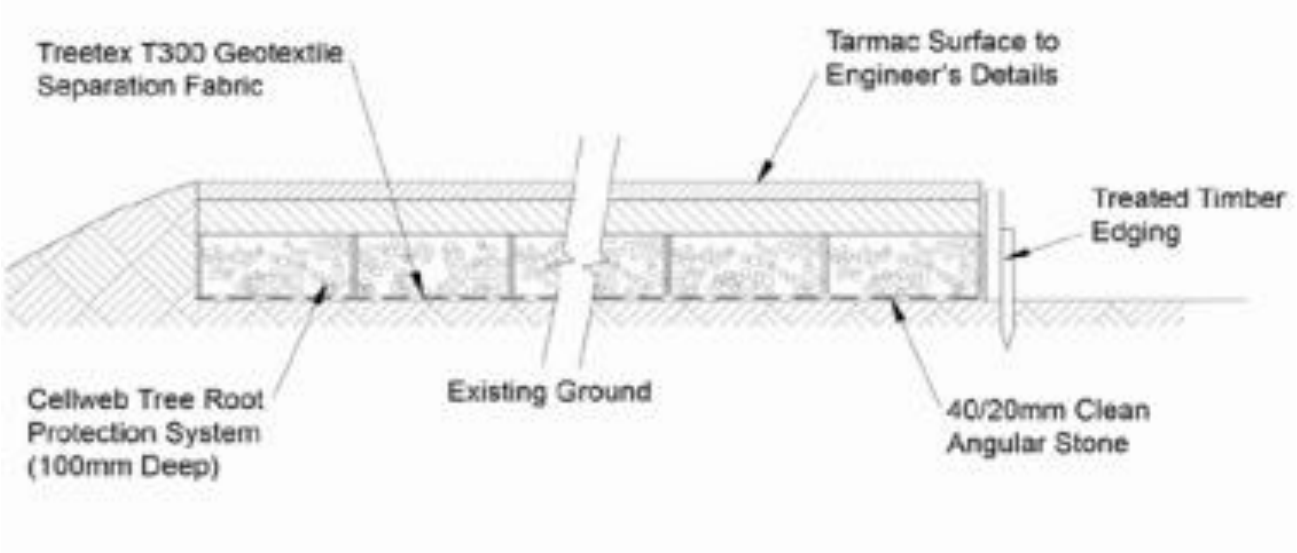

Figure 1 Illustration of Cellular Confinement System

N.B This report does not provide engineering specifications for the no dig CCS footpath and the suitability for the use of a 3 dimensional grid system in this location must be confirmed by an appropriately qualified person. Geosynthetics Limited provides a design service for their products.

Arboricultural Method Statement

10.1 This arboricultural method statement (AMS) sets out the details of tree protection measures afforded to the retained trees on and adjacent to the site.

10.2 This document should be read in conjunction with the Tree Protection Plan (SYH/TPP/OL/11/16 Rev B). The TPP indicates the construction exclusion zone (CEZ) that must be maintained around each retained tree. These areas must remain undisturbed during the construction process and must be protected using suitable fencing or ground protection as specified.

10.3 Copies of the TPP & the AMS must be available on site and all tree protection requirements explained to all persons undertaking activities on the site during the site induction process.

10.4 All tree protection measures must be installed and inspected prior to bringing onto the site any plant, materials or equipment or undertaking any construction works or demolition or any arboricultural works. The LPA must be informed in writing once the tree protection measures are installed.

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10.5 The site is to be inspected by the consulting arboriculturalist in accordance with the schedule of inspections (see 10.17).

10.6 All measurements are given in metric using standard abbreviations.

Fencing and Ground Protection

10.7 The TPP indicates the position all protective fences.

10.8 Protective fencing will comprise herras fencing or as agreed with the Local Planning Authority.

10.9 Ground protection is to be used within the Precautionary Area during the construction phase of the development and will consist of a proprietary system such as Ground Guard protective plates which must extend over the entire area indicated on the TPP and be securely fastened in place. The type of guard used must be suitable for loads up to 40 tonnes or more.

10.10 The protective fencing and ground protection must be inspected on installation and will remain in place until completion of the construction phase and then only removed with the consent of the LPA.

10.11 Other than works approved in writing by the LPA, no works including storage or dumping of materials shall take place within the exclusion zones defined by the protective fencing.

General Precautions

10.12 No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10m of the trunk of a tree that is to be retained or within any part of the CEZ. Spills kits, suitable for the type fluids, fuels and chemicals stored on site must be available on site and site operatives must have training in their use.

10.13 No fires will be lit within 20m of the trunk of any tree that is to be retained.

10.14 Storage and mixing areas, contactor parking and all site huts must be outside the CEZ.

10.15 Access to the work area is via the main site entrance and must not traverse the CEZ.

10.16 All service and drainage routes, below or above ground must avoid the CEZ. All services are to be installed in accordance with NJUG volume 4 Guidelines.

10.17 To ensure that all tree protection measures are properly installed and maintained the site shall be monitored by Shields Arboricultural Consultancy to the following schedule. Details of the findings and photographic evidence of the site inspection visits will be reported to the LPA by email within 24 hrs of the visit. All tree protection measures must remain in place until development work is completed and only removed after receiving written confirmation from the LPA.

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Schedule of Inspection

1. On completion of erection of fencing and installation of ground protection prior to commencement of development works

2. Monthly throughout the project

3. On completion of project

10.18 Prior to the commencement on site of any work, a competent person is to be appointed to monitor the day to day activities on site. In the case of a tree being damaged or where an unexpected event arises it will be for this person to contact Shields Arboricultural Consultancy to seek advice on contingency measures.

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Arboricultural Assessment

Ref. No.	Species	Top Height	Stem Dia mm	N	E	S	W	CC	Age	Rem Cont.	Cat.	RPA m^2	Notes	AIA
T1	Birch	9	330	4.3	2.8	2.5	2	1.5	M	10+	C1	49	**Condition:** Fair **Notes:** Situated in soft landscape bed in car park area	Minor specimen does not make a significant contribution to the wider landscape or public amenity and should not be considered a significant constraint to the development of the site. Can be retained under the proposed layout.
T2	Cherry	6	180	4	3.2	4.9	3.9	1	M	10+	C1	15	**Condition:** Fair **Notes:** Situated in soft landscape bed in car park area	As T1
T3	Cherry	9	360	2.3	3.2	5.2	3	1.5	M	20+	B2	59	**Condition:** Good **Notes:** Forms group with trees T4 – T6 in soft landscape area.	Reasonably significant in terms of landscape and arboricultural value, although this is limited to

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														the site. Would be removed under the proposed layout
T4	Cherry	11	380	4.2	5	6.1	4.9	1.5	M	20+	B2	65	**Condition:** Good **Notes:** As T3	As T3
T5	Cherry	5	110	1	3	3.5	1	1	EM	20+	C2	5	**Condition:** Good **Notes:** As T3	As T3
T6	Norway Maple	8	220	5	4.5	3	2	2	EM	10+	C2	22	**Condition:** Good **Notes:** As T3	As T3
T7	Lime	12	260	3	4	4	4	1	EM	40+	A2	31	**Condition:** Good **Notes:** Part of historic avenue of trees adjacent to the north east boundary of the site.	Very high amenity value. Will be retained and protected through the development.
G8	Lime	20	500	7	7	10	7	1	M	40+	A2	113	**Condition:** Good **Notes:** Avenue of trees adjacent to the north east boundary. A number of trees appear multi-stem having arisen from sucker growth around the	Very significant group with a high amenity value. Car park area to be formed to the south of the trees using 'no dig' CCS construction method. Some pruning of over long branches

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													main stem. RPA based on maximum size of individual stem. Minor specimens of holly are situated close to G8. These are not significant components of the group.	and crown raising will be required to facilitate the car park, this will be undertaken in accordance with good practice recommendations meeting the standards of BS3998: 2010 and will not be detrimental to the health, appearance or overall amenity of the trees. Some minor shrubs, mainly holly, will also be removed. This will not significantly impact on G8.
G9	Mixed	7	160	2.6	2.6	2.6	2.6	2	SM	40+	C2	12	**Condition:** Good **Notes:** Drift of semi mature trees, presumably planted as part of the original landscaping.	Trees are relatively young and provide only a limited amount of amenity at this time. Trees will require removal as part of the proposed development. Any loss of amenity will be

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														mitigated through new planting on the site.
G10	Mixed	18	400	5	5	5	5	1	OM	<10	U	72	**Condition:** Poor **Notes:** Group of willow and horse chestnut. Trees are beginning to collapse and there are early indications of bleeding canker affecting the HC.	Trees are in a prominent position but have a short life expectancy because of their condition. Trees will require removal as part of the proposed development. Any loss of amenity will be mitigated through new planting on the site.
G11	Mixed	4	120	2	2	2	2		SM	40+	C2	7	**Condition:** Good **Notes:** Drift of young trees, presumably planted as part of the original landscaping.	Trees are in a prominent position but are relatively young and the amenity they provide could be replaced through new planting. A number of the trees in this group will require removal as part of the proposed development.

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														Any loss of amenity will be mitigated through new planting on the site.
G12	Mixed	12	180	4	4	4	4		M	10+	C2	15	**Condition:** Good **Notes:** Group of willow, field maple, cherry and mixed shrubs in two separate beds. Canopies are in competition and some trees are becoming suppressed.	The group provides an element of screening from the road, however it has been downgraded because of its condition and life expectancy. Part of the group will be removed to facilitate the development and any loss of amenity mitigated through on-site tree planting, forming part of the development.
T13	Norway Maple	14	290	4.2	5.5	2	2	2	EM	20+	B2	38	**Condition:** Good **Notes:** Element of small group of trees, beginning to compete for resources with	Reasonably significant in terms of landscape and arboricultural value, tree will be retained and protected through

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													adjacent specimens.	the development and incorporated into the overall site layout.
T14	Cherry	15	310	4.9	2	2	5.5		EM	20+	B2	43	**Condition:** Good **Notes:** As T13	As T13
T15	Norway Maple	12	330	2	4.9	5.2	1.5		EM	20+	B2	49	**Condition:** Good **Notes:** As T13	As T13
T16	Cherry	16	340	2	1	5.5	4.6		EM	20+	B2	52	**Condition:** Good **Notes:** As T13	As T13
T17	Horse Chestnut	10	280	4.4.	5	3	3		M	20+	B2	35	**Condition:** Good **Notes:** As T13	As T13
T18	Sycamore	20	600	6	3	9.2	6.2		M	40+	A2	163	**Condition:** Good **Notes:** Individual tree in reasonable health and condition.	Very significant group with a high amenity value. Tree will be retained and protected through the development and incorporated into the overall site layout.
H19	Hawthorn	4	120	2	2	2	2		M	20+	C2	7	**Condition:** Good	Hedgerow is not particularly

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													Notes: Remnants of overgrown hedgerow.	significant in terms of their amenity value

Ultimate Heights of Main Species

Sycamore 20 Lime 20 Cherry 20 Norway Maple 15

Notes

BS 5837: 2012 provides the framework through which tree can be categorised in terms of their health, amenity value and long-term viability for retention on a development site. There are four categories, A,B,C & U.

Category A: Trees of high quality and value in such a condition as to be able to make a substantial contribution (a minimum of 40 years)
1 Trees that are particularly good examples of their species, or essential components of groups or formal arboricultural features.
2 Trees, groups or woodlands that 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.
3 Trees, groups or woodlands of significant conservation, historical, commemorative or other value.

Category B: Trees of moderate quality and value in such a condition to make a significant contribution (a minimum of 20 years)
1 Trees that might be included in a higher category but are downgraded because of impaired condition.
2 Trees present in numbers, usually as groups of woodlands that form distinctive landscape features.
3 Trees with clearly identifiable conservation or other cultural benefits.

Category C: Trees of low quality and value currently in adequate condition to remain until new planting could be established. Trees in this category would not usually be retained if they would pose a significant constraint to development.

Category U: Trees in such a condition that their existing value would be lost within 10 years and which should, in the current context be removed for arboricultural reasons.

Bat potential has been assessed in accordance with the guidance provided in BS 8596:2015 and is at the level of a non-specialist scoping survey. This assessment is for preliminary advice and does not negate the requirement for a specialist ecological survey

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Key

Tag No	Identification number for tree	**Species**	Species of tree
Top Height	Estimated height of tree	**Stem Dia.**	Diameter of stem at 1.5 metres
Stems	Number of stems	**N, E, S, W**	Crown spread at compass points
CC	Crown Clearance	**FSB**	Direction of first significant branch
Rem. Cont	Remaining safe life expectancy in years	**RPA**	Root protection area in m^2
Cat.	BS Category (see above)	**AIA**	Arboricultural Implication Assessment

Age	**Y -**	Young Trees
	SM	Semi Mature
	EM	Early Mature
	M	Mature
	LM	Late Mature exceeds normal life expectancy for species
	VET	Veteran Tree
Condition	**Good**	Relatively free from defects and / or major pests and diseases
	Fair	Some defects, which could be addressed through tree surgery or minor pests or early symptoms of diseases
	Poor	Substantial defects or terminal decline
	Dead	Dead

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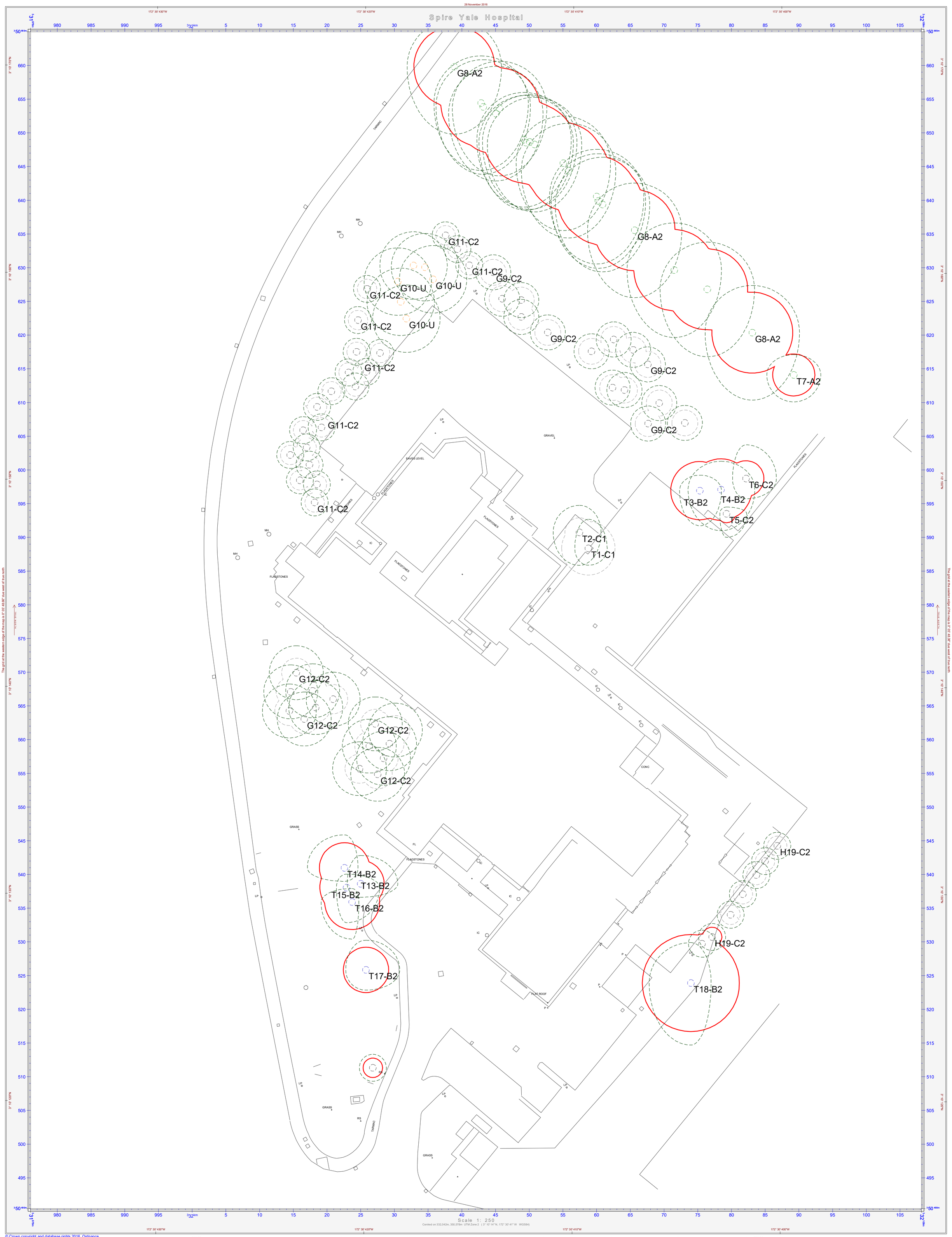
Registered Consultant



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Tree & Woodland Management Solutions

Tree Constraints Plan

Spire Yale Hospital

KEY

- Tree Cat A
- T7 Tree Cat B
- T4 Tree Cat C
- T5 Tree Cat U
- G10 Canopy Spread
- RPA
- RPA Cat C

Drawing No: SYH/TCP/11/16/01

Drawn By: S. Shields

Scale: 1:250 @ A1

Date: 28th November 2016

Revision:

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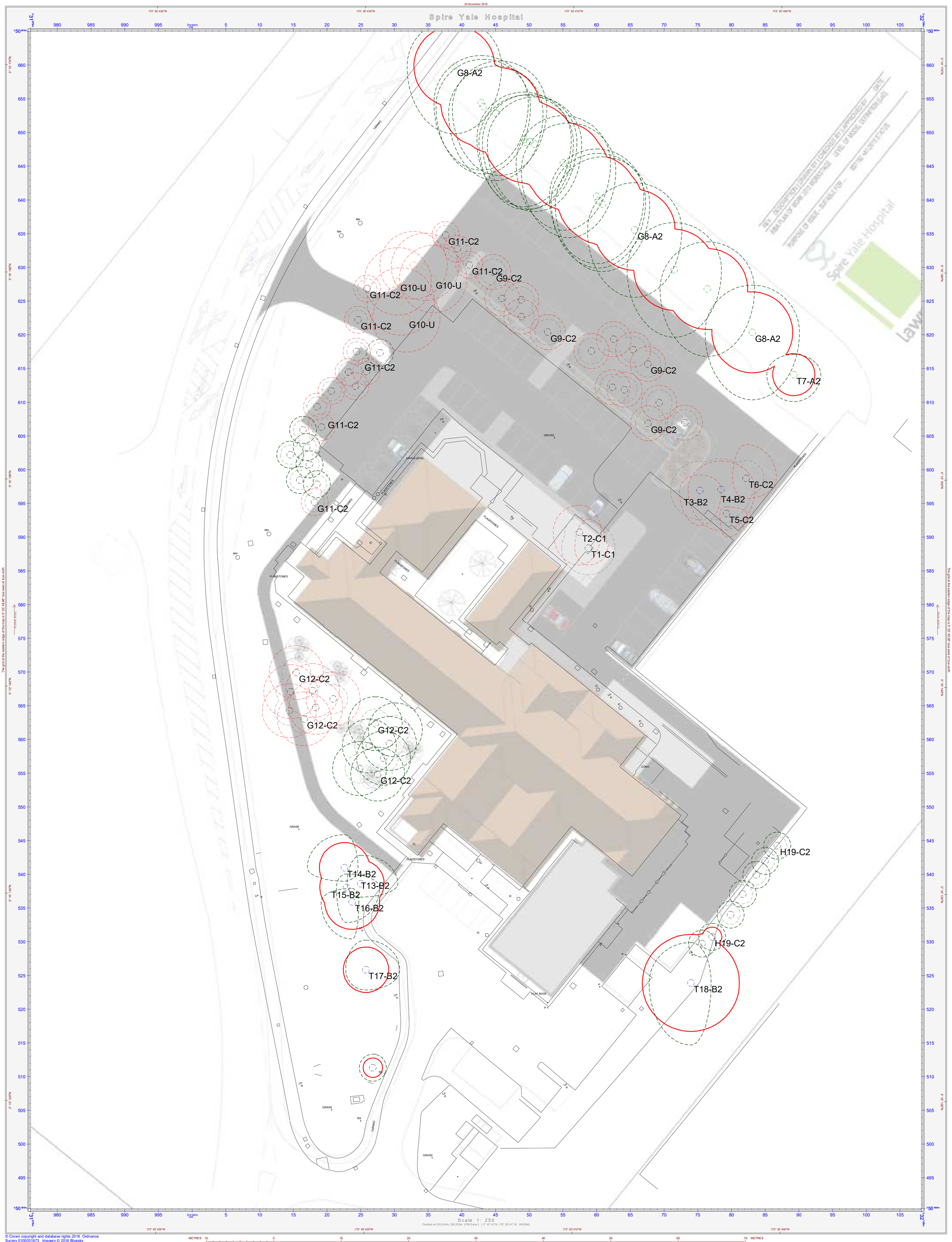

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Tree & Woodland Management Solutions

Tree Constraints Plan

Overlay

Spire YaleHospital

KEY

- Tree Cat A
- T7 Tree Cat B
- T3 Tree Cat C
- T1 Tree Cat U
- G10 Canopy Spread
- Trees for Removal
- RPA Retained Tree
- RPA Cat C

Drawing No: SYH/TCP/OL/11/16/01

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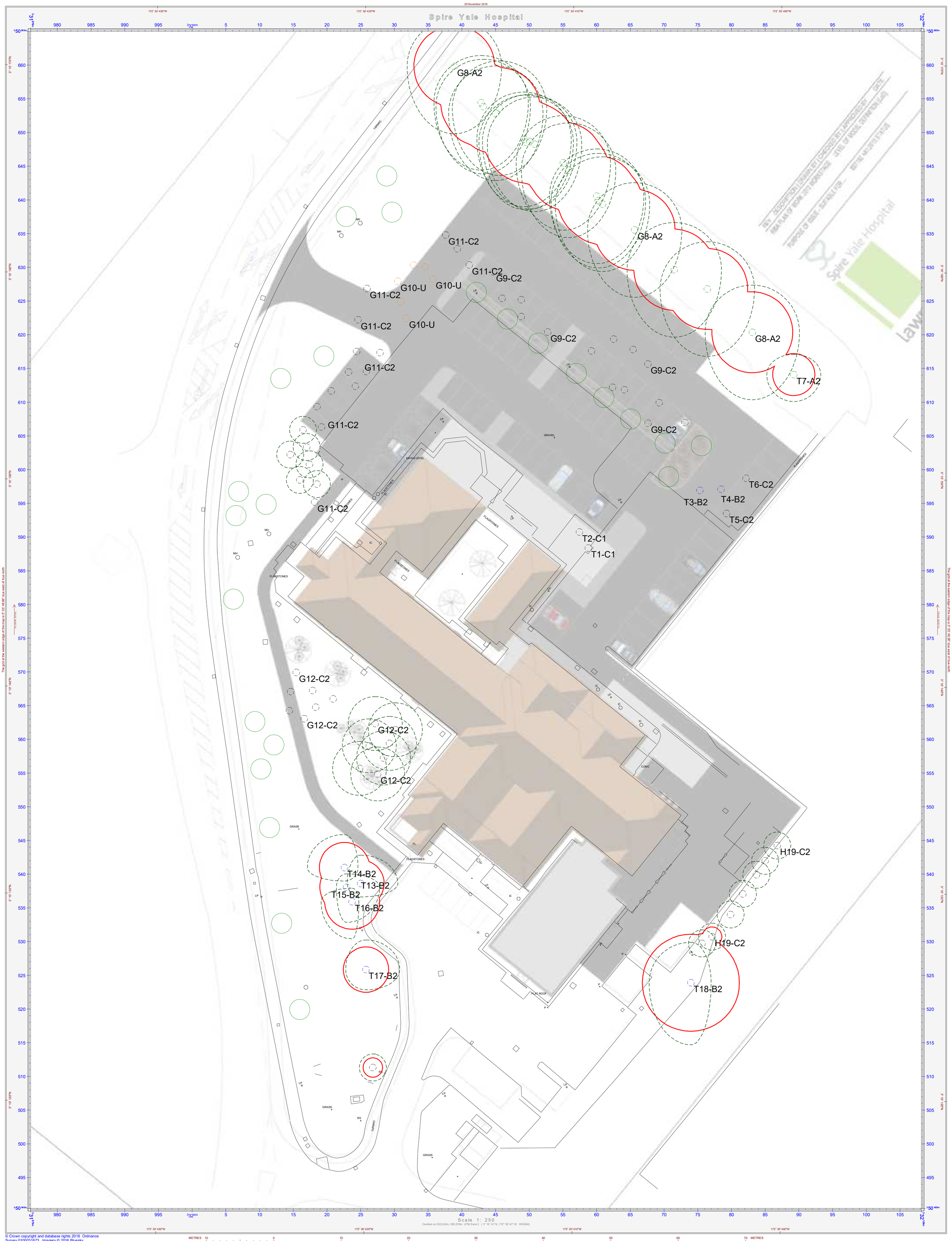

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Tree & Woodland Management Solutions

Proposed Site Plan

Spire YaleHospital

KEY

- Tree Cat A
- T7 Tree Cat B
- T3 Tree Cat C
- T1 Tree Cat U
- G10 Canopy Spread
- RPA Retained Tree
- Indicative Proposed Planting

Drawing No: SYH/PSP/OL/11/16/01

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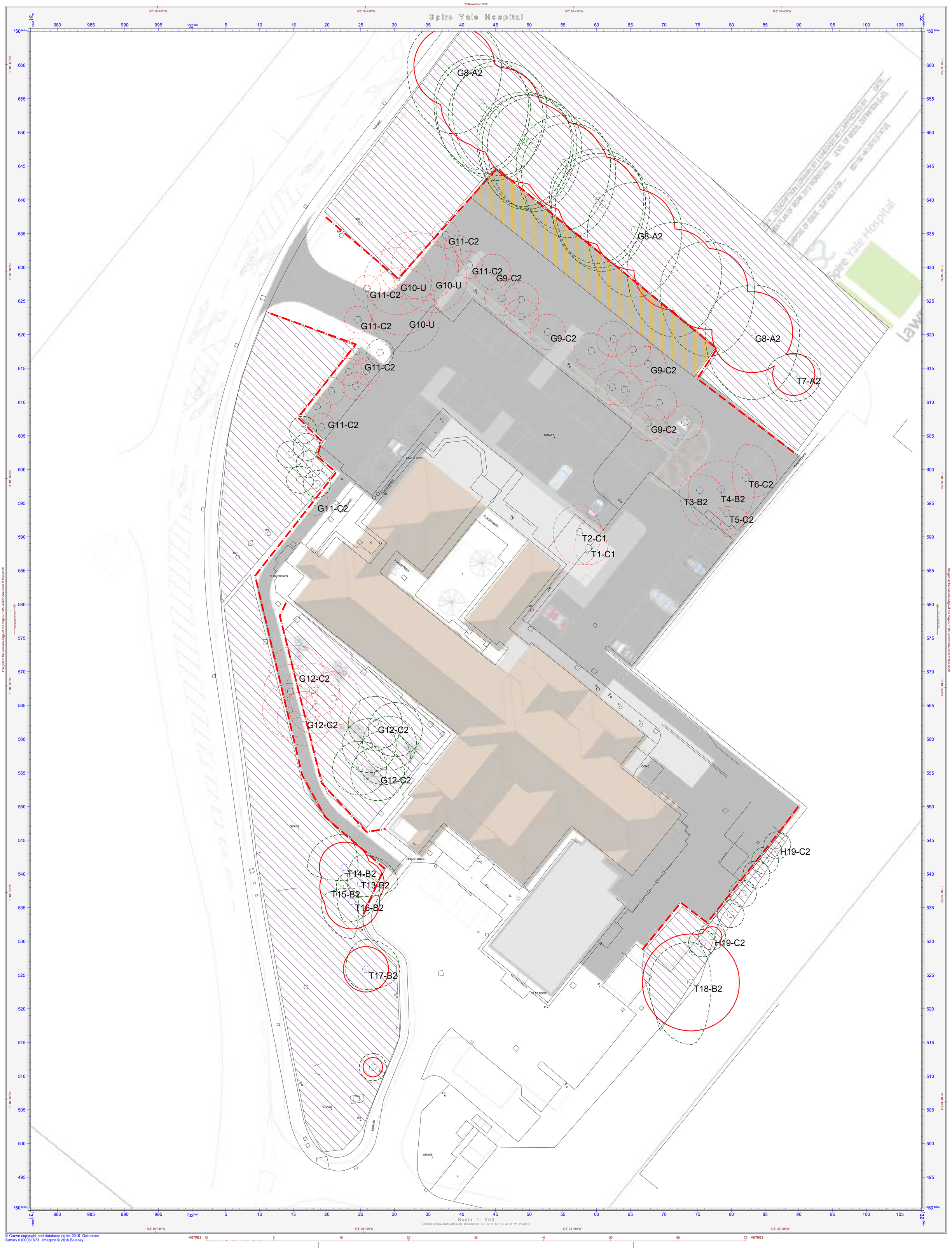

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Tree & Woodland Management Solutions

Tree Protection Plan

Spire YaleHospital

KEY

- Tree Cat A
- Canopy Spread
- RPA Retained Tree
- CEZ
- Precautionary Area
- Tree Protection Fencing

Drawing No: SYH/TPP/OL/11/16/01

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