C.B.E. Consulting

Arboricultural Surveys to BS5837

BS5837:2012 Tree Survey
Land at the former Welland Hospital Site
Roman Bank
Fulney
South Holland
Lincolnshire
NGR TF25809 23833

Survey by
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BS5837 Tree Survey, Land at the former Welland Hospital, Roman Bank, Fulney

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Introduction

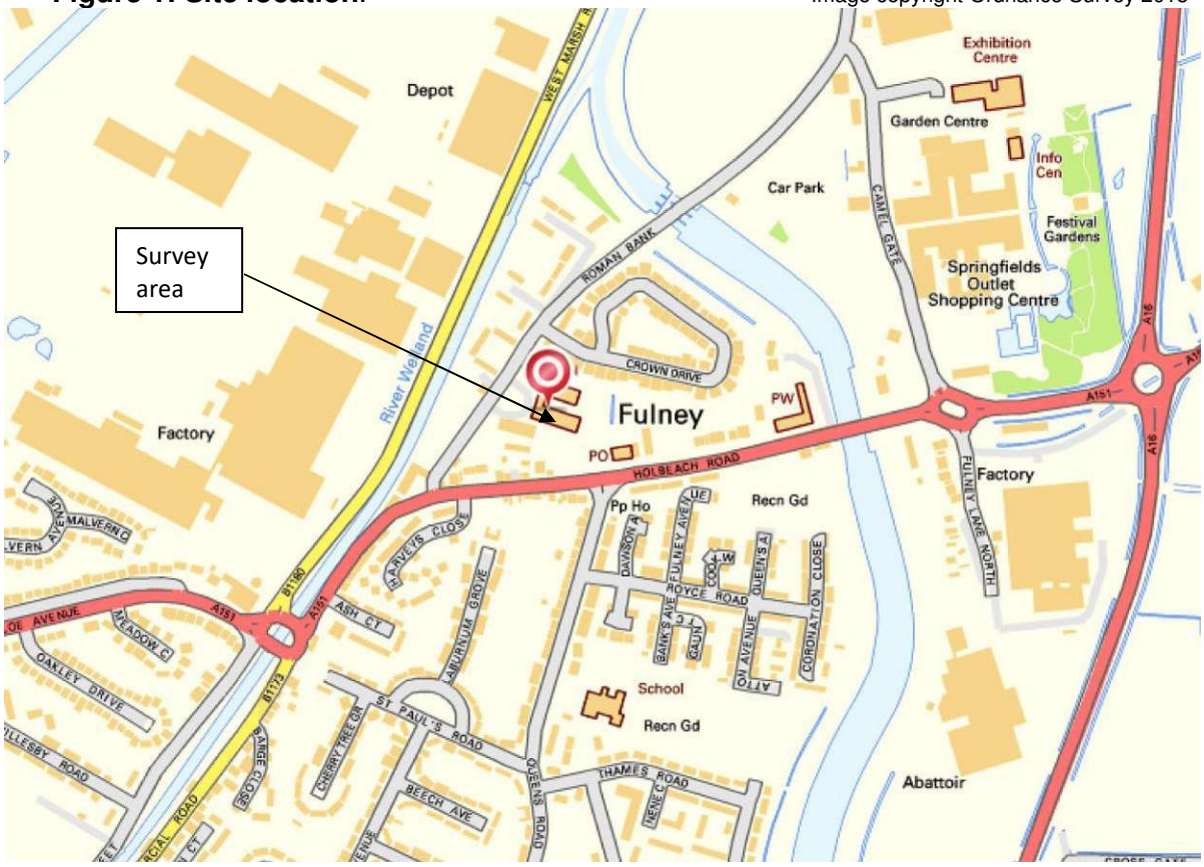
1.1 Site Description and Location

The site surveyed comprises an irregular parcel of land near the junction of Roman Bank and Holbech Road, Fulney centred at NGR TF25809 23833 which was previously occupied by the building and facilities of Welland Hospital which have now been demolished together with a bungalow and commercial garage fronting Holbeach Road, also now demolished. The boundary and landscaped areas of the former hospital contain a number of mature and semi-mature trees, some of which are known to be protected by Tree Preservation Orders. The location of the site is shown on the plan within **Figure 1** and an aerial photograph has been provided within **Figure 2** to place the site in context.

In order to facilitate an application to obtain permission to redevelop the site area the Client has requested a BS5837 (2012) Tree Survey should be completed to assess the quality of any trees within and close to the boundary of the former hospital site. An inspection of the site and the immediate surrounding areas was carried out on 22nd October 2015. A photographic record of the trees at the site is included within the report.

Figure 1: Site location.

Image copyright Ordnance Survey 2015



1.2 Neighbouring Land Uses and Recent Site History

The former Hospital and garage sites contained a number of large buildings which have been demolished. It was previously a hospital site and contained a number of large buildings which have been removed leaving only the foundations and hard standing areas on the site. The land is entirely surrounded by residential houses and commercial buildings but there is a small parcel of open amenity grassland, now lying unmanaged, on the eastern side of the site.

Within the grounds of the former hospital there were a number of landscaped areas planted with trees and shrubs and at the eastern end of the site is a line of mature Lime trees. The aerial photograph below shows the site area as it was prior to the demolition of the hospital facilities.

Figure 2: Site Contextual Aerial Photograph Image copyright Microsoft Corporation 2015



The site lies within the District of South Holland and it is not within a designated Conservation Area. A number of the trees within the area surveyed are protected under a Tree Preservation Order and details of this have been obtained. No work to remove or reduce a tree protected by a Tree Preservation Order can be carried out without the prior written permission of the District Council.

In undertaking the tree survey the assessment has been carried out in accordance with the specifications contained within BS 5837 Trees in Relation to Design, Development and Construction (2012).

An inspection of the site and the immediate surrounding areas was completed in October 2015 by Christopher Barker, dipHort, CEnv, an experienced arboricultural consultant and licensed bat worker.

2. Tree Survey Appraisal Methodology

2.1 Survey Objectives

This tree survey has been carried out with the objective of:

- Identifying the individual tree species present at the site by means of visual inspection;
- To define the approximate age, condition and canopy spread of all individual mature and semi-mature trees identified and the value of these within the development context;
- To identify any trees that present a risk to existing or proposed foundations or other structures that may be constructed on the site and recommend action to remove this risk; and
- Recommend tree management / mitigation measures where appropriate.

The survey broadly assessed the condition and arboricultural value of the trees lying in or adjacent to the site area, paying particular attention to any mature individual trees present within or adjacent to the site area in order to prepare an assessment in accordance with BS 5837 Trees in Relation to Design, Development and Construction (2012).

2.2 Survey Methodology

The methodology set out below is a detailed summary of the suggested approach to tree assessment as described in British Standard 5837:2012. This report has applied the methodology to all significant individual trees or groups of trees present at or near to the site. A topographical plan of the site provided by the land owner has been used to prepare the Tree Location Plan within Section 3 of the report. The location of the trees has been measured on the site but the plan is only approximately to scale but should not be used to measure off distances. Trees below 15 cm trunk diameter were generally excluded from the survey.

2.3 Trees

Trees have been broadly assessed based on guidance set out within the British Standard BS 5837:2012 'Trees in Relation to Design, Development and Construction'. This standard provides recommendations and guidance on the principles to be applied to achieve successful integration of development with trees, shrubs and hedgerows. Where development is to occur, the standard provides guidance on the approach needed to decide which trees are appropriate for retention, and the means for protecting these trees during the development (including demolition and construction work) and the means of incorporating trees into the developed landscape.

Trees on the site have been divided into one of four categories (based on the cascade chart for tree quality assessment). These are classed as A, B, C or U (Section 4 of BS 5837) within the table in Appendix 1. This gives an indication as to the tree's importance in relation to the site, the local landscape and, also, the value and quality of the existing trees on site. This assists informal decisions concerning which trees should be removed or retained should development occur. For a tree to qualify under any given category it should fall within the scope of that category's definition (see below). Categories A, B and C cover trees that should be a material consideration in the development process, each with three further sub-categories (i, ii, iii) which are intended to reflect arboricultural, landscape and cultural (nature conservation) values. Category U trees may have no significant landscape value but it is not presumed that there is any overriding need to remove these unless stated otherwise in the description and recommendations. They are for this reason not considered as being significant within the planning process. In assigning trees to the A, B or C categories, and the presence of any serious disease or tree–related hazard is taken into account. If the disease is considered fatal and/or irremediable, or likely to require sanitation for the protection of other trees it may be categorised as U with a recommendation for work or even removal, even if they are otherwise of considerable value.

Category (A): Trees whose retention is most desirable and are of high quality and value. These trees are considered to be in such a condition as to be able to make a lasting contribution (a minimum of 40 years) and may comprise:

(i) Trees which are particularly good examples of their species especially rare or unusual, or essential components of groups or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue);
(ii) Trees, or groups of trees which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups);
(iii) Trees or groups of significant conservation, historical, commemorative or other value (e.g. Veteran or wood-pasture trees).

Category (B): Trees whose retention is considered desirable and are of moderate quality and value. These trees are considered to be in such a condition as to make a significant contribution (a minimum of 20 years) and may comprise:

(i) Trees that might be included in the high category but because of their numbers or slightly impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage), are downgraded in favour of the best individuals;
(ii) Trees present in numbers such that they form distinct landscape features and attract a higher collective rating than they would as individuals. Individually these trees are not essential components of formal or semi-formal arboricultural features, or trees situated mainly internally to the site and have little visual impact beyond the site;
(iii) Trees with clearly identifiable conservation or other cultural benefits.

Category (C): Trees that could be retained and are considered to be of low quality and value. These trees are in an adequate condition to remain until new planting could be established (a minimum of ten years) or are young trees with a stem diameter below 150 mm and may comprise:

(i) Trees not qualifying in higher categories;
(ii) Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value and or trees offering low or only temporary screening benefit;
(iii) Trees with very limited conservation or other cultural benefits.

Category (U): Trees that are considered to have no significant landscape value but it is not presumed that there is any overriding need to remove these unless stated otherwise in the description and recommendations. They are for this reason not considered as being significant within the planning process. These trees will be in such a condition that any existing value would be lost within 10 years and which should in the current context be ignored or removed for reasons of sound arboricultural management. Trees within this category are:

(i) 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;
(ii) Trees that are dead or are showing signs of significant, immediate or irreversible overall decline;
(iii) 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.

Species have been recorded by common and scientific name. Height has been estimated in metres and stem diameter measured in centimetres unless impractical, taken at a height of 1.5 m from the base of the tree.

In the assessment particular consideration has been given to:

(a) The health, vigour and condition of each tree;
(b) The presence of any structural defects in each tree and its life expectancy;
(c) The size and form of each tree and its suitability within the context of the proposed scheme;
(d) The location of each tree relative to existing site features, e.g. its value as a screen or as a skyline feature.

Age class is assessed according to the age class categories referred to in BS 5837.

YNG: Young trees age less than 1/3 life expectancy.
SM: Middle age trees 1/3 – 2/3 life expectancy.
M: Mature trees over 2/3 life expectancy.
OM: Over mature – declining or moribund trees of low vigour.

The overall condition of any individual tree, or group of trees, has been referred to using one of the definitions listed below. A more detailed description of condition has been noted in the Tree Schedule.

G **Good:** A sound tree or trees needing little, if any, attention
F **Fair:** A tree or trees with minor but rectifiable defects or in the early stages of stress, from which it may recover
P **Poor:** A tree or trees with major structural and physiological defects or stressed such that it would be very expensive and inappropriate to retain
D **Dead:** A tree or trees no longer alive. However, this could also apply to those trees that are dying and will be unlikely to recover, or are becoming or have become dangerous

Major defects or diseases and relevant observations have also been recorded. Dead wood has been defined as the following:

Twigs and small branch material	Up to 5 cm in diameter
Minor dead wood	5 cm to 10 cm in diameter
Major dead wood	10 cm in diameter and above

The survey was completed from ground level only. Aerial inspections were not undertaken. Evaluations of tree conditions given within this assessment apply to the date of survey and cannot be assumed to remain unchanged, and it may be necessary to review these within 24 months, in accordance with good arboricultural practice.

2.4 Site Plans & Tree schedules

The position of significant individual trees or groups of trees measured out on the site is shown on the Tree Location Plan **Figure 3**. An Indicative Constraints Plan showing the RPA's of the trees of highest landscape and arboricultural value recommended for retention within any development scheme for the site has been prepared as **Figure 4.** A summary table providing detailed information on the trees and tree groups is included in Appendix 1. Within the summary table maximum RPA's (m^2) for estimated tree diameters have been included where appropriate, as well as a calculated corresponding radius of the circle for that RPA. The Root Protection Areas are formulated as described below and assist when designing layouts in relation to trees.

2.5 Root Protection Area (RPA)

Below ground constraints to development are represented by the root plate around a tree which needs protecting in order for the tree to be incorporated into a proposed scheme, without adverse harm to the tree or structural integrity of any proposed foundation structures.

This area is calculated according to the formula set out in BS 5837 (2012) clause 4.6.1.

Single Stem Trees:

RPA (m^2) = (stem diameter (mm) x 12 / 1000) ^{2} x 3.142

Multiple Stem Trees:

RPA (m^2) = (combined stem diameters (mm) x 12 / 1000) ^{2} x 3.142

This figure should be capped to 707 m^2, that is, equivalent to a circle with a radius of 15 m, or a square with approximately 26 m sides

Taken from BS5837 (2012) clause 4.6.1.

2.6 Potential For Protected Species

Potential bat roost locations are described within this report using the methodology as that recommended by the Bat Conservation Trust (BCT). Each tree of significant size assessed within this survey has also been assessed for the potential to provide roosts for bats and the table in Appendix 1 includes reference to this.

Potential	Field Signs
Roost confirmed	Confirmed bat roost in tree. Field evidence past or current presence of bats confirmed by droppings, staining or flight.
High roost potential	Splits or cracks in major limbs which develop upwards, smooth surfaces around potential entry points, dense ivy covering, woodpecker / rot holes, significant lifting bark, Artificial bat boxes. Ancient of over mature trees where the canopy cannot be fully inspected from the ground.
Medium roost potential	Some splits in branches, dense ivy covering, and small cavities visible, dense epicormic growth. Flies may be present around a potential entry point.
Low roost potential	Splits may be present in minor branches, sparse ivy cover, and some loose bark evident. Young healthy trees with good visibility to the canopy top.
No roost potential	Tree with a negligible potential to support bat roosts (not supporting any of the above features).

3. Tree Survey Findings

3.1 Survey Details

The tree inspection took the form of a walkover inspection completed by Christopher Barker dipHort, CEnv. Each individual semi-mature or mature tree of significance that could be impacted by any proposed new development within the former Hospital site and adjacent open land was identified, visually inspected and classified. The character of the trees at the site is shown in photographs contained within this section.

3.2 Mature and Semi-mature Trees

A total of nineteen individual trees and three tree groups have been identified and assessed as part of the tree survey. There is a line of mature Lime trees crossing the centre of the site area surveyed which are protected by TPO's. The character of the trees around the boundary of the field can be seen in the photographs below.

Trees G1 – T7 West and North West Boundary
The boundary adjacent to Roman Bank is dominated by a line of dense Birch trees (G1 and G3) which provide screening to the site and canopy cover along the road frontage. The trees within G1 are of reasonable quality and placed within Category B2. However, the Birch and Cherry within G3 are very crowded and of poorer quality in terms of canopy development. It may be prudent to consider removing these and planting new specimens. Just within the interior of the site near the west boundary is a solitary Cedar of Lebanon planted as a specimen tree within the landscaped grounds at what was the front entrance to the hospital. Whilst this tree is crowded by tall shrubs and has suffered some wind damage, it is still a reasonable specimen and is placed in Category B2. If practical, this tree could be incorporated into the proposed development.


Birch within G1


Cedar T2


Birch and Cherry G3

Trees T5 - T7 are small specimens situated along the north western boundary of the site screening a nearby residential house. One of the trees is dead but the remainder are in reasonable health and could be incorporated into any development if it is practical to do so. These trees fall within Category B and C. Whitebeam T5 is the tree of highest landscape value in this location and should be retained if possible to maintain screening and canopy cover.


Trees T4 and T6


Whitebeam T5 and Cypress T7 to rear

Trees T8 and T9 Central Area
Within a central border in the interior of the site are a number of small trees of limited landscape significance. There are no trees of significant stature or maturity within the interior of the site and it is assumed that these small specimens will probably be removed to facilitate any proposed development.


Small tress in site interior.

Trees G10 – T20 Line of TPO Trees
Birch G10 are of limited significance but are located in the adjacent garden and because of this and the extension of the canopies and RPA's of these trees into the site area, protection measures will be required. This pair of small trees does provide screening to the site boundary and they are placed within Category B2.

The most significant trees within the survey area are a line of mature Lime trees (T11 – T20) crossing the centre of the site. This line of trees create a linear canopy feature visually dividing the site into two areas. These eleven trees are protected under Tree Preservation Order Spalding 66 /2005 and having matured they are now quite crowded with merging canopies. The majority of these are placed in Category A of BS5837 but some individual specimens have been placed in Category B due to crowding and poor canopy development that combined with some significant ivy growth will have reduced the useful life expectancy of these.



Lime T11 – T15



Lime T15 – T20



Lime T20



View of Lime T11 – T18 from the east.

Trees T21 and T22 South Boundary.
Lime T21 is an extension of the line of trees on the western side located on the south boundary. This mature Lime tree, placed within Category A is also protected under the auspices of TPO 66/2005. This is a good specimen tree which should be retained to maintain canopy cover and screening along the south boundary of the site.

Goat Willow T22 is a small tree of limited landscape value also positioned close to the south perimeter of the survey area. This tree has limited landscape or visual amenity value in this position and is placed in Category C.



Lime T21



Goat Willow T22

Figure 3: Tree Location Plan

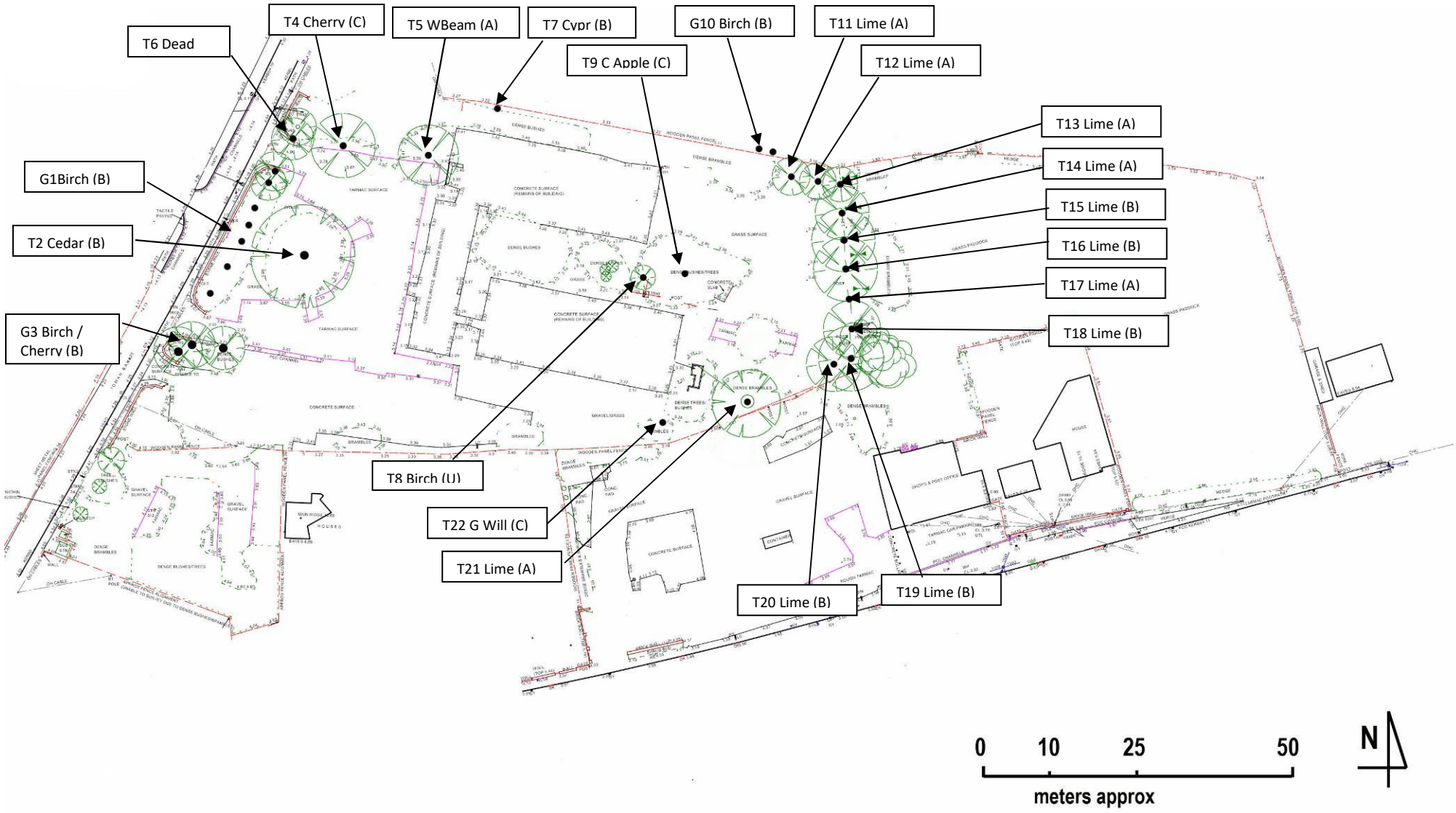
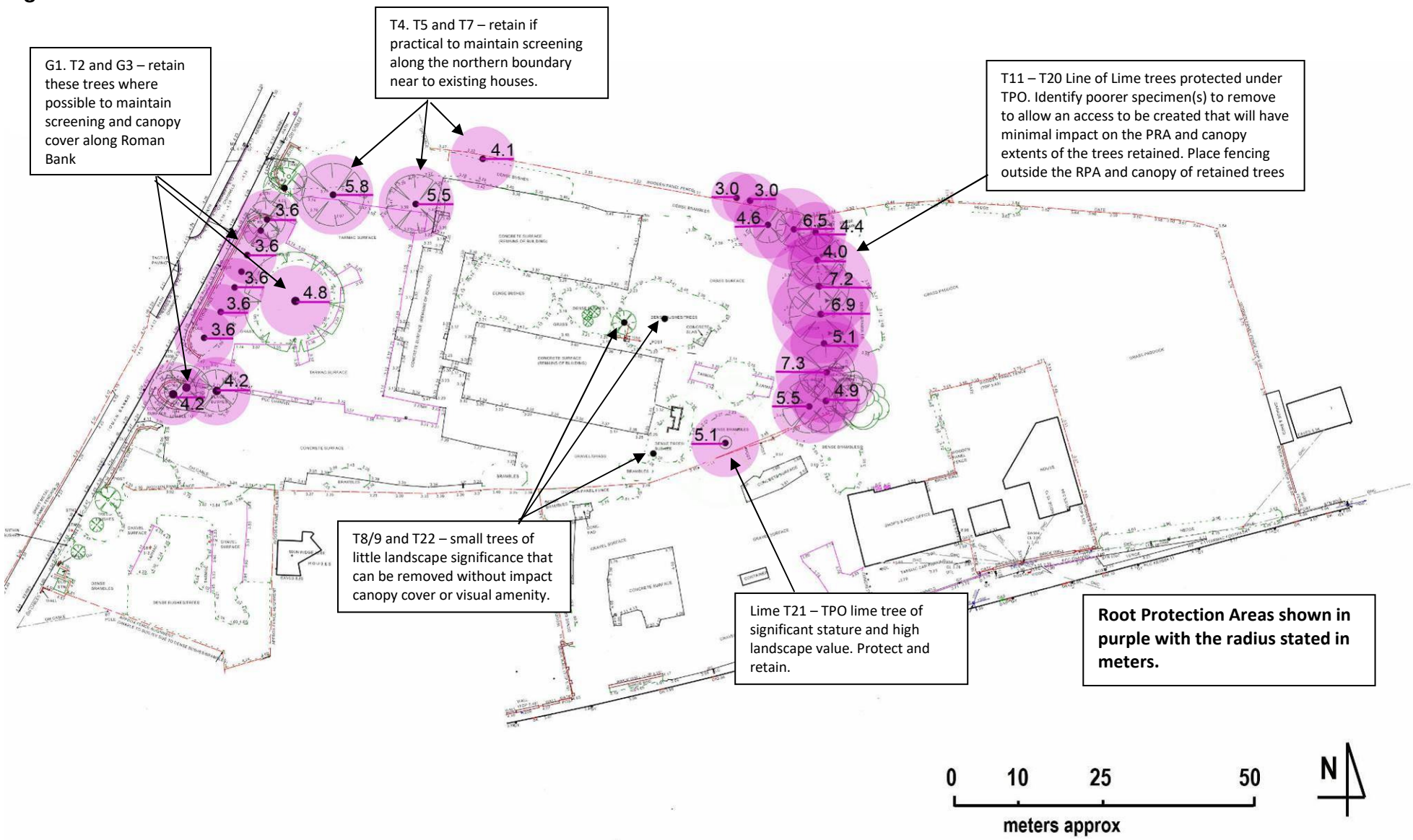


Figure 4: Indicative Constraints Plan



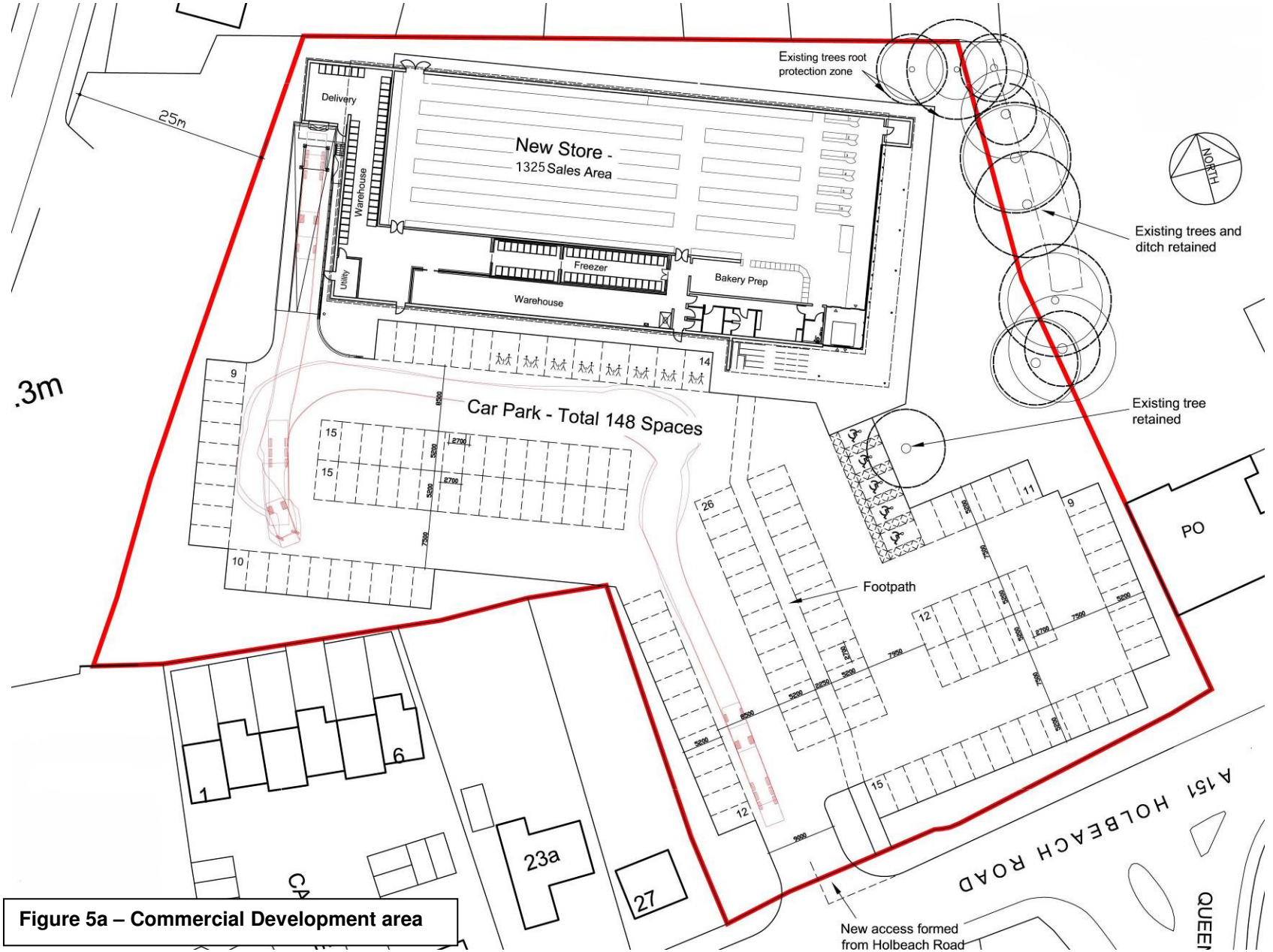


Figure 5a – Commercial Development area



Figure 5B – Residential Housing Area



Figure 5C – Roman Bank Residential Housing Area

4. Tree Management

4.1 Arboricultural Assessment

When this report was originally issued in January 2016 the development proposals for this site were not available. However, subsequently proposals for commercial development of the western part and residential development of the eastern part of the site and along Roman Bank have been prepared and provided for consideration in July 2017. Figures 5A, 5B and 5C provided above show the development proposals for the site.

The development proposals shown that a large commercial building with access from the south. It is proposed to utilise a 25m strip of land adjacent to Roman Bank for residential housing which will require all, or the majority of trees in this area to be removed. The mature Lime trees within the centre of the site are being retained. To the east of these will be an area of residential housing with access from the south.

An indicative assessment based on the details provided in 2017 has been prepared and the table below summarises this.

Tree	Category	Recommendation
G1 Line of 7 Birch	B2	These trees are presumably removed to facilitate the construction of the new houses along Roman Bank to the west of the commercial development area.
T2 Lebanon Cedar	B2	These trees are presumably removed to facilitate the construction of the new houses along Roman Bank to the west of the commercial development area.
G3 Birch x 2 Cherry x 1	B2	These trees are presumably removed to facilitate the construction of the new houses along Roman Bank to the west of the commercial development area.
T4 Cherry	C1	These trees are presumably removed to facilitate the construction of the new houses along Roman Bank to the west of the commercial development area.
T5 Whitebeam	B1	This tree is not shown as being retained within the development layout and is presumably removed.
T6 Dead	N/A	Remove
T7 Cypress	B2	This tree is not shown as being retained within the development layout and is presumably removed.
T8 Birch	U	This tree is not shown as being retained within the development layout and is presumably removed.
T9 Crab Apple	C2	This tree is not shown as being retained within the development layout and is presumably removed.
G10 Birch x 2	B2	Retained. The crown and calculated RPA can be protected within a boundary landscaped area.
T11 Lime	A2	Retained within the site area in a landscaped area with sufficient space to protect the RPA and canopy. Any ivy growth should be removed.

T12 Lime	A2	Retained within the site area in a landscaped area with sufficient space to protect the RPA and canopy. Any ivy growth should be removed.
T13 Lime	A2	Retained within the site area in a landscaped area with sufficient space to protect the RPA and canopy. Any ivy growth should be removed.
T14 Lime	A2	Retained within the site area in a landscaped area with sufficient space to protect the RPA and canopy. Any ivy growth should be removed.
T15 Lime	B2	Retained within the site area in a landscaped area with sufficient space to protect the RPA and canopy. Any ivy growth should be removed.
T16 Lime	B2	Retained within the site area in a landscaped area with sufficient space to protect the RPA and canopy. Any ivy growth should be removed.
T17 Lime	A2	Retained within the site area in a landscaped area with sufficient space to protect the RPA and canopy. Any ivy growth should be removed.
T18 Lime	B2	Retained within the site area in a landscaped area with sufficient space to protect the RPA and canopy. Any ivy growth should be removed.
T19 Lime	B2	Retained within the site area in a landscaped area with sufficient space to protect the RPA and canopy. Any ivy growth should be removed.
T20 Lime	B2	Retained within the site area in a landscaped area with sufficient space to protect the RPA and canopy. Any ivy growth should be removed.
T21 Lime	A2	Retained adjacent to a car parking area. The development proposal shown a disabled parking bay within the calculated RPA and ground protection measures will be required.
T22 Goat Willow	C2	Removed to facilitate the commercial development.

It is likely that the majority of the Birch and other trees along the boundary with Roman Bank will have to be removed in order to facilitate the construction of the new houses along this road. Cedar T2 will be located in a garden area quite close to a new house and will extend its RPA close to the commercial development boundary. This trees is not suitable for retention in such a location and will need to be removed. The Lime trees protected under the TPO can also be retained within the boundary landscape area adjacent to the new building. Sufficient space has been provided on the west side to avoid any impact on the RPA and crown extents. However, the residential development on the eastern side shows houses near to some of the trees although outside the calculated RPA and crown extents. Further assessment of the impact on these trees arising from the residential development may be required once the housing layout has been finalised.

Overall, assuming the key trees within the central area of the site are retained and protected during any proposed development, the impact on the canopy cover within the local landscape will

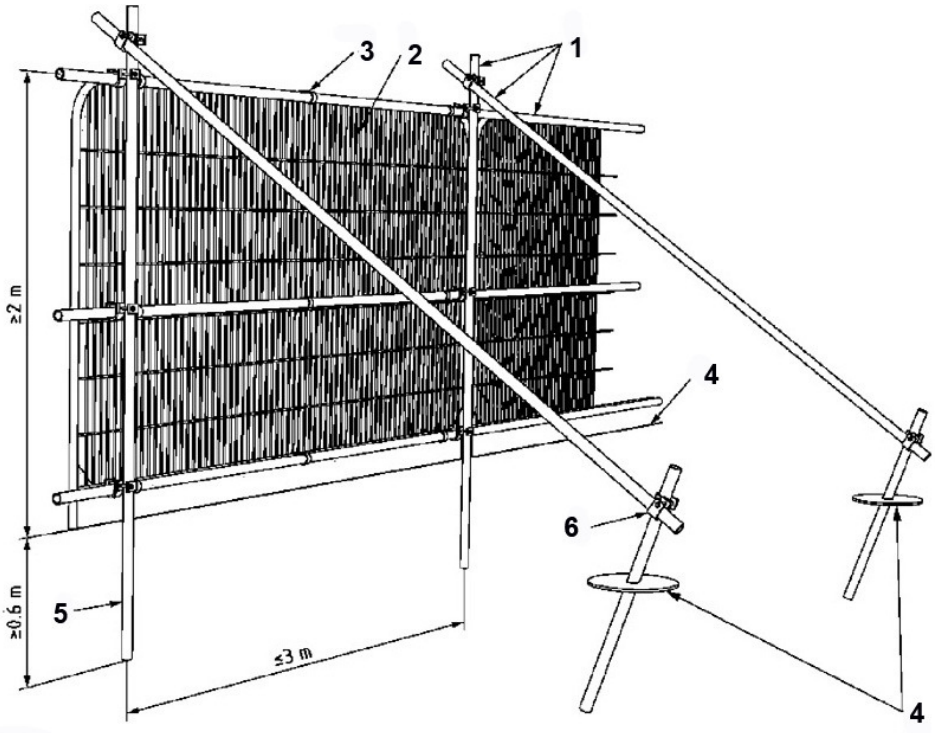
be minimal. Some loss of visual amenity along Roman Bank will be noticeable arising from the removal of the Birch trees along the road frontage but this is not a sensitive location. Once the residential development layout has been finalised a more detailed arboricultural impact report will be required providing details of the ground protection measures and position of protective fencing.

4.2 General Recommendations

Any trees retained and incorporated within the proposed development will need to be adequately protected during any approved development works. As a general rule at this site, measures to protect trees should follow the best practice principles set out in BS5837: Trees in Relation to Design, Development and Construction (2012). Prior to any construction or development work proceeding, the RPA's of individual trees to be retained should be marked out using the distances provided in the table within Appendix 1. Marking out should be completed by a person with arboricultural or horticultural expertise as individual trees will have root zones that may be affected by local conditions and allowances will need to be made to accommodate this. The best practice principles have been broadly summarised below.

- All trees retained adjacent to the site should be protected by barriers or ground protection around the calculated Root Protection Area (RPA) and as indicated on any Tree Constraints Plan (TCP) that may be produced in association with the assessment.

- Any fencing required should be erected prior to commencement of construction and before demolition including erection of any temporary structures. Once set up fences should not be removed or altered without prior consultation with the arboricultural advisor.



1. Standard scaffold poles
2. Heavy Guage 2m tall galvanised tube and weld mesh infill panels
3. Panels secured to uprights and cross members with wire ties
4. Ground Level
5. Uprights driven into ground until secure (up to 0.6m)
6. Standard scaffold clamps

- Arrangements should be made for an arboriculturist to supervise works and tree protection where trees are particularly vulnerable or sited close to access points.

- Pre-development works may be undertaken prior to the installation of fencing with the agreement of the local planning authority.

- All tree works should follow best practice procedures as set out in BS 3998 (2010). All trees should be maintained in good condition on site and be inspected annually (where overall condition requires) or every 2 years and after any major storm events, with safety a priority.

- Fencing should be clearly visible and suitable for the location, type and proximity of construction activity.

- It may be appropriate on some sites to use temporary site offices as components of the protection barriers.

- Where it has been agreed and shown on a Tree Protection Plan, construction access may take place within the RPA if suitable ground protection measures are in place (e.g. existing surfaced car park areas). In other areas this may comprise single scaffold boards over a compressible layer laid onto geo-textile materials for pedestrian movements. Vehicular movements over the RPA will require the calculation of expected loading and may require the use of proprietary protection systems.

- Once areas around trees have been protected by fencing, any works on the remaining site area may be commenced providing activities do not impinge on protected areas. Notices should be placed on fencing to indicate that operations are not permitted within the fenced area.

- Wide or tall loads etc. should not come into contact with retained trees. Banksman should supervise transit of vehicles, jibs, booms etc. where this is in close proximity to retained trees.

- Oil, bitumen, cement or other material that is potentially injurious to trees should not be stacked or discharged within 10m of a tree bole. No concrete mixing should be done within 10m of a tree. Allowance should be made for the slope of ground to prevent materials running towards the tree.

- No fires will be lit where flames are anticipated to extend to within 5m of tree foliage, branches or trunk, taking into consideration wind direction and size of fire.

- Notice boards, telephone cables or other services should not be attached to any part of a retained tree.

- Where it is deemed necessary to operate a wide or tall load, plant bearing booms, jibs and counterweights or other such equipment, as part of construction works, and such equipment would have potential to cause injurious contact with crown material i.e. low branches and limbs, of retained trees within the RPA fencing, it is best advised that appropriate, but limited tree surgery, be carried out beforehand to remove any obvious problem branches. This is classed as 'Facilitation Pruning' within BS 5837 (2012). Any such pruning should be undertaken in accordance with a specification prepared by an arboriculturalist.

- It is advised that a Pre-Commencement Site Meeting is held with contractors who are responsible for operating machinery, as described above. To firstly highlight the potential for damage occurring to tree crowns and to ensure that extra care is applied when manoeuvring machinery during such operations within close proximity to retained trees to avoid any contact.

- In the event of having caused any such branch or limb damage to retained trees it is strongly recommended that suitable tree surgery be carried out, in accordance with BS 3998 (2010) Recommendations for Tree Work, to correct the damage, upon completion of development.

- All of the above precautionary measures should be applied to minimise the effect of any damage to long-term tree health and safety.



Christopher Barker CEnv dipHort

Appendix 1: BS5837 Tree Schedule

Key:	Measurements	Age – Class	Overall Condition	BS 5837 2005 : Cascade Chart for Quality Assessment/Retention Category	Symbols:
	MS – Multi-stemmed	YNG-MAT-Young Mature	G – Good	A – High	< = less than
	Ht - Height in metres	SM – Semi-mature	F – Fair	B – Moderate	~ = approximately
	Stem – Stem Diameter at 1.5m in mm	Mat – Mature	P – Poor	C – Low	> = greater than
	Crown – Crown spread in metres	OM – Over mature	D – Dead	R – Trees for Removal	
	TD - Trunk division (height in metres)	**Est Yrs –** estimate of years remaining (>40 years; 20 –40 years; <20 years)		**Sub-categories:** **1** = mainly arboricultural values **2** = mainly landscape values **3** = mainly cultural values.	

RPA = Root protection area (equivalent to a circle with a radius 12 x the stem diameter for single stem trees and 10 x the basal diameter for trees with more than one stem arising below 1.5m above ground level).

Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Structural condition	Recommendations 2016	BS 5837 Category	RPA Radius (m)
G1	Line of 7 Birch *Betula pubescens*	12 - 13	<300	Varies to 4	2	SM	20+	F	Line of trees with merging canopies and a dense under canopy of Elder and Laurel. Ivy present on most of the Birch on trunks. No individual tree of significant stature. Negligible roost potential. No structural faults noted from ground level.	Retain if practical to maintain screening and canopy cover along Roman Bank. Remove ivy growth.	B2	3.6
T2	Lebanon Cedar *Cedrus libani*	15	Est 400	N-4 S-4 E-5 W-4	4	SM	20+	F	Single trunk with dense ivy cover and a dense under canopy of Elder and Bramble. Upright horizontally branching canopy on single main leader. Significant branch broken on the northern side of the crown. Low roost potential. No significant structural faults noted from ground level but dead wood needs to be removed.	Remove dead wood and retain if it is practical to do so. Clear away dense under canopy shrubs and also ivy growth on the trunk.	B2	4.8

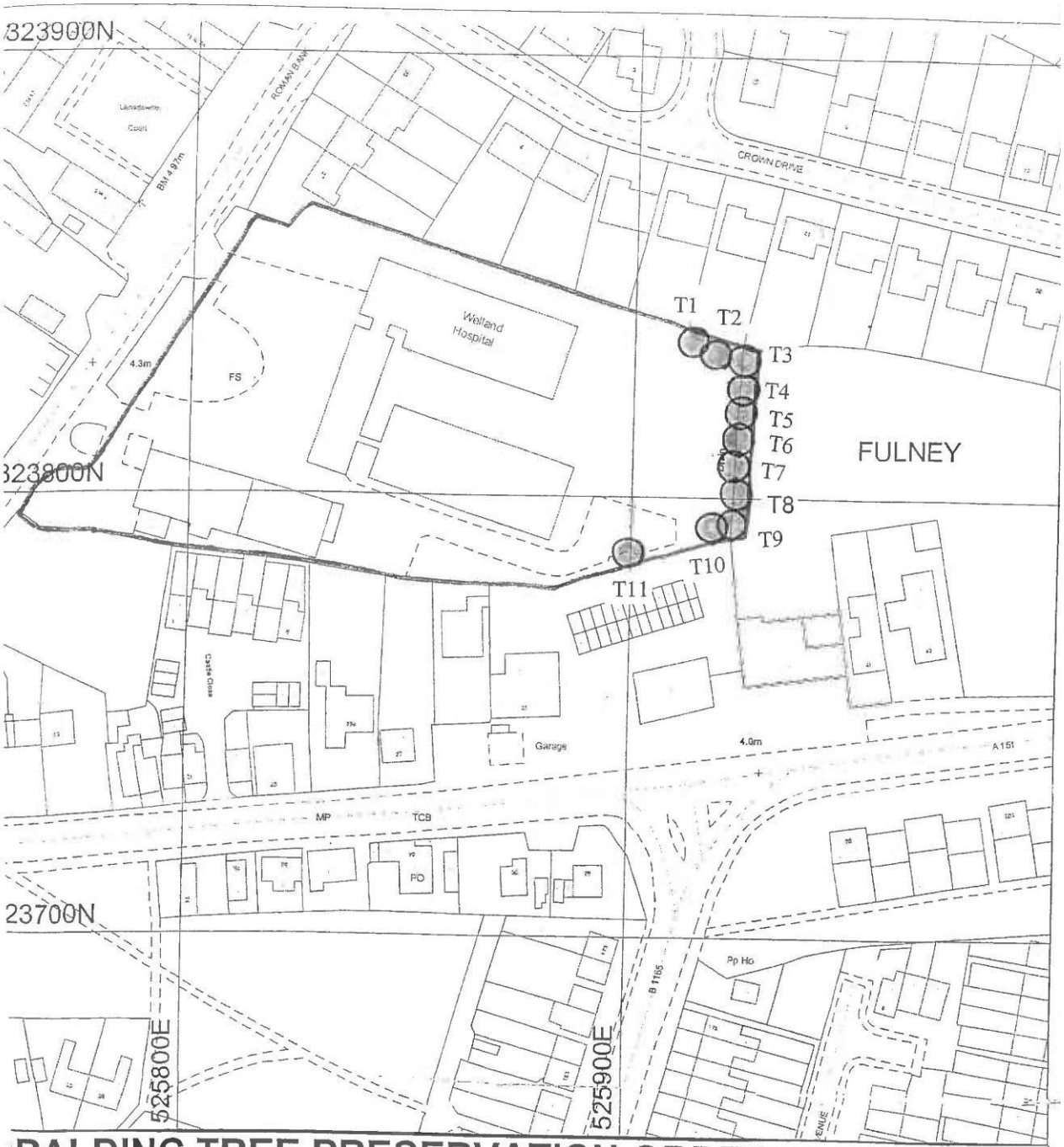
Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Structural condition	Recommendations 2016	BS 5837 Category	RPA Radius (m)
G3	Birch x 2 *Betula pubescens* Cherry x 1 *Prunus avium*	12	<355	Varies to 4	0	SM/M	20	F	Two Birch trees close to the boundary wall and one small Cherry to the interior with merging canopies. The cherry has a sparse crown due to suppression and there is ivy into the canopy. Negligible roost potential. No structural faults noted from ground level.	The position and crowing if these three trees suggests it may be prudent in the longer term to consider replacing these with better quality specimens situated where they have greater space to develop away from structures.	B2	4.2
T4	Cherry *Prunus avium*	7	485	N-4 S-4 E-6 W-3	2	M	10	F	Single trunk dividing at1.5m agl into an open irregular broad headed canopy with ivy on the trunk and into canopy interior. Negligible roost potential. No structural faults noted from ground level.	Retain if practical to do so to maintain screening to nearby residential house. Remove ivy growth.	C1	5.8
T5	Whitebeam *Sorbus aria*	6	460	N-5 S-5 E-5 W-5	2	M	20	G	Single trunk divides at 1.5m into a round headed ascending canopy Negligible roost potential. No structural faults noted from ground level.	Good quality tree providing screening to the north boundary. Retain if practical and incorporate into the development scheme.	B1	5.5
T6	Dead	-	-	-	-	-	-	-	Negligible roost potential. No structural faults noted from ground level.	Remove	N/A	N/A
T7	Cypress *Cupressocyparis sp*	8	345	N-2 S-2 E-2 W-2	2	SM	10 - 20	G	Single trunk supporting a lightly branching columnar canopy Negligible roost potential. No structural faults noted from ground level.	Not of high landscape value but provides screening to the northern perimeter. Retain if practical or replace with a native tree.	B2	4.1
T8	Birch *Betula pubescens*	6	150	N-2 S-2 E-2 W-2	1	Y	10	F	Single trunk supporting an open upright lightly branching canopy. Dead wood at top leader Negligible roost potential. No structural faults noted from ground level.	In decline. Consider removing as part of any proposed development.	U	1.8

Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Structural condition	Recommendations 2016	BS 5837 Category	RPA Radius (m)
T9	Crab Apple *Malus sylvestris*	6	245	N-4 S-4 E-4 W-4	1	M	10	G	Single trunk supporting a dense broad headed canopy. Negligible roost potential. No structural faults noted from ground level.	Small tree of limited landscape significance. Likely to be removed due to central position.	C2	2.9
G10	Birch x 2 *Betula pendula*	7	<250	N-3 S-3 E-3 W-3	2	SM	20	G	2 x single trunk specimens in an adjacent garden. The canopies extend 2m over the site boundary Negligible roost potential. No structural faults noted from ground level.	Protect the canopies and RPA where these extend into the site area.	B2	3.0
T11	Lime *Tilia europaea*	7	390	N-3 S-3 E-3 W-3	2	SM	20 - 40	G	Single trunk supporting a round headed balanced crown that has previously been pollarded Low roost potential. No structural faults noted from ground level.	(TPO T1) Retain within the site area and protect the RPA and canopy.	A2	4.6
T12	Lime *Tilia europaea*	7	545	N-4 S-4 E-4 W-4	3	M	20 - 40	G	Single trunk supporting a round headed balanced crown that has previously been pollarded Low roost potential. No structural faults noted from ground level.	(TPO T2) Retain within the site area and protect the RPA and canopy.	A2	6.5
T13	Lime *Tilia europaea*	8	370	N-4 S-4 E-4 W-4	2	M	20 - 40	G	Single trunk supporting a round headed balanced crown that has previously been pollarded Low roost potential. No structural faults noted from ground level.	(TPO T3) Retain within the site area and protect the RPA and canopy.	A2	4.4
T14	Lime *Tilia europaea*	10	335	N-5 S-5 E-5 W-5	2	M	20 - 40	G	Single trunk supporting a round headed balanced crown that has previously been pollarded. Minor ivy growth on trunk and into crown. Low roost potential. No structural faults noted from ground level.	(TPO T4) Retain within the site area and protect the RPA and canopy. Remove ivy growth.	A2	4.0

Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Structural condition	Recommendations 2016	BS 5837 Category	RPA Radius (m)
T15	Lime *Tilia europaea*	10	605	N-5 S-5 E-5 W-5	3	M	10 - 20	G	Single trunk supporting a round headed balanced crown with rather suppressed development due to crowding. Previously pollarded. Minor ivy Moderate roost potential. No structural faults noted from ground level.	(TPO T5) One of a line of similar trees. This is one of the specimens with poor canopy development due to crowding and could be considered a candidate for removal if additional canopy space is required.	B2	7.2
T16	Lime *Tilia europaea*	11	575	N-5 S-5 E-5 W-5	3	M		G	Single trunk supporting a round headed balanced crown previously pollarded. Two leaders from 1.5m agl with rather suppressed canopy development. Low roost potential. No structural faults noted from ground level.	(TPO T6) One of a line of similar trees. This is one of the specimens with poor canopy development due to crowding and could be considered a candidate for removal if additional canopy space is required.	B2	6.9
T17	Lime *Tilia europaea*	10	430	N-4 S-4 E-4 W-4	3	M	20 - 40	G	Single trunk supporting a round headed balanced crown that has previously been pollarded. Minor ivy growth on trunk and into crown. Moderate roost potential. No structural faults noted from ground level.	(TPO T7) Retain within the site area and protect the RPA and canopy. Remove ivy growth.	A2	5.1
T18	Lime *Tilia europaea*	11	615	N-5 S-5 E-5 W-5	3	M	20	G	Single trunk supporting a round headed balanced crown previously pollarded. Very dense ivy on trunk and into canopy Two leaders from 2,5m agl. Moderate roost potential. No structural faults noted from ground level.	(TPO T8) Retain within the site area and protect the RPA and canopy. Remove ivy growth.	B2	7.3

Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Structural condition	Recommendations 2016	BS 5837 Category	RPA Radius (m)
T19	Lime *Tilia europaea*	10	415	N-3 S-6 E-6 W-4	4	M	20	F	Single trunk dividing into three leaders into a broad headed canopy suppressed to north side and crowded on the west side. Dense ivy growth on the trunk and into the canopy. Moderate roost potential. No structural faults noted from ground level.	(TPO T9) One of a line of similar trees. This is one of the specimens with poor canopy development due to crowding and could be considered a candidate for removal if additional canopy space is required.	B2	4.9
T20	Lime *Tilia europaea*	10	460	N-5 S-6 E-3 W-6	3	M	20	F	Single trunk dividing into two leaders at 3m agl supporting an open irregular canopy crowded on the east side. Low roost potential. No structural faults noted from ground level.	(TPO T10) Retain within the site area and protect the RPA and canopy.	B2	5.5
T21	Lime *Tilia europaea*	10	430	N-5 S-5 E-5 W-5	2	M		F	Single trunk dividing into a round headed balanced crown at 1.5m agl Low roost potential. No structural faults noted from ground level.	(TPO T11) Retain within the site area and protect the RPA and canopy. Provides screening to the south boundary.	A2	5.1
T22	Goat Willow *Salix caprea*	6	400E	N-4 S-4 E-4 W-4	0	M		F	Coppiced regeneration from ground level with many small trunks supporting a round headed canopy Low roost potential. No structural faults noted from ground level.	Not of high landscape value.	C2	4.8

SOUTH HOLLAND DISTRICT COUNCIL



SPALDING TREE PRESERVATION ORDER NO. 66 / 2005

LAN: TF525924 323819

CALE: 1:1250

ATE: 21 JULY 2005

AMETER OF TREE CIRCLE(S) IS AGRAMMATIC ONLY, AND NOT TO Y SCALE

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