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# Arboricultural Report and Impact Assessment

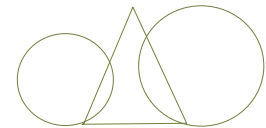
Site – Tye Barn Cottage and Micklemas, Barking Tye, Ipswich, IP6 8HU

Client – Mr Ruffell

Contact – Ian Smillie Architectural Services 75 Camden Road, Ipswich IP3 8JN

Date - 13-11-2023

To be read in conjunction with – Tree Survey Plan Drawing No. IS/TBC/01



**Moore**Partners Ltd

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## **1.0 Scope of works and client brief.**

1.1 Ian Smilie has requested a survey of the trees around the garden of Tye Barn and Michaelmas Cottages. The survey is to accompany the planning application for the demolition of the existing bungalows and construction of two houses. The report should be read in conjunction with the tree constraints and protection plan, drawing number IS/1WWC/01.

1.2 The report was to:

- assess the trees in line with BS5837:2012.
- prepare tree constraints plan.
- Address mitigation required as a result of the implications assessment.
- Provide an outline tree protection plan to demonstrate what level of retention and protection of the trees is feasible.

## **2.0 Summary**

2.1 Currently the site has two bungalows with linked garages. Accessed from the B1078 by an existing drive. Hawthorn hedges run along the north and south boundaries of the gardens. To the west of the site is a small orchard, this is separated from the garden area by an existing large pond. Within the gardens are a number of small trees including rowan, Norway maple and Lawson cypress.

The proposed development is for demolition of the existing buildings and construction of two new houses with cart lodges, car parking and associated landscaping.

The highly visible hedges along the front of the site, which are important in the landscape will be retained, along with the young ash tree at the front. The weeping willow and the hawthorn around the pond will also be retained. The orchard to the west of the pond will not be impacted on. Seven low quality trees with limited value in the wider landscape would be removed including a Norway maple, cherry plum and Lawson cypress. The removal of these trees would have little impact on the landscape.

The hedge along the current south garden boundaries would be removed but could be replaced with a new native hedge, including some native trees, along the south boundary as there is ample space for a new hedge line and tree planting.

The cart lodge to the east of the site would be on the edge of the root protection area (RPA) of two trees, a young ash T2 and a cherry T4. Though footings are outside the RPA access over it would be required to facilitate the build. Additional ground protection would be laid over the root area within the site to facilitate access and minimise impact on the root area. The cart lodge would encroach into approximately 4 m sq of the root area

of the ash T5. This is a small percentage and would not be expected to have a significant impact on the tree. Again, access will be required over the RPA to facilitate the build and the RPA would be protected as for T2 and T4. Both trees have a current ground clearance of 4m over the building and it is on the edge of the crown spreads. The building should sit below the crowns as the trees' mature.

All other trees on the site would be retained and protected with a construction exclusion zone (CEZ) enclosed by tree protection fencing, in line with BS5837 recommendations. (See section 7.3 of this report and drawing IS/TBC/01)

The implications assessment chart, section 7 of this report, outlines the implications and mitigation required for each tree.

### 3.0 Site

- 3.1 The site is a pair semi-detached bungalows to the south of the B1078. The site is accessed directly off the B1078 via an existing entrance. A long the northern boundary of the site there is a hedgerow of predominantly hawthorn. The southern boundary also has an existing hedgerow. There are three areas to the site the bungalows and gardens, a pond to the west beyond which is an area of orchard. To the south is an area currently used for arable crops. Within the gardens there are several early mature small trees. Most of the trees are to the west of the pond. This area was not surveyed as it is outside the proposed development area and protected from the development works by the existing pond.



fig 1 – site outlined in red survey area in yellow,

- 3.1 Soils and levels  
The site slopes from the east down to the west. A desk top survey shows the soils in the area are Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils as shown by the Cranfield Soil Institute; source Landis.org. Bedrock geology is Newhaven Chalk Formation - Chalk, source British Geological Survey. This is a generic desk top analysis and not a detailed soil survey.

## **4.0 Statutory protection**

### **4.1 Trees legislation**

#### **Tree Preservation Order (TPO)**

Can be served on individual trees or groups of trees. The law requires written permission to be gained from the local authority prior to carrying out any works to a tree either above or below grounds. Failure to gain consent can be seen as wilful damage and lead to prosecution and significant fines. It remains the tree owner's responsibility to check TPO status prior to carrying out any works.

#### **Conservation Area Order**

If a site lies within a conservation area designated by the local authority, trees over 75mm in stem diameter 1.5m high, are afforded protection under this statutory designation. The local authority must be notified in writing of any proposed works to a tree in a conservation area, or any activity that could affect the above or below ground parts of the tree. They have 6 weeks in which to object to the proposed works. Failure to comply with this can lead to prosecution and a fine.

#### **Town and Country Planning Act 1948**

The local planning authority has duty to ensure that when granting planning permission 'adequate provision is made for the preservation and planting of trees. This can include imposing planning conditions.

#### **National Planning Policy Framework Section 11**

This states that 'the local planning system should contribute to and enhance the natural and local environment by protection and enhancing valued landscape.' This includes recognising the benefits of ecosystem services and protecting biodiversity through protection and enhancement.

## 4.2 Wildlife legislation

There are statutory protections on British fauna. In particular bats and nesting birds can be impacted on when undertaking works on and around trees. Any works to trees should carry out checks and comply with current legislation.

### Bats

All British bats, as well as their roosts and breeding sites are protected under British Law. The Wildlife and Countryside Act 1981 schedule 5 and The Habitat Regulations make it an offence to

- Deliberately disturb bats
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport a bat or any part of a bat

### Birds

The Wildlife and Countryside Act 1981 makes it an offence to

- Intentionally kill injure or take a wild bird
- Destroy a nest while in use or take or destroy eggs.

Under **The Countryside Rights of Way Act** 'unknowingly' committing an offence is no longer a defence. It is therefore imperative that appropriate action is taken by the landowner, or contractor, prior to commencing any works on trees that could be potential nesting sites or bat roosting sites. This may include, but is not limited to, trees with cavities, splits or holes and heavy infestations of ivy, particularly in reference to bats. Appropriate risk assessments should be made before works commence by competent persons.

## 5.0 Proposed Development

- 5.1 The proposal is for the demolition of the existing bungalows and construction of two new houses with cart lodges, parking, and associated landscaping, see Fig 2 and drawings by Ian Smillie.

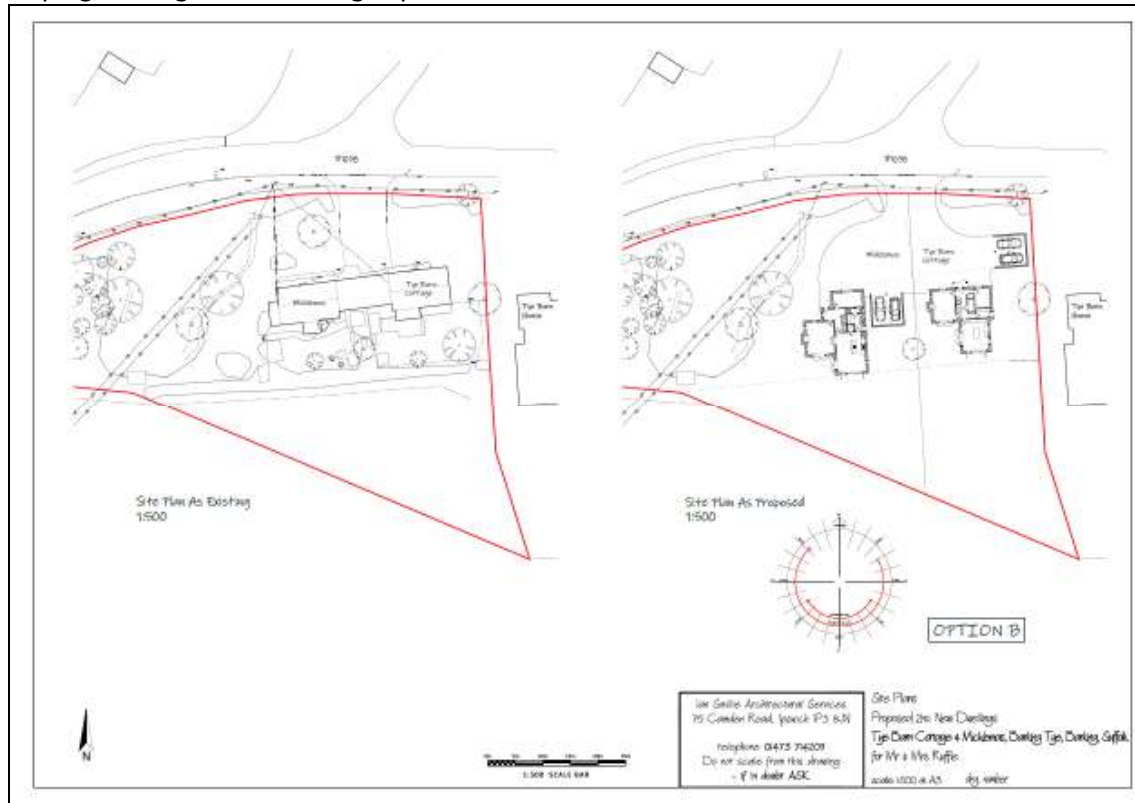


Fig 2 – Proposed site layout

- 5.2 Reference documents supplied.

Drawing references	Author	Title	Date
20195- 1207-00	Smillie	existing ground level survey	
2023038/02	Smillie	Site plans	



## **6.0 Tree assessment**

### **6.1 Survey method**

The report is based on a ground level visual tree assessment, using recognised non-invasive techniques, (Mattheck). It is an external inspection only. Condition of the tree was assessed only on date of inspection. Physiological and structural assessments are valid for a period of no more 12 months. It remains valid only if no environmental changes occur around the tree. If any changes should occur, re-inspection should be carried out.

Environmental changes around the tree will render the report invalid.

There has been no assessment of potential for indirect damage because of soil heave or subsidence that trees may have on existing properties, this is outside the remit of this report.

No internal diagnostic equipment was used, and no pest and disease samples were taken or sent away for analysis. No soil samples were taken for testing. If Soil analysis is required, a soil engineer should be employed. There has been no examination of existing drains or service runs for the presence of roots. No trial pits were dug to examine roots at the time of the tree survey.

The trees were surveyed in line with the process laid out in BS5837:2012. The trees were assessed against the criteria laid out in the British Standard. Data was collated on species, age, height, crown spread, stem diameter at 1.5m high. A base line assessment of physiological and structural condition was made. All trees were categorised in line with BS5837:2012 guidance. Trees of the highest quality were rated 'A', good quality 'B'. Trees rated 'C'; are worthy of retention but of lower quality. Those given an 'R' rating are poor quality with either less than 10 useful life years remaining, small and of limited significance in the wider landscape, or could easily be replaced in a new landscape scheme with a tree of similar size and impact. Greater detail on the rating is given in the key in below.

Trees under 75mm in diameter were not recorded in line with BS5837 guidance. The details of the trees as required under BS5837:012 were recorded in tree data for this report.

Where trees have been noted for works an assessment of condition has been made but this survey is an overview and cannot be relied on as a full health and safety assessment of the trees.

A topographical survey was available for some the tree positions within the site. Trees that were not on the topographical survey were plotted using simple triangulation techniques, though care is taken discrepancies can occur and if great accuracy is require a topographical survey should be commissioned. The tree protection plan is based on this, and the current proposed site lay out available at the time of writing the report.

## Key to survey schedule

**Tree number on plan** - T1 individual tree on the site

### BS 5837:2012 Age class

Y – Young first third of life expectancy, EM – Early mature second third of life expectancy, Ma – Mature final third of life expectancy, OM – Over mature showing signs of senescence, V – Veteran over mature and of special conservation value

**Remaining years in age bands** - <10, 10-20, 20-40, >40

**Physiological or structural condition** - **Good** no significant health problems, or no significant structural problems, **Fair** some symptoms of ill health, or currently insignificant or remediable structural problems, **Poor** significant symptoms of ill health, or significant structural problems

**Moribund** (physiological only in serious and irreversible decline, **Dead** (physiological only) not alive

### Other Abbreviations.

Esti estimated

M/S multi stem the number of stems and diameter are given in line with BS5837:2012 requirements.

N north, E east, S south, W west

### BS 5837:2012 Category of quality/retention

Category	Description		
<b>A</b> Green	Trees of high quality A1 – Mainly arboricultural value A2 - Mainly landscape value A3 – Mainly cultural value, including conservation	<b>C</b> Grey	Trees of low quality C1 – Mainly arboricultural value C2 – Mainly landscape value. C3 – Mainly cultural value, including conservation
<b>B</b> Blue	Trees of moderate quality B1 – Mainly arboricultural value B2 - Mainly landscape value B3 – Mainly cultural value, including conservation	<b>U</b> red	Trees that are in a poor condition, so that any existing value will be lost in the next 10 years, and should, for reasons of sound arboricultural management, be removed.

## 6.2 Tree data

No.	Species English & Latin	Approx Height (M)	Dia. @1.5 (CM)	Spread (M)	Height Crown Clearance (m)	Age Class	Physiological condition	Structural condition	Preliminary management recommendation	Years remaining	Category grading
T1	<i>Ash</i> <i>Fraxinus excelsior</i>	7	12 12	N 2.5 S 2.25 E 2.5 W 2.25	3.0 First main limb at 3.0m on the west side	Em	Fair	Fair/poor Potential weak fork at 0.5m high with included bark and overhead cables within the crown	Na	10 – 20	C / u
Outside the site on the verge. The overhead cables run through the crown and it will need cyclical pruning to keep the cables clear.											
T2	<i>Ash</i> <i>Fraxinus excelsior</i>	7	Esti 20	N 2.75 S 3.0 E 2.75 W 3.0	4.2 First main limb at 4.0m on the east side	Em	Fair	Fair	Na	20 – 40	C 2,3
Located close to the boundary in the neighbouring garden. It could only be surveyed from the site and the condition and structural assessment are based on a visual survey from within the site only. Some measurements were estimated due to access.											
T3	<i>Holly</i> <i>Ilex aquifolium</i>	4	Esti 10 8	N 2.0 S 2.2 E 1.0 W 1.0	2.0 Not over site	Y	Fair	Fair	Na	20 – 40	C 2,3
Located close to the boundary in the neighbouring garden. It could only be surveyed from the site and the condition and structural assessment are based on a visual survey from within the site only. Some measurements were estimated due to access.											
T4	<i>Cherry</i> <i>Prunus avium</i>	8	Esti 20 20	N 3.0 S 3.0 E 2.0 W 2.0	Not over site	Em	Fair	Fair	Na	20 – 40	C 2,3
Located close to the boundary in the neighbouring garden. It could only be surveyed from the site and the condition and structural assessment are based on a visible survey from within the site only. Some measurements were estimated due to access.											

No.	Species English & Latin	Approx Height (M)	Dia. @1.5 (CM)	Spread (M)	Height Crown Clearance (m)	Age Class	Physiological condition	Structural condition	Preliminary management recommendation	Years remaining	Category grading
T5	<i>Cherry</i> <i>Prunus avium</i>	9	Esti 30 30	N 4.5 S 4.0 E 4.0 W 4.0	4.0 First main limb at 3.5m on the west side	Ma	Fair	Fair	Na	10 – 20	C 2,3
<p>Located close to the boundary in the neighbouring garden. It could only be surveyed from the site and the condition and structural assessment are based on a visible survey from within the site only. Some measurements were estimated due to access.</p>											
T6	<i>Ash</i> <i>Fraxinus excelsior</i>	7	16 12	N 2.25 S 2.5 E 1.25 W 3.3	1.2 First main limb at 2.0m on north and west sides	Em	Fair	Fair	Na	20 – 40	C 3
T7	<i>Norway maple</i> <i>Acer platanoides</i>	7	29	N 3.0 S 2.6 E 2.6 W 3.0	2.2 First main limb at 2.2m all round	Em	Fair	Fair	Na	20 – 40	C 3
T8	<i>Rowan</i> <i>Sorbus aucuparia</i>	4	13	N 2.0 S 0.5 E 2.0 W 1.2	1.7	Y	Fair	Fair	Na	20 – 40	C 3

No.	Species English & Latin	Approx Height (M)	Dia. @1.5 (CM)	Spread (M)	Height Crown Clearance (m)	Age Class	Physiological condition	Structural condition	Preliminary management recommendation	Years remaining	Category grading
T9	<i>Purple cherry plum</i> <i>Prunus pissardi nigra</i>	7	30	N 2.75 S 2.5 E 3.0 W 2.4	2.0 First main limb at 0.6m on the south side	Em	Fair	Fair	Na	20 – 40	C 2
T10	<i>Holly variegated</i> <i>Ilex aquifolium cvr</i>	4	19	N 2.0 S 2.2 E 2.0 W 1.0	1.2	Y	Fair	Fair	Na	20 – 40	C 2,3
T11	<i>Magnolia</i> <i>soulangeana</i>	4	15	N 2.0 S 2.2 E 2.0 W 1.0	1.2	Y	Fair	Fair	Na	20 – 40	C 2,3
T12	<i>Weeping willow</i> <i>Salix x chrysocoma</i>	3.5	61	N 3.5 S 3.7 E 4.0 W 3.7	0	Ma	Fair	Poor See below			
<p>The tree has been heavily reduced in the past below the overhead cables resulting in large wounds. These will be particularly prone to decay as willow is a species that is poor at compartmentalising decay.</p> <p>Dense ivy on the crown and scaffold makes a full structural assessment not possible of the trunk.</p>											

No.	Species English & Latin	Approx Height (M)	Dia. @1.5 (CM)	Spread (M)	Height Crown Clearance (m)	Age Class	Physiological condition	Structural condition	Preliminary management recommendation	Years remaining	Category grading
T13	<i>Hawthorn</i> <i>Crataegus monogyna</i>	4	20 20 15	N 2.75 S 3.0 E 3.0 W 2.78	1.2	Ma	Fair	Fair	Na	20 – 40	C 2,3
T14	<i>Blue lawson cypress</i> <i>Chamaecyparis</i> <i>lawsoniana</i>	6	20	N 2.0 S 2.0 E 2.0 W 2.0	0	Em	Fair	Fair	Na	20 – 40	C 2
T15	<i>Lawson cypress</i> <i>Chamaecyparis</i> <i>lawsoniana</i>	3.5	15	N 1.2 S 1.2 E 1.2 W 1.2	0	Em	Fair	Fair	Na	20 – 40	C 2
T16	<i>Hazel</i> <i>Corylus avellana</i>	5	10 4	N 2.0 S 2.0 E 2.0 W 1.5	1.0	Ma	Fair	Fair	Na	20 – 40	C 2

No.	Species English & Latin	Approx Height (M)	Dia. @1.5 (CM)	Spread (M)	Height Crown Clearance (m)	Age Class	Physiological condition	Structural condition	Preliminary management recommendation	Years remaining	Category grading
T17	<i>Laburnum</i> <i>Laburnum spp</i>	4	12	N 2.5 S 1.5 E 1.0 W 1.5	1.8	Em	Fair	Fair / poor Weak fork at 1.0m high	Na	10	C / u
H1	<i>Hawthorn</i> <i>Crataegus monogyna</i>	2.1	2 x 15	As plan	0	Ma	Fair	Fair Has been trimmed regularly	Na	10 – 20	C 2,3
H2	<i>Mixed native</i>	1.2	Av 13	As plan	0	Ma	Fair	Fair	Na	20 – 40	C 2,3
H3	<i>Hawthorn</i> <i>Crataegus monogyna</i>	4	Av	As plan	0	Ma	Fair	Fair	Na	20 – 40	C 2,3

No.	Species English & Latin	Approx Height (M)	Dia. @1.5 (CM)	Spread (M)	Height Crown Clearance (m)	Age Class	Physiological condition	Structural condition	Preliminary management recommendation	Years remaining	Category grading
H4	<i>Beech</i> <i>Fagus sylvatica</i>	2.2	Av 6	As plan	0	Y	Fair	Fair	Na	20 – 40	C 2,3



## 7.0 Arboricultural Impact Assessment

7.1 The arboricultural impact is based on the following parameters.

- All trees that are to be retained will be protected by tree protection fencing in line with BS5837:2012 section 6.2
- Should be read in conjunction with Tree Constraints and Protection Plan drawing number IS/TBC/01.

7.2 The root protection area (RPA) is an area of ground around the tree that should be retained, undisturbed, for the benefit of the tree roots. The RPA is calculated, as set out in BS5837:2012. This determines the square metres of ground area that should be retained. This is often shown as a circle, with a radius as determined by the calculation. However, it is not always essential that this is a circle, and, in some situations, the geography of the site can make an alternative shape more appropriate. It must still equate to the same area as the circle calculated under the approved calculation.

Tree no.		RPA m/sq	Radi of RPA (M)	Tree implications assessment	Mitigation
T1	Ash	13	2.00	Distant enough from the proposals not to be affected.	Protect the tree with a construction exclusion zone (CEZ) for the duration of the build, enclosed with tree protection fencing in line with BS5837, section 7.3 below and drawing IS/TBC/01
T2	Ash	18	2.40	<p><b>Crown</b> The new garage is on the edge of the crown spread</p> <p><b>Roots</b> The garage is on the edge of the root protection area (RPA) Access will be required over the RPA to facilitate the build. The water demand of the tree will need to be considered in the design of the footings.</p>	<p><b>Crown</b> The tree has a good ground clearance of 4.2m in the area of the garage. The existing 1.8m high close board fence will act as tree protection fencing.</p> <p><b>Roots</b> The root area within the site will be protected with additional ground protection for the duration of the build in line with BS5837, see section 7.4 below and drawing IS/TBC/01.</p>

T3	Holly	7	1.50	<p><b>Crown</b> The new garage is outside the crown spread</p> <p><b>Roots</b> The garage is on the edge of the root protection area (RPA) Access will be required over the RPA to facilitate the build. The water demand of the tree will need to be considered in the design of the footings.</p>	<p><b>Crown</b> The existing 1.8m high close board fence will act as tree protection fencing.</p> <p><b>Roots</b> The root area within the site will be protected with additional ground protection for the duration of the build in line with BS5837, see section 7.4 below and drawing IS/TBC/01.</p>
T4	Cherry	36	3.40	<p><b>Crown</b> The new garage is outside the crown spread</p> <p><b>Roots</b> The garage is on the edge of the root protection area (RPA) Access will be required over the RPA to facilitate the build. The water demand of the tree will need to be considered in the design of the footings.</p>	<p><b>Crown</b> The existing 1.8m high close board fence will act as tree protection fencing.</p> <p><b>Roots</b> The root area within the site will be protected with additional ground protection for the duration of the build in line with BS5837, see section 7.4 below and drawing IS/TBC/01.</p>
T5	Cherry	81	5.10	<p><b>Crown</b> The new garage is on the edge of the crown spread</p>	<p><b>Crown</b> The tree has a good ground clearance of 4m in the area of the garage. The existing 1.8m high close board fence will act as tree protection fencing.</p>

				<p><b>Roots</b> The garage is within the edge of the root protection area (RPA) and would affect approximately 4 m sq. Access will be required over the RPA to facilitate the build. This is a small percentage and would not be expected to have a significant impact on the tree.</p> <p>The water demand of the tree will need to be considered in the design of the footings.</p>	<p><b>Roots</b> The root area within the site will be protected with additional ground protection for the duration of the build in line with BS5837, see section 7.4 below and drawing IS/TBC/01.</p>
T6	Ash	18	2.40	Distant enough from the proposals not to be affected.	Protect the tree with a construction exclusion zone (CEZ) for the duration of the build, enclosed with tree protection fencing in line with BS5837, section 7.3 below and drawing IS/TBC/01
T7	Norway Maple	41	3.60	Remove to facilitate the development.	A small tree with limited amenity value in the wider landscape.
T8	Sorbus	7	1.50	Remove to facilitate the development.	A small tree with limited amenity value in the wider landscape.
T9	Prunus	41	3.60	Remove to facilitate the development.	A replacement tree can be planted within the site.
T10	Holly variegated	18	2.40	Distant enough from the proposals not to be affected.	Protect the tree with a construction exclusion zone (CEZ) for the duration of the build, enclosed with tree protection fencing in line with BS5837, section 7.3 below and drawing IS/TBC/01
T11	Magnolia	10	1.80	Distant enough from the proposals not to be affected.	Protect the tree with a construction exclusion zone (CEZ) for the duration of the build, enclosed with tree protection fencing in line with BS5837, section 7.3 below and drawing IS/TBC/01
T12	Weeping willow	163	7.20	Distant enough from the proposals not to be affected.	Protect the tree with a construction exclusion zone (CEZ) for the duration of the build, enclosed with tree protection fencing in line with BS5837, section 7.3 below and drawing IS/TBC/01

T13	Hawthorn	46	3.80	Distant enough from the proposals not to be affected.	Protect the tree with a construction exclusion zone (CEZ) for the duration of the build, enclosed with tree protection fencing in line with BS5837, section 7.3 below and drawing IS/TBC/01
T14	Blue Lawson Cypress	18	2.40	Remove to facilitate the development.	A small tree with limited amenity value in the wider landscape.
T15	Lawson Cypress	10	1.80	Remove to facilitate the development.	A small tree with limited amenity value in the wider landscape.
T16	Hazel	5	1.30	Remove to facilitate the development.	A small tree with limited amenity value in the wider landscape.
T17	Laburnum	7	1.50	Remove to facilitate the development.	A small tree with limited amenity value in the wider landscape.
H1	Hawthorn			To be retained and protected through the build.	
H2	Mixed native			Remove to facilitate the development.	A new native boundary hedge can be planted along the southern boundary
H3	Hawthorn			To be retained and protected through the build.	
H4	Beech			Remove to facilitate the development.	A new native boundary hedge can be planted along the southern boundary

### 7.3 Tree protection fencing

The root protection areas (RPA) of retained trees should be protected for the duration of the works with tree protection fencing, in line with BS5837:2012, prior to the developer commencing on site. The fencing is to be of 1.8m steel mesh, heras fencing, to be installed as detailed in BS5837:2012 section 6.3.2 figure 3. (See appendix 1). Once erected, the fencing will have all weather notices attached to the barrier worded "Construction Exclusion Zone –Keep out". The fencing should not be taken down until all construction and any hard surfaces is completed, see appendix 1

### 7.4 Additional ground protection

Where access is required over an RPA to facilitate the build, additional ground protection in line with BS5837:2012. This should be as follows: For pedestrian access only, a single thickness of scaffold board either, suspended on a driven scaffold frame to form a suspended walkway, or on a non-compressible layer (e.g. 100mm layer of bark mulch) laid over a geotextile.

For pedestrian operated plant, up to a gross weight of 2t, proprietary inter linked ground protection boards, placed on a non-compressible layer (e.g. 100mm layer of bark mulch) laid over a geotextile.

For wheeled or tracked plant over 2t in gross weight, an alternative system (e.g. proprietary system or pre-cast reinforced concrete slabs) to an engineering specification, designed to accommodate the likely load it will be subject to, is required.

### 7.5 New hard surface

Any new hard surface within the root zone should also be a no-dig construction. They should be designed by the architect or engineer to comply with the following within the RPA of the retained trees.

Any grass sward is to be removed by hand. A geotextile will be laid over the surface of the soil, at the existing level. Any low areas should be built up using sharp sand. There should be no excavation into the soil within the root protection area. A cellular sub base, such as of cellweb, or similar, root protection system, should be laid over the area. This should be filled with granite chips with no fines. This should not be tipped within the root area and should be spread from one end, by hand. The edgings are to be a timber board held in place with timber pegs, so that the roots are not damaged. The surface finish will be a porous finish, allowing water and air to percolate through the joints.

#### 7.6 Service runs

Any Utilities trenches should where possible avoid the RPA's of retained trees. If a service route cannot avoid the RPA of a retained tree, it should be installed in one of the following two ways, to avoid excavation with machinery in the RPA or precautionary area:

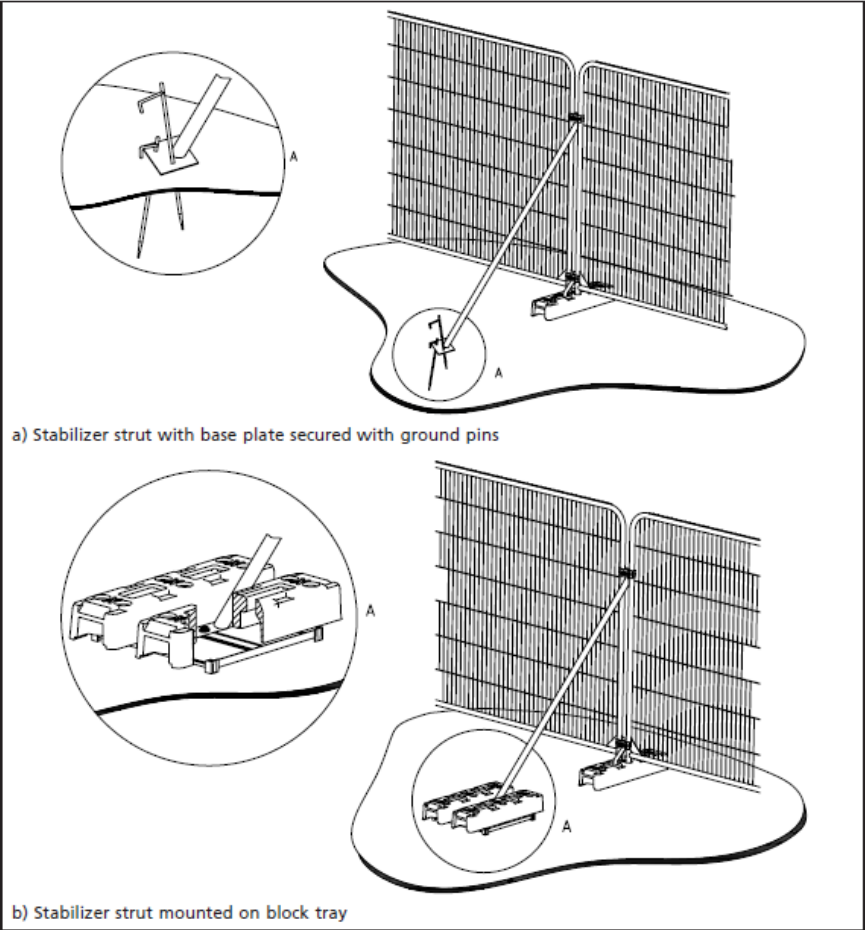
For short runs, the service trench will be carefully excavated by hand. Any roots over 25mm will be retained and protected by wrapping in damp Hessian. Any roots less than 25mm in diameter, which cannot be preserved, will be pruned cleanly with a sharp saw or secateurs or hand saw, by a suitably qualified person. Exposed roots will be covered with damp Hessian and sharp sand. Back fill is to be of excavated soil or an inert granular fill.

For long runs, a trenchless installation method, such as directional drilling or impact moling, is to be used. Retrieval and access chambers should be located outside the RPA of the trees. The works should comply with current safety practices for excavating trenches.

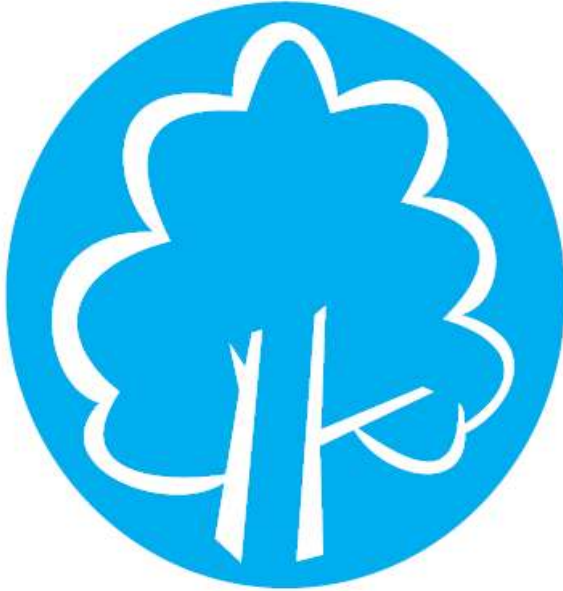
#### 7.7 There will no changes in ground levels, within the root area of any retained tree.

# Appendix 1 – Protective fencing

Figure 3 Examples of above-ground stabilizing systems



Tree protection fencing should be installed in the position as shown in the tree constraints and protection plan for the site.



**PROTECTIVE FENCING. THIS  
FENCING MUST BE  
MAINTAINED IN ACCORDANCE  
WITH THE APPROVED PLANS  
AND DRAWINGS FOR THIS  
DEVELOPMENT.**



**TREE PROTECTION AREA  
KEEP OUT !**  
**(TOWN & COUNTRY PLANNING ACT 1990)**  
**TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY  
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A  
TREE PRESERVATION ORDER.**  
**CONTRAVENTION OF A TREE PRESERVATION ORDER MAY  
LEAD TO CRIMINAL PROSECUTION**  
**ANY INCURSION INTO THE PROTECTED AREA MUST BE  
WITH THE WRITTEN PERMISSION OF THE LOCAL  
PLANNING AUTHORITY**



## **Appendix 2 – Report Caveats**

1. The report is based on a ground level visual tree assessment (Mattheck).
2. No soil samples were taken for testing. If Soil analysis is required a soil engineer should be employed.
3. No pest and disease samples were taken or sent away for analysis.
4. It remains the responsibility of the tree owner to check TPO status prior to carrying out any works on the tree.
5. Physiological and structural assessments are valid for a period of 12 months. It is an external inspection only.
6. VTA of the tree was assessed only on date of inspection; it remains valid only if no environmental changes around the tree. If any changes should occur re-inspection should be carried out.
7. Environmental changes around the tree will render the report invalid.
8. No internal diagnostic equipment was used.
9. Any works to the trees should comply with BS3998:2010 Tree Work

## **Appendix 3 – References**

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

NHBC Chapter 4.2 Building near trees

D Lonsdale 'Principles of Tree Hazard Assessment and Management'  
Forestry Commission 2007

Strouts and Winter 'Diagnosis of ill health in trees'  
Forestry Commission 2007

C Mattheck and H Breloer 'Body Language of Trees'