Arboricultural Report and Arboricultural Implications

Site – **The Fox PH, Haverhill Road,**

Client – **Rutherford Holdings Ltd**

Contact – Wellsfield Associates, York House, Westview Drive, Rayleigh, SS6 7AU

Date - **23-11-2023**

To be read in conjunction with – Tree Protection Plan Drawing No. WELL/FPH/01

MoorePartners Ltd

Contents BS5837:20012 Tree Assessment

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1.0 Scope of works and client brief.

1.1 Wellsfield Holdings have requested a survey of the trees and hedges around the site of the former Fox Public House. The survey is to accompany the planning application for new Drive-thru on the site. The report should be read in conjunction with the tree constraints and protection plan, drawing number WELL/FPH/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 The site is the former, now derelict Fox Public House and car park. The ground are significantly overgrown with blackberry scrub and ruderal vegetation. There are no significant trees within the site. Around the boundary of the site are hedges that [provide a good screen with the surrounding housing, but there are no significant trees in the site. To the west of the site is an area of secondary woodland. There is a stream running along the western boundary between the woodland and the site.

The proposals are to construct a drive-thru restaurant and sales area, associated car parking and internal roads.
The hedges should be retained as screening for the proposed buildings from the surrounding hedge. The most significant trees are in the woodland area to the west. This is separated by the stream from the site and the majority of the trees are at least 8m from the stream and the root protection areas too small to reach the site. There are five trees closer to the bank of the stream, but they are considered distant enough from the proposals not to be affected as the stream will act as a root barrier along the site boundary. Tree protection fencing should be installed along the bank of the stream to act as tree protection fencing for the woodland beyond.
There would be clearance of the blackberry and goat willow scrub within the site.

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

See also the arboricultural method statement for the site by Moore Partners Ltd.

3.0 Site

3.1 Site location

2.1 The site is the former Fox Public House and car park. The pub is now derelict, and the ground are significantly overgrown with blackberry scrub and ruderal vegetation, making access difficult. There are no significant trees within the site. Around the boundary of the site are hedges but there are no significant trees in the site. To the west of the site is an area of secondary woodland. There is a water filled ditch and stream approximately 1m lower than ground level running along the boundary and the woodland. The majority of the trees are over 8m from the stream but there are a small number of trees along the bank. These are included in the survey, and several were of poor quality. The stream at 1m deep would be expected to act as a root barrier or at least partial root barrier along the boundary. The ground water level under the stream, would result in the soil being at a permeant field capacity. This would result in low air levels within the soil structure which would not be conducive with good root growth.

Fig 1 – the site

3.2 Soils and levels

The site is relatively level. It slopes from the road down to the rear of the site. 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 London Clay Formation- Clay, silt and sand, 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 art 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 construction of a new drive-thru café and sales area with associated car parking and internal roads. See Fig 2 and drawings by Wellsfield Associates.

Fig 2 – Proposed new site layout

5.2 Reference documents supplied.

Drawing references	Author	Title	Date
23050-23-01	SV Surveying	Topographical survey	24-02-2023
3774-07b	Wellsfield	Feasibility plan	April 23

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 survey plotted using simple triangulation techniques, the dense overgrown nature of the site makes locating the trees very difficult. Though care is taken discrepancies can occur and if great accuracy is required 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		
A Green	Trees of high quality A1 – Mainly arboricultural value A2 - Mainly landscape value A3 – Mainly cultural value, including conservation	C Grey	Trees of low quality C1 – Mainly arboricultural value C2 – Mainly landscape value. C3 – Mainly cultural value, including conservation
B Blue	Trees of moderate quality B1 – Mainly arboricultural value B2 - Mainly landscape value B3 – Mainly cultural value, including conservation	U 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
H1	*Laurel* *Prunus laurocerasus*	2.5	Av 10cm x 2no.	as plan	0	y	fair	fair	na	20-40	C2
H2	*Blackthorn* *Prunus spinosa*	2.5	<10	as plan	0	y	fair	fair	na	20-40	C2
H3	*Blackthorn* *Hawthorn* *Blackberry*	3-4	max 15	as plan	0	em-ma	fair	fair	na	20-40	C2
T1	*Goat willow* *salix caprea*	4	esti 48	N 4 S 4 E 4 W 2.5	3	om	fair/poor	fair/poor	na	10-20	C?u
	short lived species with limited value in the wider landscape. A group of self set saplings less than 75mm diameter is growing up around the base, see reference to G1.										

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
W1	*Elm* *Lawson cypress* *Field maple* *Sycamore*	10-20	various	as plan not over site	npt over site	ma	fair	fair	na	40	B23
	a band approximately 8m wide, between the edge of the woodland and the stream, has no trees present. The largest trees are at the southeast corner away from the proposed building area.										
T2	*Ash* *Fraxinus excelsior*	6	21	N 3 S 1.5 E 1.5 W 1.5	2.2	em	fair/poor	fair/poor	na	10-20	C/U
	Outside the site on the other side of the stream. It is considered likely the stream will have acted as at least a partial root barrier to roots growing into the site.										
T3	*Field maple* *Acer campestre*	7	28cm x 2	N 4 S 3 E 2 w 2	3.5	em	fair	fair dense ivy will swamp the crown if left unchecked	na	10-20	C3
	Outside the site on the other side of the stream. It is considered likely the stream will have acted as at least a partial root barrier to roots growing into the site.										
T4	*Elm* *Ulmus spp*	7	Esti 34	N 3.0 S 3.0 E 2.5 W 3.0	5.5	em	fair	fair ivy has been severed	na	10-20	C/U
	Elm can be susceptible to Dutch Elm Disease as it matures. Outside the site on the other side of the stream. It is considered likely the stream will have acted as at least a partial root barrier to roots growing into the site.										
G1	*Goat willow* *Salix caprea*	<10	4	As plan	0	Y	Fair	Fair	Na	10	U
	A stand of young saplings around T1										

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	*Field maple* *Acer campastre*	6	22	As plan	0	Em	Fair	Fair	Na	40	B /C
T5	*Norway maple* *Acer platanodies cvr*	3.5	10	N 2 S 2 E 2 w 2	1.8	y	fair	fair	na	20-40	C/U
	A small young tree with limited value in the landscape and could be easily replaced.										
T6	*Ash* *Fraxinus excelsior*	10	36	N 5 S 3 E 3 W 5.5	6	ma	fair	fair	na	20-40	C23
T7	*Horse chestnut* *Aesculus hippocastanum*	5	30	N 5.4 S 0 E 2.5 W 4.5	0	y	fair	fair suppressed by T8	na	20-40	B23
G2	*Elm x 4* *Ulmus spp*	6	av 17	as plan	not over site	em	fair	fair	na	10-20	C/U
	Elm can be susceptible to Dutch Elm Disease as it matures.										

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
G3	*Elm x 2* *Ulmus spp*	6	av 17	as plan	not over site	em	fair	fair	na	10-20	C/U
	Elm can be susceptible to Dutch Elm Disease as it matures										
T8	*Dead possibly elm*	7	10	N 4.5 S 0 E 6.0 W 4.0	4	Om	Dead	Poor	Fell	<10	U
T9	*Horse chestnut* *Aesculus hippocastanum*	6.5	Esti 22	N 3.0 S 2.5 E 4.0 W 2.5	5.5	Em	Fair	Fair	Na	<40	C 2,3
	Located outside the site to the south.										
T10	*Elm* *Ulmus*	11	Esti 26	N 2.0 S 1.0 E 1.0 W 1.0	5.5	Em	Poor	Poor Dense ivy throughout the crown	Na	<10	C/U
	Located outside the site in the hedge to the south.										

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 WELL/FPH/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.

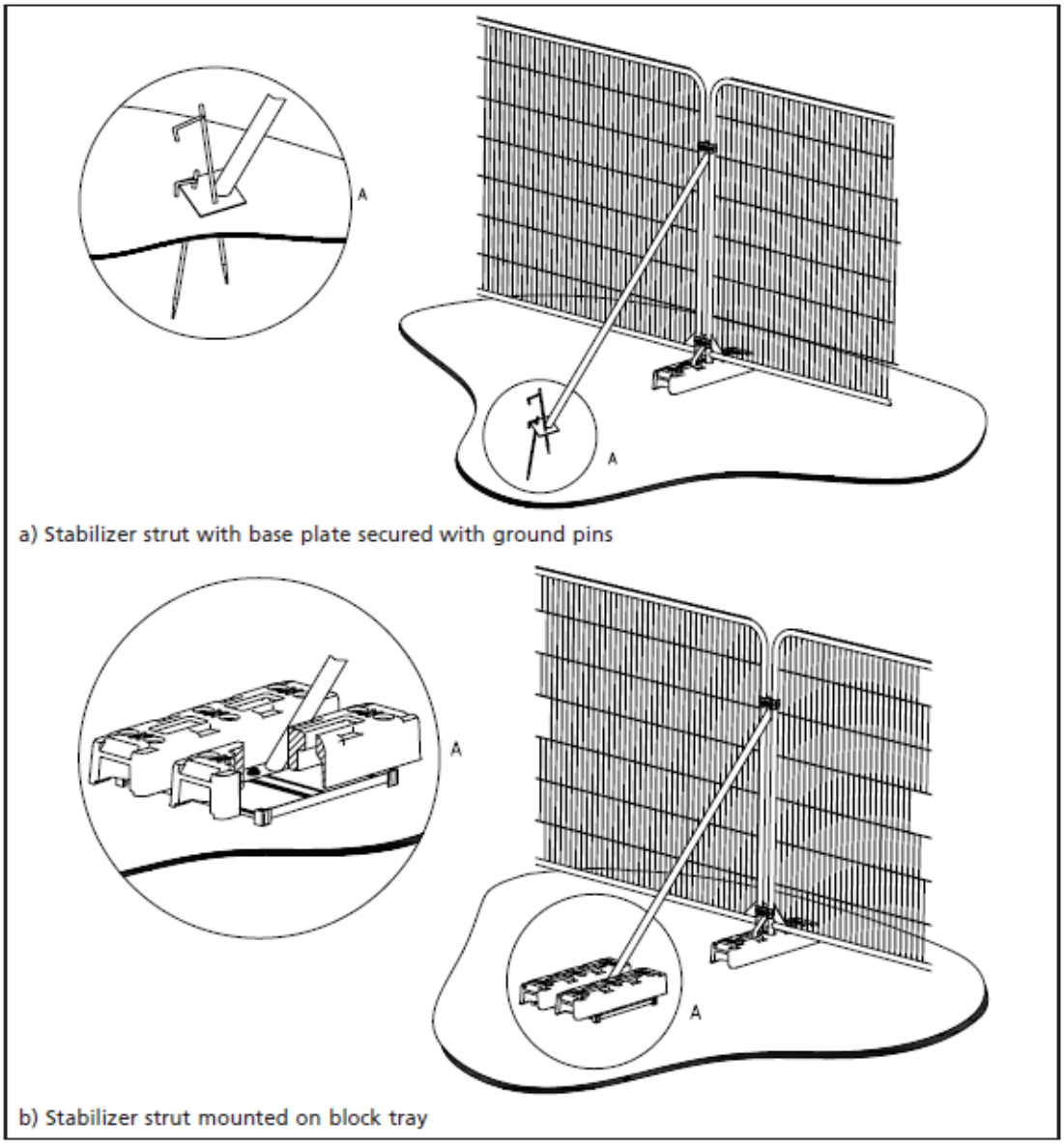
Tree no.		RPA m/sq	Radi of RPA (M)	Tree implications assessment	Mitigation
H1	*Laurel*		1.1	Runs along the front boundary of the car park.	Protect the hedge with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
H2	Blackthorn		1.2	Running along the boundary provides a good screen with the housing to the east.	Protect the hedge with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
H3	Blackthorn		1.8	Running along the boundary provides a good screen with the housing to the east.	Protect the hedge with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
T1	Goat willow	92	5.4	Distant enough from the proposals not to be affected.	Protect the tree with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
T2	Ash	18	2.4	Distant enough from the proposals not to be affected. The stream will act as a root barrier along the site boundary	Protect the tree with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01

T3	Field maple	71	4.80	Distant enough from the proposals not to be affected. The stream will act as a root barrier along the site boundary	Protect the tree with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
T4	Elm	55	4.20	Distant enough from the proposals not to be affected. The stream will act as a root barrier along the site boundary	Protect the tree with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
G1	Goat willow		0.8	Remove to facilitate the development	A stand of self set sapling with limited landscape value. The species is short lived and seeds readily into open area.
H4	Elm Field maple		2.4	Outside the site to the west, distant enough from the proposals not to be affected.	Protect the hedge with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
T5	Norway maple	41	3.6	A young tree that can easily be replaced within the new landscape scheme.	Protect the tree with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
T6	Ash	55	4.2	Distant enough from the proposals not to be affected. The stream will act as a root barrier along the site boundary	Protect the tree with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
T7	Horse chestnut	41	3.6	Distant enough from the proposals not to be affected. The stream will act as a root barrier along the site boundary	Protect the tree with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
G2	Elm		2.10	Distant enough from the proposals not to be affected. The stream will act as a root barrier along the site boundary	Protect the tree with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01

G2	Elm		2.1	Distant enough from the proposals not to be affected. The stream will act as a root barrier along the site boundary	Protect the tree with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
T8	Dead	5	1.20	Dead tree	Fell as dead limbs overhang the public footpath. It is not clear if the tree is within the site curtilage.
T9	Horse chestnut	23	2.70	Distant enough from the proposals not to be affected.	Protect the tree with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01
T10	Elm	28	3.00	Distant enough from the proposals not to be affected.	Protect the tree with a construction exclusion zone, for the duration of the build, enclosed with tree protection fencing in line with BS5837:2012, appendix 1 of this report and drawing number WELL/FPH/01

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 – Temporary ground protection

If the drive is removed the root area within it, shown on drawing WELL/FPH/01, will be protected using additional ground protection, prior to commencing building and demolition works.
This will protect the roots, and the soil around them, from damage by compaction, spillage and excavation.

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 (eg 100mm layer of bark mulch) laid over a geotextile.

For pedestrian operated plant, up to a gross weight of 2 ton, 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 2 ton is 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.

Appendix 3 – 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 4 – 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’