## **ARBORICULTURAL REPORT**

# BS5837: 2012 'Trees in relation to design, demolition and construction - recommendations'

SITE OF SURVEY	Vicarage Fields, Southerndown Rd, St. Brides Major, Vale of Glam.
CLIENTS	Mr Ieuan Williams (on behalf of Mr C. Davies) Reading Agricultural Consultants Gate House, Beechwood Court Long Toll, Woodcote, Reading, RG8 0RR
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DATE SURVEYED	1 <sup>st</sup> December 2014 Report valid for 12 months

## SUMMARY

- The Tree Survey, Arboricultural Impact Assessment and Method Statement and Tree Protection Plan has been completed
- It is our opinion that this development can be constructed with negligible detrimental affect upon the existing trees identified in the tree survey if constructed within the designated area. This is however dependent on the correct use of all methods of protection and construction as recommended in the attached Arboricultural Impact Assessment and Method Statement.
- A chronology of events for arboricultural issues has been detailed in section 5 of this report and an Arboriculturalist will need to be appointed to act as a watching brief before the commencement of any construction work.

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## 1. INTRODUCTION

#### 1.1 <u>ASSIGNMENT</u>

We have been instructed by Mr Ieuan Williams (on behalf of Mr C. Davies) of Reading Agricultural Consultants, Gate House, Beechwood Court,Long Toll, Woodcote, Reading, RG8 0RR to carry out an Arboricultural Impact Assessment and Method Statement and Tree Protection Plan for development purposes in accordance with BS5837:2012 'Trees in relation to design, demolition and construction - recommendations'. This report is being prepared in order to support a planning application for a detached dwelling and ground use for mobile 'shepherd huts.

#### 1.2 <u>THE DEVELOPMENT PROPOSALS</u>

It is proposed to construct a detached residential property within the sitearea. It is also proposed that several mobile 'shepherd huts are to be positioned within the site area.

#### 1.3 <u>REPORT METHODOLOGY</u>

The methodology for preparing this report is in accordance with BS5837:2012 'Trees in relation to design, demolition and construction - recommendations' is as follows:-

#### **Tree Survey Plan**

The purpose of the Tree Survey is to identify all trees on site that may be within influential distance of any proposed development. The plan will record the condition of the trees, their quality and benefits within the context of the development and their above and below ground constraints in relation to both the site and any proposed development.

#### **Arboricultural Impact Assessment and Method Statement**

The purpose of this part of the report is to identify, evaluate and possibly mitigate the extent of any direct and indirect impacts on the trees. It will also identify any potential impacts of the trees on the proposed development.

#### **Tree Protection Plan**

The Tree Protection Plan shows all necessary aspects of tree protection that is required during the development process.

#### 1.4 DOCUMENTS AND INFORMATION PROVIDED

We were provided with plans of the site by Mr Ieuan Williams (on behalf of Mr C. Davies) Reading Agricultural Consultants,Gate House, Beechwood Court,Long Toll, Woodcote, Reading, RG8 0RR.

#### 1.5 <u>LIMITATIONS AND DISCLAIMER</u>

Trees are living organisms whose health and condition can change rapidly. The conclusions and recommendations in this report are only valid for one year. Any changes carried out to the site as it stands at present, prior to planning approval, eg building of extensions, excavation works, importing of soils, extreme weather events etc will invalidate this report.

Visual tree assessment has been undertaken from ground level utilising aids such as binoculars, sounding hammer and probes where necessary.

We have no connection with any of the parties involved in this situation that could influence the opinions expressed in this report.

## 2. THE SITE

#### 2.1 <u>SITE VISIT</u>

We carried out a site visit on 1<sup>st</sup> December 2014.

#### 2.2 <u>SITE DESCRIPTION</u>

The site is presently occupied by several single storey outbuildings used to store agricultural machinery, supplies and firewood.

#### 2.3 <u>PHOTOGRAPHS</u>







Tree 06





Group 07

Tree 08







Tree 12



Group 13



#### 2.4 LEGAL CONSTRAINTS

It is not known if the trees are located in a Conservation area or are designated with a Tree Preservation Order .

#### **Conservation Area**

In Conservation Areas, trees of a diameter greater than 75mm, measured at 1.5m from ground level are automatically protected (except in certain circumstances) under the Town and Country Planning Act 1990. Notice of intent is required to be given to the Local Planning Authority (LPA) before work is carried out. An application form can be downloaded from the LPA website. The LPA has six weeks to decide whether the tree should be made subject to a Tree Preservation Order. If the LPA do not respond within the six week period, then the tree work that has been applied for may proceed.

If an application for work is refused and a Tree Preservation Order is designated to the trees, the applicant has a right of appeal to the Secretary of State under the provisions of section 78 of the Town and Country Planning Act 1990 (as amended).

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

A Tree Preservation Order is made by the Local Planning Authority which in general makes it an offence under the Town & Country Planning Act 1990, to cut down, top, lop, uproot, willfully damage of willfully destroy a tree without the planning authority's permission.

It will be necessary to apply to the Local Planning Authority (LPA) for permission to carry out any work on these trees. The LPA has eight weeks to respond to the application to either refuse or permit the work applied for. The LPA can also make alternative work recommendations.

If an application for work is refused, or allowed subject to conditions, or if the council fails to decide the application within 8 weeks, the applicant has a right of appeal to the Secretary of State under the provisions of section 78 of the Town and Country Planning Act 1990 (as amended)

Carrying out work on protected trees without permission from the LPA can result in fines of up to  $\pounds 20,000$  per tree, if convicted in a magistrate's court and you have destroyed the tree or up to  $\pounds 2,500$  for other offences.

## 3. ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

#### 3.1 DIRECT LOSS OF TREES

In order to construct the proposed development we do not anticipate any direct loss of trees.,

#### 3.2 FACILITATION PRUNING

The canopies of tree numbered 912 have a canopy ground clearance of less that 3m, adjacent to the mobile 'shepherd huts area. In order to facilitate access for these structures without causing mechanical damage to the branches of these trees, and to allow a 2m clearance from the proposed structure, the following pruning will be needed.

Tag No/Species	Recommended action
912 Sycamore	Remove significant deadwood and crown lift to 4.5m.

All tree work should be carried out to BS 3998:2010 'Tree work - Recommendations'.

#### 3.3 TREEWORK AND ECOLOGY

Bats, nesting birds and some mammals are protected under the Conservation of Habitats and Species Regulations 2010, Wildlife and Countryside Act 1981 and (as amended) Wildlife and Countryside Act 2000. A risk assessment will be required prior to commencement of any tree work or felling to assess the likelihood of disturbing or endangering any protected wildlife or habitat. If any protected species are present in any of the trees, or if the tree has a known bird or bat roost, then consultation with the Statutory Nature Conservation Organisation (SNCO) must be undertaken prior to commencement of work.

#### 3.4 TREE PROTECTIVE BARRIERS

Trees are often damaged both above and below ground level and soils compacted as a result of construction activity. In order to minimise this risk, tree protective barriers will be erected to prevent construction activities that may have a detrimental affect on any retained trees within influential distance of the construction area.

The barriers will be erected prior to the start of any construction or demolition activities and remain in place until all construction works are complete.

The area protected by barriers will be considered sacrosanct and will not be entered into by construction contractors without consultation with the commissioned Arboriculturalist and Local Authority Tree Officer.

Barriers will be erected in accordance with both the default specifications detailed in figure 2 of BS5837:2012 'Trees in relation to design, demolition and construction - recommendations' and in accordance with the specification in figure 3 of the British Standard.

The protective barriers will enclose the root protection areas of the trees as detailed on the Tree Protection Plan.

## Trees can be protected using Heras fencing and stabilised in accordance with Figure 3 of BS5837: 2012.

These weldmesh panels should be 2m tall and mounted on rubber or concrete feet. The panels should be joined together using a minimum of two anti-tamper couplers, installed so as they can only be removed from the inside of the fence. The distance between the couplers should be at least 1m and should be uniform throughout the fence. The panels should be supported on the inside by stabiliser struts, which should normally be attached to a base plate secured with ground pins (figure 3a). Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabiliser struts should be mounted on a block tray (figure 3b).



"CONSTRUCTION EXCLUSION ZONE – NO ACCESS"

#### 3.5 GROUND PROTECTION

Surface soils are often compacted on construction sites as a consequence of heavy equipment moving over the surface. Soil structure can be affected to some depth. Compaction reduces air and moisture content and increases the likelihood of erosion.

Trees can be affected by physical damage to roots leading to decay and roots are unable to penetrate the soil. The results are poor vitality and stress.

The Tree Protection Plan identifies the positioning of the ground protection sheets. If this area of ground protection can be adjusted according to the required position of the mobile 'shepherd huts..

We have not been provided with information as to the weight of the mobile 'shepherd huts. This temporary ground protection should be capable of supporting any traffic entering or using the propsed areas without being distorted or causing compaction of underlying soils. The ground protection might comprise one of the following:

- a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;
- b) for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane; the client has many ground protection sheets stored on site these may be suitable for use in this area depending on the weight of the mobile 'shepherd huts.
- c) for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

#### 3.6 <u>REMOVAL OF HARD SURFACING AND LIGHT STRUCTURES</u>

If it is proposed to remove the existing hard surfacing and light structures from within the root protection areas of trees Excavation into the underlying soils and ground compaction from traffic of heavy plant can have a detrimental impact on tree roots leading to decline of the tree.

Where these hard surfaces and light structures are scheduled for removal, care should be taken not to disturb tree roots that might be present underneath. Hand held tools or appropriate machinery should be used (under arboricultural supervision) to remove the existing surface or structure, working backwards over the area, so that the machine is not moving over the exposed ground.

#### 3.7 **<u>POSITIONING OF TEMPORARY SITE FACILITIES</u>**

The siting of temporary site facilities has not been identified on the existing site plans. Any temporary site facilities such as site huts, offices, toilets and car parking must be positioned outside the root protection areas and construction exclusion zones of any retained trees.

If possible, any vehicle or pedestrian access required to and from the site facilities must be positioned outside the root protection area of any retained trees. If access has to be positioned within any root protection areas, a site specific Arboricultural Method Statement detailing ground protection measures will be needed.

#### 3.8 ON SITE STORAGE OF SPOIL, BUILDING AND TOXIC MATERIALS

Prior to and during construction works on site, no spoil or construction materials will be stored within the root protection area of any tree on site or within the adjacent land.

Any facilities for the storage of oils, fuels or chemicals will have to be sited on impervious bases and surrounded by impervious bund walls. The volume of the bund compound will have to be at least equivalent to the capacity of the tank plus 10%. In case of accidental leakage, the compound will have to be at least equivalent to the capacity of the largest tank, or the combined capacity of interconnected tanks plus 10%. All filling points, vents, gauges and sight glasses will have to be located within the bund. The drainage system of the bund will have to be sealed with no discharge to any watercourse, land or underground strata. Associated pipe-work will have to be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets will have to be detailed to discharge downwards into the bund.

#### 3.9 <u>CHANGES IN GROUND LEVEL</u>

There will be no ground level changes within any identified root protection areas or construction exclusion zones, which are identified on the Tree Protection Plan .

#### 3.10 INSTALLATION OF SERVICES

Service runs have not been indicated on the proposed plan but it is not expected that there will be the need for any service runs within the root protection areas of any retained trees on site.

If there is a need to install services within the root protection area of any trees on site, specialist measures would have to be employed to minimise damage to trees. An Arboriculturalist will be employed to prepare a site specific method statement and carry out a watching brief.

#### 3.11 LANDSCAPING

We have not been supplied with landscaping details and plans for the site as yet. The preparation of any ground for landscaping purposes within the root protection areas will be carried out in conjunction with site specific Arboricultural Method Statements, prepared by the appointed Arboriculturalist. All Construction Exclusion Zones will remain sacrosanct, with tree protection retained in place, until landscaping detail has been approved and any relevant method statements have been prepared.

#### 3.12 FUTURE CONSIDERATIONS

Many of the retained trees are going to be in relatively close proximity to the proposed structures. None of these trees are fully grown or have reached their full mature dimensions. There are several factors that should be considered by having trees close to buildings, particularly if they are for residential purposes.

- a) Shading there is potentially significant shading from deciduous trees in the summer and all year round shade from evergreen trees. The influence of this shade is from north west through to due east in the main part of the day. The extent of the shade will increase as the trees grow. Some trees will proportionately block day light to windows.
- b) Space none of the trees at the site are close to their potential mature dimensions. Future growth will bring their canopies close to and in contact with the proposed structures so future maintenance will be required to maintain clearance.
- c) Litter both deciduous and evergreen trees drop leaves, flowers, seed, cones, bark and generate insect residue and bird droppings throughout their lives. This can be a nuisance by blocking gutters and gullies causing slippery surfaces and damaging paintwork.
- d) Trees can cause apprehension to occupiers of nearby buildings especially during high winds.
- e) Trees are mechanical structures and can be subject to structural failure, particularly in high winds and if they have faults or are under stress. This has obvious health and safety implications and a structured method of hazard risk assessment should be in place particularly as there will be public use of this area.

#### 3.13 GENERAL CONSTRUCTION OUTSIDE RPA

- a) Care should be taken when planning site operations to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can results in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from trees is maintained at all times.
- b) Material which will contaminate the soil, eg concrete mixings, diesel oil and vehicle washings should not be discharged with 10m of the tree root protection area..
- c) Fires should not be lit in a position where their flames can extend to within 5m of foliage, branches or trunk. This will depend on the size of the fire and wind direction.
- d) Notice boards, telephone cables or other services should not be attached to any part of the tree.
- e) It is essential that allowances should be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards the trees.

## 4. SITE MONITORING

Once planning permission has been granted it is important that an open line of communication is maintained between the Contractors, the appointed Arboriculturalist and the Local Planning Authority.

The Arboriculturalist should be called upon to give advice and act as a watching brief where the trees are likely to be impacted by construction operations.

Protective tree barriers will be inspected by the Arboriculturalist before the start of any demolition or construction operations and the site inspected prior to the removal of the barriers following construction.

During the period of intensive construction, it is advisable that regular two weekly random site visits are carried out by the Arboriculturalist to ensure tree protection has not been contravened and to provide general advice. Site visit inspection sheets should be completed and made available to the developer, tree officer and contractors.

## 5. CHRONOLOGY OF EVENTS FOR ARBORICULTURAL WORK

#### PLANNING STAGE

- 1 Tree Survey completed.
- 2 Arboricultural Impact Assessment, Method Statements and Tree Protection Plan completed.

Preparation of further site specific method statements, if required.

#### PRE-CONSTRUCTION PHASE

Supply all main contractors with a copy of the Tree Survey report including the Arboricultural Impact Assessment, Arboricultural Method Statement and the Tree protection Plan.

Inform all site staff and contractors of tree protection implications and restrictions, within the site induction system.

Carry out tree work once planning permission has been granted.

Initial meeting between Construction Contractors, Developers and the appointed Arboriculturalist to clarify tree issues.

Prepare any further sit specific Arboricultural Method Statements that may be required, eg installation of services.

Erect protective fencing and install ground protection as detailed on the Tree protection Plan and in 3.5 and 3.6 of the Arboricultural Impact Assessment and Method Statement.

Site inspection by the Arboriculturalist before construction begins.

#### **CONSTRUCTION PERIOD**

Inspection of tree protective barriers and ground protection prior to start of construction.

Carry out an auditable system of arboricultural site monitoring on a 2 week basis during periods of intensive construction near to retained trees.

Site inspection by appointed the Arboriculturalist following completion of construction and prior to the removal of tree protective barriers.

On completion of the main construction period remove protective fencing and ground protection.

Carry out landscaping, replanting and light construction work and ameliorate any

soil root area compaction.

Carry out replacement tree planting if specified in accordance with the attached Arboricultural Method Statement and specification.

#### POST CONSTRUCTION

Regularly inspect the trees every 2.5 years to monitor condition and assess for hazard risk.

## 6. CONCLUSION

The Tree Survey, Arboricultural Impact Assessment and Method Statement and Tree Protection Plan have been completed. The main development area is outside the root protection area of the surveyed trees and will not impact the roots of these trees. The positioning of the mobile 'shepherd huts can be undertaken using temporary ground protection minimizing the likelihood of soil compaction.

It is our opinion that this development can be constructed with minimal detrimental affect upon the retained trees identified in the tree survey. This is however dependent on the correct use of all methods of protection and construction as recommended in the attached Arboricultural Impact Assessment and Method Statement.

- Tree protective fence barriers will be erected around and to enclose the calculated root protection areas of any trees within influential distance of the construction area, as identified on the tree protection plan .
- Tree protective barriers will be installed prior to the start of any demolition works and the existing hard surfacing will be retained within the segments of root protection areas of trees to provide ground protection during construction.
- Tree protective barriers will be erected to create a construction exclusion zone in order to prevent construction activities that may have a detrimental effect on any retained trees within influential distance of the construction area.
- All construction exclusion zones, as identified on the Tree Protection Plan, are classified as sacrosanct areas and must not be entered or utilized for any construction purposes, unless suitable tree protection is in place and the Arboriculturalist has been consulted beforehand.
- Construction vehicles will be of a size to enable them to access the existing driveway and site, without causing damage to any parts of the retained trees both above and below ground level.
- All site facilities and storage materials will be positioned outside any root protection area of any retained trees unless the ground is protected by existing hard surfaces or suitable ground protection measures.
- There will be no ground level changes within any root protection area or construction exclusion zone

- No vehicles, machinery or plant will be parked within any root protection area of any retained trees on site.
- It is recommended that all underground services are routed outside the Root Protection Area of any retained trees. Where routing of services through Root Protection Areas cannot be avoided, methods to minimise the potential for root damage will be employed.
- Existing hard surfaces and light structures, within the root protection areas of any retained trees will carefully be removed using hand tools and appropriate machinery, under arboricultural supervision, so as not to disturb the underlying soils.
- An appointed Arboriculturalist will carry out monthly site inspections to ensure tree protection has not been compromised and to give any necessary advice. These visits will be logged and made available to the local authority conservation officer and planning department.
- An Arboriculturalist will be appointed and called upon to give advice and act as a watching brief where the trees are likely to be impacted by construction operations. The appointed person will inspect the protective barriers prior to construction and inspect the site following completion. Site monitoring sheets will be supplied to all relevant parties.

## APPENDIX 1 TREE SCHEDULE KEY

The trees and groups of trees at the site have been assessed as per the recommendations set out in BS 5837 2012.

Туре	Represents the type of vegetation being assessed. These are Tree (T), Group (G), Stump (S), Woodland (W)
Tag No	Each tree has been marked by a numbered tag for on site identification. Where possible this number is related to, or similar to the given tree number. There may be occasions when the tag number bears no relationship to the tree number, but is still useful for on site identification
Common Name Botanical Name	The tree species have been identified and both common and botanical names are given.
Age	<b>Young</b> – (Shown as <b>Y</b> in the schedule) juvenile tree with dominant leading shoot growth and short side branches. Vigorous growth and often of conical form.
	<b>Semi-mature</b> – (Shown as <b>SM</b> in the schedule) young adult tree, leading shoot growth may not always be dominant but side branches are usually ascending. Vigorous growth, flower and seed production. Minimal deadwood.
	<b>Early maturity</b> – (Shown as <b>EM</b> in the schedule) adult tree with the main framework of the crown formed. Not yet at full dimensions. Vigorous growth and some shedding of inner branches and deadwood. Horizontal side branches.
	Mature – (Shown as <b>M</b> in the schedule) adult tree at full crown volume and dimensions. Maximum flower and seed production. Dead wood likely within the crown and reiteration growth in the lower canopy.
	<b>Over mature</b> – (Shown as <b>OM</b> in the schedule) loss of overall vigor and reduction of full dimensions due to limb loss and branch tip die back. Major dead wood within the crown and possible hollowing and cavities. Retrenchment of the crown through increased reiteration growth on the lower branches.
	<b>Veteran / Ancient</b> – (Shown as <b>V</b> in the schedule) a tree that has passed beyond maturity and is old in comparison with other trees of the same species. They often have decayed or hollow stems and branches and abundant deadwood. They are important for heritage, landscape and ecological value.

Height (m)	Where site lines allow, tree height has been calculated by means of a laser clinometer and recorded in metres. If the use of a laser clinometer is restricted due to confined space or obscuring vegetation, the height of the tree may be estimated based on the surveyor's experience. Adjacent trees or buildings with a clear view may be measured and used as a height scale. Where several trees are located in close proximity, one tree may be measured and the other trees estimated using the measured tree as a reference.
Diameter (mm)	The stem diameter is measured in millimetres in accordance with Annex C of BS5837 2012.
Stems	The number of stems are recorded, eg 1, 2, 3 etc.
Crown Height (m)	Is the distance from the lowest point of the crown from ground level.
Crown Height (m) /Direction	The height of the First Significant Branch (FSB) is recorded in metres and the direction of growth is in relation to the cardinal points of the compass.
North (m) South (m) East (m) West (m)	As it is rare that a tree's crown is asymmetric, the crown spread is measured at the four cardinal points of the compass to give an estimated representation of the crown spread which is then recorded on the tree survey plan.
(Crown Spread)	

Condition	Physiological Condition
	Each tree has undergone a brief preliminary visual inspection from ground level. This information is only relevant at the time of inspection because circumstances influencing a tree's condition can change rapidly. This section is divided into two separate sections:
	G = Good - fully foliaged/twigged canopy for the tree's situationwith an indication of natural vigor from shoot extension growth andsigns of good vitality throughout the tree's system. $F = Fair - signs$ of adequate vigour and vitality up to 70% canopy coverage. May show signs of slight stress such as branch tip die back, slightly sparse foliage, yellow or small foliage. Stress may be alleviated by prescribed maintenance. P = Poor - obvious signs of advance stress including less than 70%canopy coverage, crown die back, significant deadwood. Sparseand discoloured foliage. $D = Dead - moribund or dead trees$
Comments	Structural Condition
	Any structural defects are noted such as splits, cracks, tight forks, rubbing branches, cavities, decay and the presence of pests or diseases. These may compromise the mechanical integrity of the tree's structure.
	(Veteran trees may pose many physiological and structural faults yet still be considered in good condition for their age.)
Recommendations	Following visual inspection preliminary recommended action, further detailed inspection, or maintenance may be prescribed.
RPR (m) Root Protection Radius	This is calculated from Annex D of BS 5837 2012 'Trees in relation to construction - Recommendations'.

Category	The tree's overall value is categorised in accordance to the cascade chart (table 1) of BS 5837 2005, see Appendix 2 of this report.
	In brief, the purpose of the tree categorisation is to identify and quantify the value of the existing tree stock. This will allow informed decisions to be made concerning which trees should be removed or retained should the development occur.
Category A	Trees of high quality and value that make a substantial contribution Marked in light green on the tree survey plan.
Category B	Trees of moderate quality and value that make a significant contribution. Marked in mid blue on the tree survey plan.
Category C	Trees of low quality and value that provide only an adequate contribution. Marked in grey on the tree survey plan.
<u>Category U</u>	Trees in such a condition that any existing value would be lost within ten years. This includes trees that should be removed for good arboricultural reasons. Marked in dark red on the tree survey plan.

## APPENDIX 2 TREE SCHEDULE

Tag no.	Туре	Age	Tree Name (Common name)	Tree name (Botanical)	Condition	Crown height	Height	Trunk Dia. (mm)	Single stem (1) or multi- stem (m) *	North (m)	South (m)	East (m)	West (m)	BS Cat.	RPA Radius (m)	Comments	Action
901	Τ	SM	Norway Maple	Acer platanoides	Good	1.5N	6	290	1	6	2.5	4	4	C2	3.48	Group tree with single stem and natural taper, supporting a full canopy . Growing on site boundary adjacent to existing fence.	No action
902	T	SM	Ash	Fraxinus excelsior	Good	1.5W	6.5	120	1	2	1	3	3	C2	1.44	Group tree with single stem and natural taper, supporting a full canopy . Growing on site boundary adjacent to existing fence.	No action
903	T	SM	Norway Maple	Acer platanoides	Good	2W	6	150	1	3	1	4	4	C2	1.80	Group tree with multi stems and natural taper, supporting a full canopy . Growing on site boundary adjacent to existing fence.	No action

904	Τ	ЕМ	Elm	Ulmus procera	Good	2W	8	220	1	3.5	4.5	5.5	4	C2	2.64	Group tree with multi stems and natural taper, supporting a full canopy . Growing on site boundary adjacent to existing fence.
905	Group	SM	Ash	Fraxinus excelsior	Good	2.5W	8	190	1	4.5	4.5	4	4.5	C2	2.28	Group trees with multi stems and natural taper, supporting a full canopy . Growing on site boundary adjacent to existing fence.
906	Τ	EM	Horse Chestnut	Aesculus hippocastanum	Good	2W	9	460	m	5.5	5.5	6.5	4.5	C2	4.60	Group tree with multi stems and natural taper, supporting a full canopy . Growing on site boundary adjacent to existing fence.
907	Group	SM	Privet	Ligustrum ovalifolium	Good	0	3	150	m	See plan 11.5m / 2m					1.80	Group trees forming hedgerow with multi stems and natural taper, supporting a full canopy . Growing on site boundary adjacent to existing fence.

908	Τ	EM	Elm	Ulmus procera	Good	2.5W	7	360	1	3	3	5.5	2.5	C2	4.32	Group tree with single stem and natural taper, supporting a full canopy . Growing on site boundary in adjoining land adjacent to existing fence.	No action.
909	Τ	EM	Norway Maple	Acer platanoides	Good	2.5N	5	240	1	3.5	5	4	4	C2	2.88	Group tree with single stem and natural taper, supporting a full canopy . Growing on site boundary adjacent to existing boundary wall.	No action
910	Τ	EM	Hawthorn	Crataegus mongyna	Good	1.5E	4	420	1	1	4	6	2	C2	5.04	Group tree with single stem and natural taper, supporting a full canopy. Leaning stem. Evidence of decay within main stem. Growing on site boundary adjacent to existing boundary wall and outbuilding.	No action
911	Group	EM	Hawthorn, Sycamore, Alder	Crataegus mongyna, Acer pseudoplatanus, Alnus glutinosa	Good	0	4	240	m	See plan				C2	2.40	Group tree with multi stems and natural taper, supporting a full canopy . Growing on site boundary adjacent to existing boundary and outbuildings	No action

912	Τ	EM	Sycamore	Acer pseudoplatanus	Good	2.2E	10	610	1	5.5	6.5	4	9.5	B2	7.32	Open grown tree with single main stem and natural taper, supporting a full canopy . Some significant deadwood in crown. Growing adjacent to boundary hedgerow.	Remove significant deadwood and crown lift to 4.5m.
913	Group of approx. 17 trees	SM	Ash, Sweet Chestnut, Oak	Fraxinus excelsior, Castanea sativa, Quercus robur	Good	2E	9	150	1	See plan				C2	1.80	Group trees with single stems and natural taper, supporting canopies that overhang the site area. Growing in area fenced off for chicken run	No action
914	Т	SM	Oak	Quercus robur	Good	3E	5	120	1	1	1	1	1	C2	1.44	Open grown trees with single stems and natural taper, supporting canopies that overhang the site area. Growing in area fenced off for vegetable plot.	No action
915	T	SM	Oak	Quercus robur	Good	3E	5.5	140	1	1.5	2.5	4	1.5	C2	1.68	Open grown trees with single stems and natural taper, supporting canopies that overhang the site area. Growing in area fenced off for vegetable plot.	No action

## APPENDIX 3 -

## **ARBORICULTURAL METHOD STATEMENTS**

## THE CONSTRUCTION OF TREE EXCLUSION ZONES AND ERECTION OF PROTECTIVE BARRIERS

#### **INTRODUCTION**

All trees which are to be retained on site should be protected by barriers and or ground protection (please refer to separate ground protection method statement)

Please refer to accompanying tree protection plan for fence positions.

#### 1. <u>METHODOLOGY</u>

- a) Protective barriers should be positioned so as to enclose as large an area around the trees as practically possible. This exclusion zone should contain the minimum root protection area specified by the radius figure identified in the tree survey schedule and the tree protection plan, or as amended by the appointed Arboricultural Consultant.
- b) It should be made clear that the root protection area is a minimum distance of protection. Tree roots can often extend beyond this distance and more protection should be given where possible and secured as an exclusion zone.
- c) Vertical tree protection barriers should be erected and any ground protection installed before any materials or machinery are brought on to site and before any demolition, development or stripping of soil commences.
- d) All vehicles and/or plant involved in erecting the protective barriers should operate outside the root protection area.
- e) Once erected barriers and ground protection should be regarded as sacrosanct. They should not be removed or altered without prior recommendations by the arboricultural consultant or by the approval of the Local Planning Authority.
- f) Once erected the protective barriers should be inspected by the arboricultural consultant before construction work proceeds.
- g) When using weldmesh panels on rubber or concrete feet they should be made resistant to impact by angled support scaffold poles secured into the ground. Weldmesh is preferred because it is readily available, it is resistant to impact, can be re-used and enables visual inspection of the protected area.

h) All weather notices should be erected on the protective barriers with the words:-

#### Protected Tree – Construction Exclusion Zone KEEP OUT



#### Figure 3 Examples of above-ground stabilizing systems

### **GENERAL TREE PROTECTON OUTSIDE THE EXCLUSION ZONE** 1. <u>INTRODUCTION</u>

Trees that have been protected by establishing an exclusion zone with protective fencing and ground protection can still be detrimentally affected from activities outside these areas. The following additional precautions should be taken outside the exclusion zone.

#### 2. <u>METHODOLOGY</u>

- a) Care should be taken when planning site operations to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can results in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from trees is maintained at all times.
- b) Material which will contaminate the soil, eg concrete mixings, diesel oil and vehicle washings should not be discharged with 10m of the tree root protection area..
- c) Fires should not be lit in a position where their flames can extend to within 5m of foliage, branches or trunk. This will depend on the size of the fire and wind direction.
- d) Notice boards, telephone cables or other services should not be attached to any part of the tree.
- e) It is essential that allowances should be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards the trees.

## **APPENDIX 4**

## **TREE PROTECTION PLAN** See electronic attachment

## **APPENDIX 5**

## TREE CONSTRAINTS PLAN See electronic attachment