



ARBORICULTURAL TREE PROTECTION METHOD STATEMENT

**32 Brockwell Lane
Kelvedon
Essex**

24th May 2021

Prepared by

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Scope

The purpose of this tree protection method statement is to provide Arboricultural advice in relation to the constraints of a Yew tree located in the neighbouring garden and referred to in this report as T1, which is to be retained during the construction of a shed and landscaping of the garden space. Protection measures are to be implemented using the guidelines and principles of BS5837:2012.

Table of Contents

	Page
1 Introduction	4
2 Appraisal	5

Appendices

1 Qualifications and Experience	8
2 Site Specific Information	9
3 Limitations and Qualifications	22
4 Tree Protection Plan	24

1 INTRODUCTION

1.1 Brief:

This report has been prepared at the request of NJ Landscape Design the project garden designer, on behalf of the property owner to provide advice on how the Yew tree will be suitably protected during construction works to implement the construction of a shed and garden design.

1.2 Qualifications and experience:

I have based this report on my site observations and the provided information, and I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture and list the details in **Appendix 1**.

1.3 Documents and information provided:

A plan of the proposed layout of the garden space and position of the shed.

1.4 Relevant background information:

The tree is the subject of a TPO.

1.5 Scope of this report:

This report is only concerned with the Yew tree shown in this report as T1 to be retained that could be impacted by construction works to implement the proposed layout, and the measures required to provide protection for them as best prescribed in the guidance of BS5837: 2012 'trees in relation to design, demolition and construction'. Any issues regarding construction methods etc. is outside the remit of an Arborist and remedy should be sought with suitably qualified persons, for example builder, engineer etc. For the purposes of this report an Arborist / Arboriculturalist is someone who through training and experience has the knowledge to assess trees and their condition in a competent manner. Trees with a dbh of less than 75mm have not been included as per the guidance in BS5837:2012 or species considered to be shrub specimens.

2 APPRAISAL

2.1 Brief site description:

The focus of this report is the side garden to the property which is currently laid to lawn, both at the front and the rear. A concrete shed base sits directly under the tree with a path adjacent to the house running from the front to the rear, these are the only hard surface structures present in this part of the garden.

2.2 Condition of the tree:

The tree appears to be in a healthy condition with no signs of pests or diseases normally associated with the species. Because it is located behind the fence in third party ownership, it could only be assessed from the garden space.

A more detailed analysis of the tree can be found in **Appendix 2**.

2.3 Suitability of the tree to be retained for location and management requirements at present:

The tree is considered suitable for the location, I am not aware of any conflict either directly or indirectly with the buildings or usage of the site. Its crown is extending towards the house, but not touching it and has a meter or so clearance. To maintain a better clearance and form a basis for future reduction points, a crown reduction of the overhang by 1m could be considered. This will not impact on its amenity or longevity. The epicormic grown can also be reduced back to the boundary line to prevent future obstruction to the garden space. Because the tree is the subject of a TPO (Tree Preservation Order) consent from the local authority will be required first.

No management works are required at present, the above are suggestions.

2.4 Potential effects of development on the tree:

The landscape designer informs me that the proposal intends to use a composite decking as a subbase, rather than in situ poured concrete or flags. Therefore, there will individual post holes dug. The post holes will be marked out and initially dug in accordance with the hand dig method statement provided. If roots larger than 2.5cm are encountered, the post holes will be moved to avoid conflict to ensure not roots are damaged. Roots of 2.5cm and less will be pruned clear. The post holes will be sheathed with a non-porous liner to prevent toxins leaching into the soil. Care will be taken to ensure no cement is spilt onto the bear earth.

The maximum height of the shed at the ridge will be no more than 2.5m which means there is suitable clearance under the canopy, so there will not be a need to prune the tree. The canopy clearance is 3m and the height of the supporting posts can be constructed to ensure that this ties in with the build so that there is no conflict or requirement to pruning works to make it fit. The orientation of how the building will sit means there is only one high central point along the ridge line will run north to south, with the roof sloping away either side providing more clearance from the canopy. The picture below illustrates the clearance and shows the existing shed and base.



This is the only element of the garden design that could potentially impact on the tree if care is not taken. Where the extension to the path in the front garden is to be installed, this will only occupy a small part of the RPA (Root Protection Area) and will involve shallow excavation where roots are unlikely to be impacted. BS5837:2012 allows provision for shallow base structures such as this to occupy the RPA if no more than 20% of the total RPA is covered. In this case it is far less than this amount and a traditional build is feasible.

All soft landscape works will be undertaken within the RPA using hand tools and at no point will rotavators or ground compacting machinery be used, to further ensure roots are not damaged directly or indirectly.

If for whatever reason it is found soil levels within the RPA need to be raised to achieve a more even surface across the garden, then a cellular confinement system will be used, with a granular material used to fill the cells, to spread the load of the new soil and be porous to prevent compaction or panning to occur. An example of such a system is shown below.



Any change in soil levels will be kept to a minimum within the RPA.

The RPA will be fenced off as far as practically possible during works to install the new shed, so that unnecessary movement over it is not permitted. Instead of heras panels I suggest plastic mesh fencing will be sufficient to denote this protection area, but still allow the family access to their garden space. If this is not to the council's satisfaction, then fencing will be as depicted in **Diagram 1** of **Appendix 2**. Where access over the RPA on soft ground is going to be required, suitable ground protection will be in place for the traffic crossing it.

Materials can be stored on the existing hard surface of the drive, or if required in the in the RPA as long as suitable protection measures are in place as explained below in the method statement. It will be important that the site manager and all relevant personnel understand the protection measures that will need to be in place prior to works progressing on site. Details of the protection measures to be set up and maintained can be found in **Appendix 2**. A pre commencement meeting with the site manager and supervising arborist will also take place, to ensure the protection measures and requirements are understood and planned for accordingly. As long as the protection measures outlined in this report are adhered to, the tree will not be impacted by construction activities to achieve the planning proposal.

The tree can be protected from construction pressures by following the protection measures outlined within this report.

Brief qualifications and experience of Andrew Day

I hold a Higher National Diploma in Arboriculture. I have been working in the field of arboriculture for approximately 10 years, spending time as a contracting arborist undertaking all aspects of practical arboriculture both in the UK and Europe. I have also worked within local government as a tree officer working for a variety of local authorities. I have a broad experience of both the practical and theoretical aspects of arboriculture having worked within the public and private sector.

1. Qualifications:

Higher National Diploma in Arboriculture (1996)

NPTC (National Proficiency Training Council) units 20, 21 and 22

Lantra professional tree inspection certificate

2. Practical experience:

Prior to establishing my company, I worked for a private Arboriculture company for three years undertaking many practical aspects of Arboriculture. I moved on from this to become a local authority tree officer for five years, my duties included consultation on planning matters with regard to trees, advice to the general public, managing the council's tree stock and liaising with other professionals on Arboricultural related issues. I was approached by an established tree contracting and consulting company in Essex to develop and run the consultancy department as their principle consultant which I did for three years.

SITE SPECIFIC INFORMATION

Explanatory Notes

Tree Survey

Tree Protection Method Statement and Protection Criteria

Hand Dig Method Statement

Informatives for protection fencing

Arboricultural Considerations notice for site hut and inducted personnel

Explanatory Notes

Measurements/estimates: All dimensions are estimates unless otherwise indicated. Measurements taken with a tape or clinometer are indicated with a '*'. Less reliable estimated dimensions are indicated with a '?'.

Species: The species identification is based on visual observations and the common English name of what the tree appeared to be is listed first, with the botanical name after in brackets. In some instances, it may be difficult to identify a particular tree quickly and accurately without further detailed investigations. Where there is some doubt of the precise species of tree, it is indicated with a '?' after the name in order to avoid delay in the production of the report. The botanical name is followed by the abbreviation sp if only the genus is known. The species listed for groups and hedges represent the main component and there may be other minor species not listed.

Height: Height is estimate height to the nearest metre.

Spread: The maximum crown spread is visually estimated to the nearest metre of the total crown spread diameter. It should be noted that the crown of some trees can be one side, however this usually indicated within the report.

Diameter: These figures relate to 1.5m above ground level and are recorded in centimetres. Estimate measurements are banded 0-10cm, 11-20, 21-30 etc. If appropriate, diameter is measure with a diameter tape. 'M' indicates trees or shrubs with multiple stems. 'AV' indicates average and is the average of two stems when dealing with twin stem trees.

Estimated Age: Age is assessed as **M** mature (last one third of life expectancy), **EM** early-mature (one third to two thirds life expectancy) and **Y** young (less than one third life expectancy).

FSB: First significant branch from ground level (direction shown on tree protection / constraints plan)

SULE: This is the estimated Safe Useful Life Expectancy of the tree. Trees can live longer than this value but can pose a risk to persons or property.

RPR: Radius of root protection area around the tree /group

RPA: Root protection area for tree or group

BS 5837 2012 - On the basis of this assessment, trees can be divided into one of the following categories:

A - Trees whose retention is most desirable, High category

B - Trees where is desirable, Moderate category

C - Trees which could be retained, Low category

U - Trees that cannot realistically be retained; Fell category

Tag	Name	Age	Diameter (mm)	Height (m)	Crown Hgt (m)	FSB Hgt (m)	Crown Spread (N S E W) (m)				Life Exp	Recommendations	Category	RPR (m)	RPA Area (m)
T1	Taxus baccata (Yew)	M	800	15(3)	3	3	4.5	4.5	4.5	4.5	20+	Limited inspection as this tree is located in third party ownership and no access. This tree has epicormic growth and deadwood. Remove deadwood. Epicormic growth has pushed through boundary fence. Remove epicormic growth. Consider reducing back the overhang by 1m to maintain a good distance from the house, that can be maintained on a scheduled basis.	B3	9.6	289.57

Method Statement for Tree Protection Measures

PROJECT: 32 Brockwell Lane, Kelvedon, Essex

CLIENT: NJ Landscape Design

1.1 Brief

Provide protective measures specification for a Yew tree identified in this report as T1, to be retained using the guidelines and principles prescribed in BS5837: 2012 'trees in relation to design, demolition and construction'.

1.2 Protective measures and Site Supervision

An important factor in providing protection for the tree during the construction works is the chronological order in which development tasks are undertaken. Before work continues on site, the following issues will be addressed and submitted to the council for approval.

- A suitably qualified arborist will be retained to oversee tree protection measures where required and liaise with the tree officer as required. The contact information of this arborist will be made available to the council tree officer prior to works starting on site.
- The base of the existing shed will be utilised or carefully removed. The post holes for the new shed foundation will be excavated carefully to avoid roots larger than 2.5cm and lined with a non-porous material.
- A pre- commencement meeting with a suitably qualified arborist will take place with the site manager and other relevant site personnel, to debrief them on the importance of the protection measures and to assist in setting up of the ground protection etc. before work commences on site. Supervision works will be programmed in for when excavation is undertaken in the RPA.
- A schedule of arboricultural site supervision will be formulated at the pre-commencement meeting and be provided to the council by the site manager once this plan of visits has been set. **It is then the responsibility of the site manager to ensure the arboricultural supervision visits are booked in and undertaken at the relevant times.**

1.2.1

A pre-commencement inspection by the supervising arborist will take place to ensure the protective measures are understood and a schedule of arboricultural site monitoring is formulated at the start of the project, this will consist of a visit by a suitably qualified arborist once at the start of the project when the fencing is set up and to outline the protection measures to the construction staff. Another visit will be scheduled towards the end to ensure protection measures are still in place and no mitigation works to the tree are required. Supervision will be present when excavation in the RPA is required, which will be done in accordance with the hand dig method statement provided. If this is not to the council's satisfaction, then visits arboricultural visits will take place once a month for the duration of the project. A log of these visits and any actions required will be available to the council on request and kept on site. **Arboricultural supervision will be present at all times during excavation work in the RPA.**

A copy of auditable site monitoring will be sent to the local planning authority upon completion of each stage of arboricultural supervision.

1.2.2

Protective fencing will be a plastic mesh style barrier to denote the protection area, and still allow the owner to access the garden space. This will be set up during works to construct the new shed, then removed to facilitate the remainder of the works once this heavy work has been completed. If this is not acceptable to the council, then fencing will be as shown in **diagram 1** or similar will be placed in the locations as shown on the tree protection plan in **Appendix 5**, prior to works commencing on site. Once erected the fencing will not be removed unless permission has been given by the tree officer or the works on site have been completed. The informatives provided will be attached to the fencing to highlight its importance at a height of 1.5m and at 5m intervals along the line of fencing, or in locations that can demonstrate they are clearly visible to identify the purpose of the fencing in relation to the project.

1.2.3

All personnel inducted on site will be made aware of the tree protection measures and will be responsible for their own actions in maintain these and ensuring that they do not cause any damage to the tree.

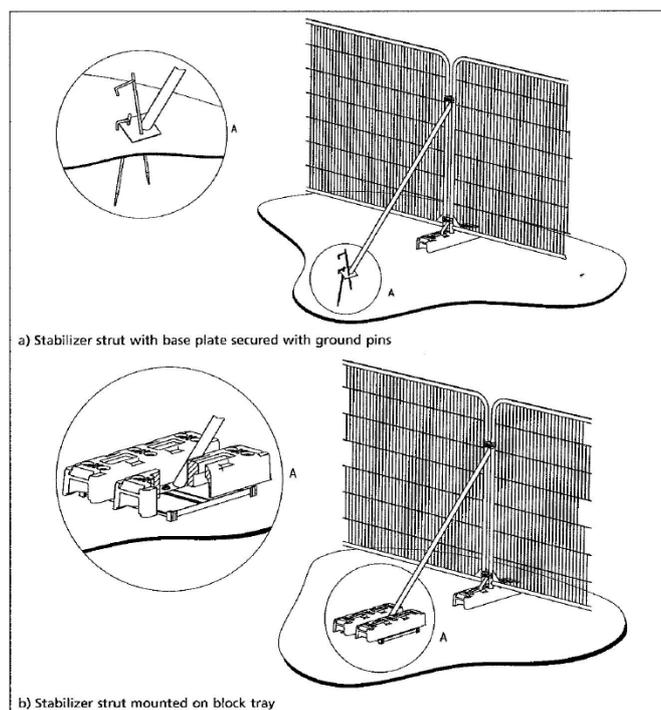
1.2.4

The placing of tree protection measures works within the construction timescale will not be altered and it is re-emphasised that this is to take place prior to any other activities.

1.2.5

All personnel inducted on site will be made aware of the tree protection measures and will be responsible for their own actions in maintaining these and ensuring that they do not cause any damage to the tree.

Diagram 1



1.3 Forbidden activities within RPA

1.3.1 Within the root protection area, the following activities will be prohibited, unless the local authority in writing grants specific permission:

No storage of chemicals or other substances likely to leach and cause harm to the trees to be stored.

No storage of heavy plant or materials likely to cause further soil compaction. The piling rig will sit outside the RPA at all times.

No ground disturbance works, apart from what has been approved by any planning permissions or specifically from the council.

No activities that could indirectly affect the trees such as bonfires etc.

- 1.3.2 No ground disturbance works apart from those granted in the planning permission is to be undertaken within the confines of the RPA without the written permission of the local authority.

The protected area is not to be breached at any time, unless the local authority has granted permission and a qualified arborist has been consulted and supervises any work activities that need to take place.

1.4 Storage of chemicals / mixing of materials

- 1.4.1 Storage of chemicals will be placed in a sealed bund / area, with no discharge allowed onto the ground or watercourses. The area containing these materials will have an impervious surface and stored **if possible** 10m away from the RPA. If accidental spillage of chemicals or other damage to the trees takes place the local authority is to be notified as soon as possible and a suitably qualified arborist is consulted as to the best actions to take to mitigate any damage that may have occurred as a result of the accident and these works to be undertaken to mitigate the situation as soon as possible.

1.5 Works in the RPA

- 1.5.1 **No excavation works will take place within the RPA unless permission is granted by the local authority to do so. The hand dig method statement provided, will be adhered to as far as is practically possible given the ground conditions when initially excavating to remove the shed base if it cannot be utilised in the new scheme. The supervising arborist will be present at all times during this work.**
- 1.5.2 **Where hand digging is not feasibly handheld pneumatic tools will be used. If this is found to be impractical and a mechanical digger with pneumatic head is required, then a competent operator will be in control with the supervising arborist overseeing the works.** A suitably qualified arborist will be present to ensure any roots encountered are not damaged and any exposed roots are covered and treated accordingly to prevent stress to the tree(s).
- 1.5.3 Excavations for the post holes will be dug by hand in accordance with the hand dig method statement. If roots larger than 2.5cm in diameter are encountered the post hole location will be moved to avoid roots.
- 1.5.4 A liner will be placed in the post holes that will be non-porous, to act as a barrier to prevent contamination to the soil from concrete and other toxins.
- 1.5.5 The demolition / building contractor will discuss the works with the supervising arborist and formulate a suitable working method statement of how to proceed with works and protect the tree in accordance with this report.

1.5.6 If the soil level needs to be raised in the RPA for the design, a cellular confinement system will form the base layer using a non-granular material. This will spread the load of the soil placed on top, prevent panning, and allow water and gaseous exchange to still take place around the roots.

1.6 Material storage / site parking

1.6.1 Particular attention will be made to the type of materials to be stored and the type of machinery needed to move them, ensuring that sufficient protection measures in accordance with this method statement and space are provided to prevent damage to the trees to remain. The details outlined in 1.4 above will be adhered to.

1.6.2 **At no point will plant or materials be allowed to be parked or stored within the RPA. This will be strictly policed by the site manager.** If this is not possible, then suitable ground protection will be in place.

1.6.3 The site manager will provide a plan showing the site access, compound and material storage areas before construction works on site begin. The existing drive will be used as much as possible.

1.7 Ground Protection

1.7.1 Where access across the RPA on soft ground, or extra ground protection is deemed necessary on existing hard surfaces to implement the construction, the following ground protection measures will be implemented as required. This ground protection will also be used if access across the RPA in other areas is needed.

For pedestrian traffic:

A single thickness of scaffold boards placed on top of a scaffold frame so as to form a suspended walkway (similar to diagram 2), or boards laid on to a geotextile membrane with a layer of wood chips 100mm in thickness.

For pedestrian operated plant, up to 2 tonnes:

Interlinked ground protection boards of plywood or similar at least 2.5cm thick, laid onto a geotextile membrane on a bed of wood chip 150mm in depth.

For wheeled or tracked traffic exceeding 2 tonnes gross weight:

Metal tracking designed and fit for purpose, pre-cast concrete slabs or similar, laid to an engineering specification on a compression resistant layer e.g., wood chips that will likely spread the weight of the load and prevent compression of the soil underneath.

1.7.2 **AT NO POINT WILL THE GROUND WITHIN THE RPA BE LEFT UNPROTECTED IF ACCESS IS REQUIRED IN THIS AREA.**

1.8 Completion

- 1.8.1 Once all the construction activities on the site have been completed and a suitably qualified arborist will assess the condition of the trees and liaise with the local authority accordingly if any works are considered necessary.

2 HAND DIG METHOD STATEMENT

PROJECT: 32 Brockwell Lane, Kelvedon, Essex

- 2.1** The area to be excavated will be inspected by a professional arborist to assess the likely proximity of root activity and concentration prior to the commencement of any works. All relevant authorized personnel to be informed and required permissions gained before work commences.
- 2.2** If hand digging is not possible/practicable a method of excavation will be agreed and undertaken by a suitably qualified person for example air spading or a competent digger operator etc., in the presence of a qualified arborist.
- 2.3** During excavation great care will be taken to minimize damage to retained roots, including the bark around the roots.
- 2.4** All roots greater than 25mm diameter should be retained and worked around. Where clumps of smaller roots (including fibrous roots) are found these are to be retained.
- 2.5** Roots with a diameter in excess of 25mm must not be severed without permission from an Arborist.
- 2.6** If roots are encountered, the Arborist must conduct the root pruning and inform the relevant person to suggest mitigation works to the tree(s) if required. If severance is unavoidable roots must be cut back using a sharp tool, leaving the smallest wound possible. A photographic record will be kept of the pruned roots. The vertical wall of the trench on the tree side will be faced back with a double layer of damp hessian and pegged to prevent it from sagging, to prevent the desiccation of roots. The hessian will then be faced with an impermeable plastic sheet to prevent the alkalinity of the concrete scorching the cut ends of the roots.
- 2.7** If there is a possibility of infection being passed from one specimen to another, tools will be sterilized in an appropriate method to reduce the risk of cross contamination.
- 3.8** When backfilling an inert granular material mixed with topsoil or sharp sand (not builder's sand) is to be used around the retained roots. Unless an alternative backfill substrate has been agreed with in writing by the appropriate authorized personnel.
- 2.9** If roots are to be left exposed for a period of longer than 1 hour (dependent on weather conditions), then a covering of dampened Hessian or similar material is to be used to cover the exposed roots. Any changes to this practice are to be authorized by a qualified arborist.
- 2.10** All levels are to be returned to the original plane after any excavation unless specific design and relevant permission has been authorized.
- 2.11** A qualified Arborist is to be on site to supervise during any operations within the protection zone.

ANDREW DAY
ARBORICULTURAL CONSULTANCY LTD

REDUCING COSTS BY DELIVERING PRACTICAL SOLUTIONS

TREE PROTECTION ZONE

**DO NOT CROSS WITHOUT
PERMISSION**

**BREACHING THIS BARRIER CAN
RESULT IN THE FOLLOWING:**

- **SHUT DOWN OF THE JOB**
- **FINANCIAL IMPLICATIONS**
- **CRIMINAL PROCEEDINGS**

ARBORICULTURAL SITE CONSIDERATIONS

THIS NOTICE IS TO BE DISPLAYED IN THE SITE OFFICE OR A SUITABLE LOCATION WHERE IT IS CLEARLY VISIBLE AND ISSUED TO ALL PERSONNEL INDUCTED ONTO SITE

The following site considerations must be observed at all times during the development process, from site preparations through to completion.

- ❖ The protected area of the RPA must be regarded as sacrosanct and not breached except where to implement the planning permission granted, without prior consultation with either the local planning authority or the supervising arborist.
- ❖ Ground protection must not be lifted or removed without prior consultation with either the local planning authority or the supervising arborist.
- ❖ Damage caused to ground protection must be reported to the site manager to ensure suitable repair or actions are taken.
- ❖ No materials, chemicals, machinery, or vehicles to be stored within the RPA (root protection area) as defined on the tree protection plan and on site by fencing and ground protection.
- ❖ No materials etc. must be rested against or machinery chained to trees.
- ❖ No pruning of trees may be undertaken by anyone other than a qualified arborist and approved by the supervising arborist and local authority tree officer.
- ❖ Any physical damage caused to a tree to be retained must be reported to the site manager immediately so that suitable remedial works can be commissioned without delay.
- ❖ Builder's sand (which contains high levels of salt) must not be used to back fill excavations within or in close proximity to tree roots, as it has a toxic effect and can cause root desiccation. Sharp sand must be used under such circumstances.
- ❖ Soil contaminants such as concrete mixings, diesel oil and vehicle washings must be kept suitably contained, preferably within bunded areas. Any spillages within 2m of a fenced area must be reported to the site manager and supervising arborist immediately so that suitable mitigation works can be commissioned.
- ❖ Fires must not be lit in positions where their flames can extend to within 5m of foliage, branches, or trunks. Wind direction and size of fires will impact on this.
- ❖ Notice boards, telephone cables or other services etc. must not be attached to any part of a tree.

Remember the tree officer can turn up at any time or neighbours may report any poor practice or threats to the trees.

Site Personnel Contact Information

As far as I am aware the only personnel associated with this site at the time of writing this report is the site owner and project landscape designer. Table 1 shows the contact details of the project landscape designer who is to be contacted if any enquires relating to this project need answering.

Table 1

Name	Relation to Site	Contact Details
NJ Landscape Design	Project Landscape Designer	07867 794689

**LIMITATIONS
AND
QUALIFICATIONS**

LIMITATIONS AND QUALIFICATIONS

Unless specifically mentioned the report will only be concerned with ground inspections. No below ground inspections will be carried out without prior confirmation from the client that such works should be undertaken. This report is for the purposes of identifying the potential impact construction activities could have on the trees and is not a health and safety assessment of the trees. A cursory assessment of the trees health and condition will be recorded, but this is not to be taken as a detailed assessment of its structural condition, health, and management recommendations in relation to this. A separate tree inspection regime focusing on these aspects will need to be undertaken if this is required.

The validity, accuracy and findings of this report will be directly related to the accuracy of the information made available during the inspection process. No checking of independent data will be undertaken, Andrew Day will not be responsible for the recommendations within this report where essential data are not made available or are inaccurate.

This report will remain valid for one year from the date of inspection but will become invalid if any tree works not recommended within the report are undertaken, soil levels around the trees are altered in any way, and extreme weather conditions are experienced or if any building works that could impact on the tree are undertaken or not disclosed.

If any of the above occurs, then it is strongly recommended that a new tree inspection is carried out.

It will be appreciated, and deemed to be accepted by the client that the formulation of the recommendations for the management of the trees will be guided by the following:

1. The need to avoid reasonable foreseeable damage
2. The arboricultural considerations – Tree safety, good Arboricultural practise and aesthetics.

The client is deemed to have accepted the limitation placed on the recommendations by the sources quoted in the attached report. Where time constraints or the client limits sources, this may lead to an incomplete quantification of the risk.

TREE PROTECTION PLAN

(This plan is for reference only; please refer to the separate A3 plan for scaling if required)

