



ARBORICULTURAL REPORT

**Land at Yapton Road
Barnham
West Sussex**

19th March 2020

Prepared by

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Scope

The purpose of this report is to provide Arboricultural advice in relation to identifying the constraints of trees which are present on site and in neighbouring land, in relation to the proposal to construct a care home on the land. Providing advice on how the trees could be impacted and protection measures to be implemented for them using the guidelines and principles of BS5837:2012.

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1 INTRODUCTION

1.1 Brief:

This report has been prepared at the request of Arrow Planning Ltd, the project planning consultant on behalf of the site owner, to provide advice on the arboricultural constraints that the trees on site and in adjacent land present to the scheme, and what protection measures will need to be implemented to safeguard the trees to be retained from construction pressures.

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 showing the proposed layout of the site.

1.4 Relevant background information:

None.

1.5 Scope of this report:

This report is only concerned with trees located on site and neighbouring land that could be impacted by construction works to implement the proposed layout, and the measures required to provide protection for those to be retained as best prescribed in the guidance of BS5837: 2012 'tree 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 tree and their condition in a competent manner.

2 APPRAISAL

2.1 Brief site description:

The site is an open field that is currently being used to graze sheep. On the southern boundary is a hedge made up of native species, with the main road and residential properties beyond. To the east and west are residential properties, with a public footpath running adjacent to the eastern boundary. To the north are other fields of a similar nature.

2.2 Condition of trees:

The trees appear to be in a healthy condition, with no visible signs of pests or diseases normally associated with the species. Those in third party land could only be inspected as best I could from the confines of public rights of way.

A more detailed analysis of the trees can be found in **Appendix 3**.

2.3 Suitability of trees for location and management requirements at present:

The trees could be considered suitably for the location, as they appear to have been purposely planted with the exception of T5 which has likely naturally developed in the hedgerow. G2 could be considered unsuitable for long term retention, because the growth potential of these trees are likely to cause displacement to the field fence and obstruction to the public footpath. Its likely these have self-set or grown from suckers of nearby trees. In my opinion removal would be the best option.

No management works are considered necessary at present.

2.4 Potential effects of development on the trees:

To implement the development of the site none of the trees will need to be removed or worked on. A small part of the boundary hedge to the front will need to be removed for the access drive and site lines, but this is unlikely to impact of the amenity of this feature in the street scene. This can be compensated for by planting some new trees, set further back from the road to enhance the amenity of the street scene and provide screening and softening to the development.

Because the construction works are focused away from the trees and the constraints they present, it is that they will be directly impacted by the proposal. There is a small risk of indirect damage occurring to them if care is not taken to avoid collision damage by vehicles or inappropriate storage of materials etc.

However, there is sufficient space on site away from the trees so this is unlikely to be an issue. Protective fencing is shown on the tree protection plan in **Appendix 5** to protect the trees and hedge line from collision damage or inappropriate access by machinery etc. Given the distance away from the construction zone, I believe it would be feasible to use a plastic mesh style of fencing to denote this protection area, rather than use heras style fencing. It will clearly show workers on site where the protection areas are and be more practical and cost effective to install. The site manager can also police that vehicles stay on the concrete roads and materials or vehicles are kept away from the trees.

The trees can be protected from construction pressures by following the measures outlined in the tree protection method statement in **Appendix 3**. There is plenty of space on site and away from the trees where material storage / manoeuvring can take place, although this will need to be made clear to any contractors to further ensure the trees are not damaged. Protective fencing will be set up before construction works commence on site. The protection measures highlighted in the Tree Protection Method Statement in **Appendix 3** will be adhered to prevent the trees to be retained from being damaged.

In this case the potential impact of the proposal in relation to the trees to be retained is considered to be low with measures being able to be put in place to prevent unnecessary harm.

The scheme presents an excellent opportunity to have new planting installed, which would enhance the amenity within the landscape, screening the development from the road and increase the ecological net gain compared to what the site is currently like. Native tree species along with shrub specimens that are pollinator species would offer a diverse habitat for wildlife and seasonal interest on the site, compared to the barren field currently occupying it.

2.5 Potential effects of the trees on the development:

Leaf litter from the deciduous trees close by could become a problem if it causes drains or gutters to become blocked, that could impact in other ways on the building, or if left on the access surface where they could become a slip hazard. To address this gutter guards could be installed to prevent build-up of leaf litter that could become a problem, or regular cleaning of the gutters employed. Regular clearing of falling leaves on the access route, especially in times of wet weather will address any potential slip hazards caused by this seasonal occurrence. Shadow cast will not be an issue given the only vegetation on the southern boundary is the hedge line and a few conifer specimens in G3, that are a notable distance from the proposed buildings. Any new planting will need to consider how shadow cast could impact on the usage of rooms in the buildings. The trees are unlikely to have any notable impact on the proposal, or none that scheduled maintenance cannot easily address.

2.6 Proposed solutions to safeguard the trees during construction works:

2.6.1 Protective fencing

Protective fencing will be placed in the locations shown on the tree protection plan in **Appendix 5** prior to works commencing on site and will be a plastic mesh style fence that clearly shows the protected area. The fencing will be retained at times. Access beyond the fence line will only be allowed with good reason and with the tree officer's permission. It is important to ensure that construction activities do not occur beyond the extents of the protective fence line. If soil compaction is deemed a risk by the tree officer, the ground protection measures provided in the method statement will be implemented.

2.6.2 Services

No details relating to service runs have been provided. As long as the service runs are located outside of the RPA this will not conflict with the trees. This will be confirmed by the project architect.

2.6.3 Site facilities and material storage

Care will have to be taken to identify the type of materials required and the access of any machinery, vehicles or plant needed to move them, as these can cause collision damage to aerial parts of the tree as well as soil contamination. **The site manager will provide details** on this aspect of the project if felt necessary by the local authority. There is plenty of space on site for this element of the build, so is unlikely to impact on the trees.

2.6.4 Works within RPA

No excavation works are proposed in the RPA as far as I am aware.

2.6.5 Site supervision

The site manager will provide a timetable of works on the site, listing all the key stages of development, starting with the demolition and excavation works, establishing site facilities, through to completion of the site. Arboricultural supervision will take place prior to works commencing on site to ensure protection measures are understood and implemented with a pre-commencement meeting with the site manager and other relevant personnel. Another visit will take place when the excavation works within the RPA, one mid-way through the work timetable and once at the end. If this is deemed unacceptable by the tree officer, monthly supervision meetings will take place and at key stages such as foundation installation, or on a frequency agreed with the tree officer.

Prior to work, all key personnel connected with the site will be briefed by an arborist about the importance of the tree protection and methods of ensuring that the trees are protected during the construction period. A record of all arboricultural related site meetings will be made, signed off and available for inspection by the local authority if required.

2.6.6 Site completion

Once work has been completed, an arborist will inspect the trees and comment on their condition and prescribe any mitigation works required. The tree protection measures are expanded upon in **Appendix 3**. Any proposed landscaping scheme or works will be discussed with the supervising arborist to ensure that this will not conflict with the trees or the protective areas in any way.

2.6.7 Tree management works

No tree management works are required. Only a small portion of the boundary hedge to the front will be removed to facilitate access and sight lines.

3 CONCLUSIONS

- The trees appears to be in good health, with no signs of pests or diseases normally associated with the species.
- No trees are required to be removed or worked on to implement the proposal.
- The construction works will be confined to areas far away from the trees, so are unlikely to impact on them.
- The trees can be adequately protected from construction pressures by implementing and adhering to the protection measures provided in the method statement in **Appendix 3**.
- The scheme presents an excellent opportunity to have new landscaping installed to complement the site, but also enhance amenity and ecological net gain. This can be conditioned as part of a planning consent.

4 OTHER CONSIDERATIONS

4.1 Tree subject to statutory controls:

I do not know if the trees are the subject of a tree preservation order or other restrictions. I suggest that the local authority is contacted to confirm this and kept updated with any proposed tree works to form a good working relationship and to prevent misunderstandings or contravention of protection measures. This is an advisory for readers of this report and not meant as a confirmation as to the protection status of the trees commented on.

*Andrew Day HND Arb
For Andrew Day Arboricultural Consultancy Ltd.*

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. I am currently a consulting arborist for Andrew Day Arboricultural Consultancy.

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 about tree, advice to the 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 PHOTOGRAPHS



Showing T1 – T4 and G1 & G2



Showing G3, T5 & T6



Showing T6

SITE SPECIFIC INFORMATION

Tree Survey

Tree Protection Method Statement and Protection Criteria

Notices for Protective Fencing if erected

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 quickly and accurately identify a particular tree 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 tree 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 tree or shrubs with multiple stems. 'AV' indicates average and is the average of two stems when dealing with twin stem tree.

Estimated Age: Age is assessed as mature (last one third of life expectancy), semi-mature (one third to two thirds life expectancy) and 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. Tree 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, tree can be divided into one of the following categories:

- A** - Tree whose retention is most desirable, High category
- B** - Tree where is desirable, Moderate category
- C** - Tree which could be retained, Low category
- U** - Tree that cannot realistically be retained; Fell category

Tag	Name	Age	Diameter	Height	Crown Hgt	FSB Hgt	Crown Spread (N S E W) (m)				Life Exp	Recommendations	Category	RPR	RPA
T1	Betula pendula (Silver Birch)	EM	200	12(6)	6	6	3	5	5	2	20+	Third party tree. No works required at present.	C2	2.4	18.1
T2	Salix caprea (Goat Willow)	M	520	12(4)	4	4	5	7	7	7	20+	Third party tree. No works required at present.	C2	6.24	122.34
T3	Sorbus aucuparia (Rowan)	SM	260	12(6)	6	6	3	2	2	2	20+	Third party tree. No works required at present.	C2	3.12	30.59
T4	Populus trichocarpa (Western Balsam Poplar)	M	600	15(7)	7	3	8	5	8	7	20+	Third party tree. No works required at present.	B3	7.2	162.88
T5	Sambucus nigra (Elder)	EM	200	5(2)	2	2	2	3	1	2	20+	No works required at present.	C3	2.4	18.1
T6	Salix fragilis (Crack Willow)	M	550	12(6)	6	6	3	3	3	3	20+	Appears to be dead. Third party tree.	U	6.6	136.87
G1	X Cupressocyparis leylandii (Leyland Cypress)	EM	250	12(1)	1	1	2	2	2	2	20+	Third party tree. No works required at present.	C1	3	28.28
G2	Populus trichocarpa (Western Balsam Poplar), Crataegus monogyna (Hawthorn)	SM	100	5(1)	1	1	2	2	2	2	20+	No works required at present.	C3	1.2	4.52
G3	X Cupressocyparis leylandii (Leyland Cypress)	EM	250	12(1)	1	1	2	2	2	2	20+	No works required at present.	C1	3	28.28

Method Statement for Tree Protection Measures

PROJECT: Land at Yapton Road, Barnham, West Sussex

CLIENT: Arrow Planning Ltd

1.1 Brief

Provide protective measures specification for trees to be retained using the guidelines and principles prescribed in BS5837: 2012 'tree in relation to design, demolition and construction'.

1.2 Protective Fencing 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 and contractors. The contact information of this arborist will be made available to the council tree officer prior to works starting on site.
- The Location of services will be confirmed and if required, details of their installation will have been provided, with any arboricultural protection measures or methodologies of working programmed in the works schedule and approved by the council.
- 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 protection fencing etc. before work commences on site.

The arboricultural site supervision schedule will be compiled at the pre-commencement meeting and will be the responsibility of the site manager to ensure that it is carried out and maintained for the duration of the works.

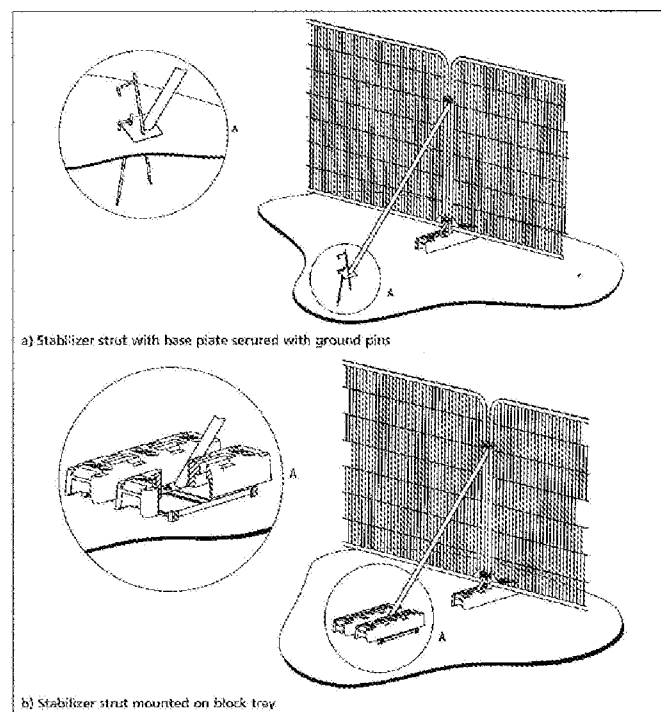
1.2.1

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, once mid-way through and once at the end. 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.

1.2.2

Protective fencing will be a plastic mesh style barrier, secured in place with metal pins to clearly denote the tree protection perimeter. If this is not acceptable to the council, it 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.

Diagram 1



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 trees.

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:

1.3.2 No storage of chemicals or other substances likely to leach and cause harm to the trees to be stored, unless precautions have been taken to prevent this such as sealed bunds etc.

No storage of heavy plant or materials likely to cause further soil compaction.

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

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

1.3.2 No excavation works apart from those granted in a 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 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, an 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 within the RPA

1.5.1 No excavation works will take place within the RPA of the trees to facilitate the conversion of the buildings.

1.5.2 If it is found that excavation work is required in this protected area, the permission of the council will have been given and a hand dig method statement provided that will be adhered to at all times.

1.5.3 **Arboricultural supervision will be present at all times during excavation works in the RPA, without exception.**

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. The site manager will provide a plan or details of the locations of material storage, site facilities etc to demonstrate how this has been considered to prevent collision damage happening.

1.7 Ground Protection

1.7.1 If access across the RPA on soft ground is needed, then the following ground protection will be installed.

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. Any proposed landscaping works will be discussed with the supervising arborist to ensure there could be no detrimental impact on the trees.

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 tree.
- ❖ No pruning of tree 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 tree.

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 project planning consultant. Table 1 shows the contact details of the project planning consultant who is to be contacted if any enquires relating to this project need answering.

Table 1

Name	Relation to Site	Contact Details
Arrow Planning Limited	Project Planning agent	01494 447202

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 constraints of tree in relation to development and not a health and safety assessment of the tree. A cursory assessment of the tree 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 Arboricultural Consultancy 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 tree are altered in any way and if any building works which were not disclosed during the inspection are undertaken. If extreme weather changes occur such as heavy winds, snow etc., the tree will need to be re-inspected to ensure their condition has not been affected or has altered from the initial inspection details obtained.

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 tree 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

(For reference only. Please refer to the separate A3 plan for scaling if required)

