

17th July 2023

Reference MB230703

INTRODUCTION

Arbor-Eco Consultancy were commissioned by Miss S Knee, to provide an arboricultural report comprising of a tree constraints plan, following a tree survey of an individual Oak tree (*Quercus robur*). A letter of mitigation along with an Arboricultural Method Statement is provided for the remediation of land following the construction of a double garage within the RPA of the tree.

An additional tree has been taken into consideration, however, this off-site tree whilst has a default RPA within the footprint of the property is highly unlikely to have been influenced by the development work due to a previously constructed defunct cesspit that will have deflected any rooting material into the adjacent field and property. This tree is shown as T2 on the Tree Constraints Drawing MB230703-01 and a number of photographs are shown at Plate 1.



Plate 1: Defunct cesspit location and excavated evidence.

PLANNING REFERENCE

Planning Reference H/23/95031, issued by Eastleigh Borough Council, as a retrospective application for the retention of the erected double garage at the property.

COMMENTS RELATING TO TREES

Comments received 17/05/23;

- There are two oak trees within potential influencing distance to the structure – one to the east and one to the west. These trees are subject to a Tree Preservation Order.

- The structure may be within the Root Protection Areas of these two trees and, thus, may have had a negative impact. However, without arboricultural information – tree survey and impact assessment - it is not possible to determine.
- Therefore, we raise a holding objection and request arboricultural information. In addition, we would like a method statement detailing any remedial work, if it is deemed that there has been a negative impact.

COMMENTS RELATING TO ECOLOGY

Comments received 26/06/23;

- I object to this application because it could have an unacceptable impact on the SINC due to disturbance and hydrology and on the trees. A 20 m buffer is normally required between a SINC boundary and any development. What is the actual distance between the rear of the building and the site boundary?
- Even if this qualified as permitted development, a building should not be allowed to be built right up against the SINC boundary.
- Does the building have any surface water drainage arrangements? I don't see any rain gutters on the site photos but I do see a raised drain cover on top of a pipe in the 2nd photo which also appears to show a large window at the rear of the garage. Why does the garage have such a large window to the rear? If it is to be retained and used at night, the window must be covered so that light does not shine out onto the SINC. There also appear to be two exterior lights on the front of the garage. This must not be kept on all night, but only as needed, with a motion detector for security purposes.

TREE SURVEY

Arbor-Eco Consultancy have carried out a tree survey of two Oak trees (*Quercus robur*) to further inform management recommendations.

T1, as shown on Tree Constraints Drawing MB230703-01 indicates that the default RPA is within the influence of the constructed garage block.

T2, as shown on Tree Constraints Drawing MB230703-01 indicates that the default RPA is within the influence of the constructed garage block, however, the impact of the development is deemed to be insignificant due to a previous structure within the default RPA. This tree is an off-site tree at a distance so as not to be influenced by the development due to historical structures within the site.

In addition, a Southern Water owned, sewer dissects the site from east to west.

HISTORY

Prior to the construction of the garage block (for retention) a defunct cesspit existed and is shown on Plate 1 and on historical OS map on Fig 1.

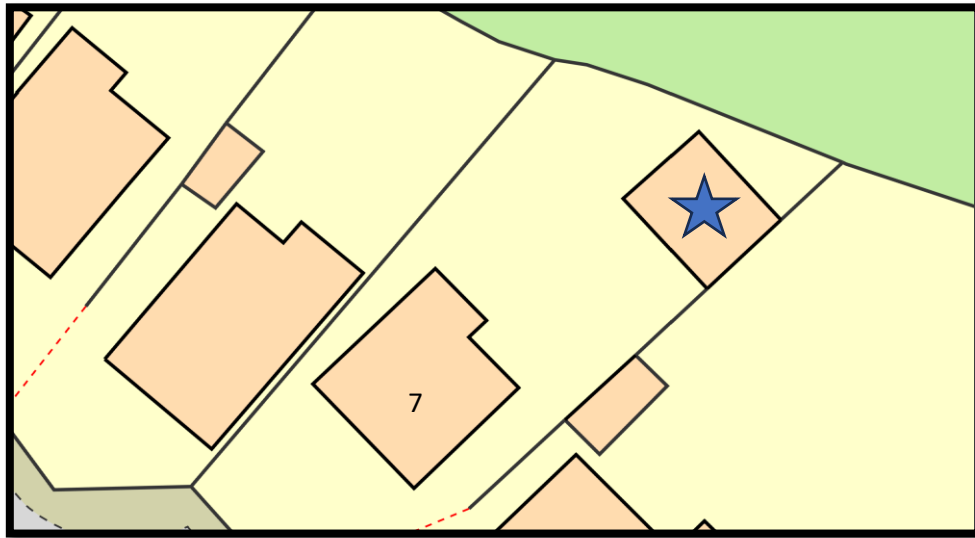


Fig 1: *Location of defunct cesspit.

Further to the cesspit being discovered, a few years ago an adjacent tree (see Plate 2) within the garden was the subject of root heave (potentially due to flooding within the SINC) and the tree fell into the garden and damaged the property. See Plate 2.

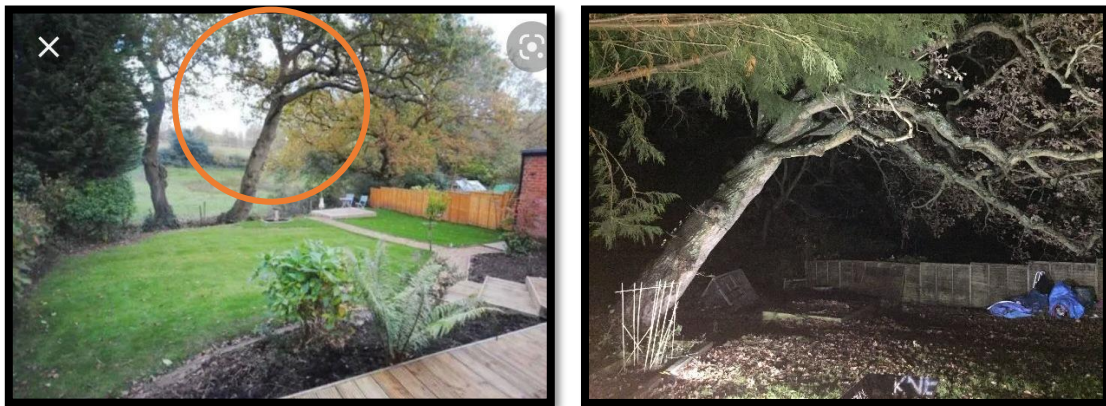


Plate 2: Original tree and tree root failure.

The tree was subsequently removed in accordance with the Town and Country Planning (Tree Preservation) (England) Regulations 2012, Part 4 – Applications for Consent under Tree Preservation Orders, for a dangerous tree.

The Local Authority confirmed the loss and the mitigation was to plant a tree of the same species within 10 m of the original tree stem. This was duly carried out, however, considering the size of the garden (regardless of the new construction) there is very little space to support two mature Oak trees (*Quercus robur*) in the opinion of Arbor-Eco Consultancy. The new tree, has not grown particularly since planting, and I suggest that it is potted until all building debris has been removed

(see Mitigation and Remediation). It may well be better positioned within the SINC rather than on an elevated level in the garden. This letter seeks permission below for a common-sense approach.

As with the cesspit, and whilst it is acknowledged that trees from the same family (*Fagaceae*) do graft roots, have a mutualistic relationship and will 'help' each other, the loss of the tree will also have damaged or deflected the roots of the remaining tree. Indeed, the remaining tree grows on the inner lip of the land drain and not directly inside the property, and therefore it may be considered vulnerable as the previous tree was, if flooding should occur within the SINC. Nonetheless, it is likely that the majority of roots would be within the SINC where water, oxygen and nutrients would be abundant.

Finally, Southern Water have provided a drawing showing the location of a sewer pipeline that dissects the rear aspect garden of the property to the south of T1. This pipeline is to be renewed under statutory licence and therefore, whilst a mitigation program can be arranged, the disturbance of grown may further exacerbate the decline of the tree. This must be a consideration in the Decision of the Planning Application.

DISCLOSURE OF FACTS

In response to the ecological concerns raised it can be seen that a man-made structure was constructed within 20 m of the SINC. Indeed, the existing bungalow is within 20 m (along with a further 9 properties and most with garden buildings of varying design within 20 m of the SINC. Arbor-Eco Consultancy considers this objection a moot point based on historical fact and current evidence. The 20 m rule should apply to all properties that are adjacent to the SINC and not solely number 7.

Further to this, it would appear discriminatory that number 7 should be accused of disturbing the SINC alone. All of the properties have rear gardens that abut the SINC and there is no enforcement to reduce highway contaminant run-off (road salt for example) or that the owners of all properties should not be cleaning vehicles, personal equipment or using either a fertiliser or herbicide. Again, Arbor-Eco Consultancy would determine this comment as a moot point as it is directed only at the owners of number 7.

The current double garage was built with consideration to prevent any land contamination from building materials of run-off. The building was built above ground upon a metal ring-beam. In addition, Terram was placed on the ground before any concrete was poured and the land carefully landscaped to accept the construction of the building as shown in Plate 3 (montage).

Small vehicles with a ground pressure weight of less than a human was also utilised. The contracts manager was aware of the presence of protected trees and from the outset built the garage within the permitted parameters. An oversight has rendered the pinnacle of the roof a mere 300 mm above the allowable height. This is the only part of the building that has brought this about. The owner does have permission to lower the roof and retain the building as permitted development but has chosen to comply with the local authority to provide the best solution for the tree.

The cesspit and potentially the previously healthy tree may that fell, may have contributed to the decline of the retained tree. Furthermore, the ***climate change*** the world is experiencing will have made a considerable contribution to the loss of foliage and apparent decline.

Extreme Weather Events

The confirmed heatwave and drought of 2018 combined with the hottest year on record for the month of July in 2019 and 2022, has meant that the ground has been baked, water has evaporated and the water table lowered. This has meant that many trees have been left with little or no water to survive through (at least) three growing years. Tropical nights in 2020 and 2022 added to an already water starved ground. A record number of frosts over the month of April, 2021, killed emerging buds and reduced the photosynthetic opportunity to many trees and plants. In addition, the early on-set of spring 2019 and 2021 meant that trees were already rooted in warm soils with little water. The hottest year on record was also announced for 2022. Autumn of 2022 has already experienced Storm Claudio in the south and so weather patterns are changing constantly. A heatwave for early 2023 has been confirmed along with some of the hottest temperatures globally.

When rain has fallen, the ground is so hard that the water cannot percolate to lower depths, or even soak the upper soil levels, but has run-off towards rivers, land-drains and water courses that collect the rain-water. Shallow rooted trees such as Silver Birch (*Betula pendula*), Scots Pine (*Pinus Sylvestris*) and Ornamental Cherry (*Prunus* spp.) have suffered from wilt and consequently been unable to recover meaning that within two years the trees have been killed by lack of water. This is a common theme throughout the areas surveyed in the south of UK and according to Kew Gardens, the effects will be felt for the following 10 years.

MITIGATION AND REMEDIATION

Ecology

Surface water arrangements will exist in the form of water butts. There will be two, located in such a configuration as to capture rainwater from the roof. These water butts feed the garden space. Therefore, it is not considered that the hydrology is so affected that the flora will be deprived. Indeed, there would appear to be an abundance of water within the SINC as Himalayan Balsam (a notifiable invasive plant) is thriving within the land drain to the rear of the property.

In terms of providing assistance to the biodiversity of the site, the owner has already expressed a wish to plant herbs such as Lavender (*Lavandula angustifolia*), Rosemary (*Salvia rosmarinus*), Thyme (*Thymus vulgaris*), Sage (*Salvia officinalis*) and Oregano (*Origanum vulgare*). These are some of the best pollinators according to the RHS. These will be planted within the gardens space and in addition, a narrow section of land adjacent to the building will be utilised solely for pollinating plants as is shown on Tree Constraints Drawing MB230703-01, enclosed.

Arboriculture

The owners have acknowledged that there may be damage to the tree, however, in their defence there are a number of historical facts that should be taken into consideration.

1. An historical cesspit lay over the land and within the footprint of the new building.
2. A companion tree suffered root heave and the void remains with no root structure.
3. A sewer pipeline dissects the garden and was excavated to the south of the tree which again, is likely to deflect ant roots from T1. See Fig 2.
4. The tree grows from the inner lip of the existing land drain between the property and the SINC.

A mitigation strategy has been discussed with Miss Knee and she has agreed to instigate the following methodology subject to the approval of the local authority;

1. Using a tracked mini-digger, of no greater than 1.5 t in gross weight, shall remove between 75 mm and 150 mm of soil within the 10 m default radius of T1. This will include the removal of historical builder's debris and contaminated soil (in so much as bricks and concrete were observed).
2. The work will be graded in so much as 75 mm will be removed nearer to the stem and working in arcs towards the property to eventually remove 150 mm of soil and debris. This depth will only be exceeded on the agreement of the retained Arboricultural Consultant to further remove contaminated land if necessary.
3. The machine will operate from outside of the 10 m radius of T1 and only track within the 10 m radius in a straight line. No ground protection is deemed necessary as this has been a heavily utilised and compacted garden prior to Miss Knee occupying the residential property. This work shall be completed under the supervision of the retained Arboricultural Consultant.
4. Following the removal of the contaminated soil, an air-spade shall be used to break up the compacted ground, made friable and raked flat to remove large stones and debris.
5. Once the retained Arboricultural Consultant is satisfied that all contaminated soil has been removed, a shallow layer of quality top soil shall be laid, mixed with mulch and raked flat.
6. Mycorrhizal powder shall be spread across the ground (according to manufacturer's instructions) to encourage fibrous root growth. Again, the ground will be raked flat.
7. The land shall be watered.

The final garden landscaping shall be considered whereby the land is not covered by any man-made structure to allow the percolation of water and oxygen to the ground. The landscape scheme can be discussed with the retained Arboricultural Consultant for suitability.



Fig 2: Sewer pipeline location and 'run'.

Planting of pollinating shrubs and herbs will then take place to improve biodiversity in accordance with the request of the local authority Ecologist.

In addition, any rainwater run-off can be directed to the garden (and eventually the SINC) and the water-butts (when full) can be used to water the newly planted garden shrubs and herbs.

Finally, this letter requests that the Tree Officer provides an alternative species, suitable for a small rear garden, to replace the tree that was lost. Alternatively, could permission be sought to replace the tree within the SINC or gift a tree to the local authority to plant within a public space.

CONCLUSION

Miss Knee would like to take this opportunity to apologise for the construction oversight of the roof height despite this being outside of her control at the time, and has maintained that no damage above or below ground has been directed at the tree (T1) during the development.

It is deemed that the mitigation above will help the tree to recover, however, should the climate continue to burden the planet then this must also be a consideration.

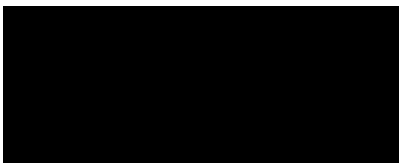
It would be helpful if the Tree Officer would provide an alternative tree species to mitigate the loss of the tree that fell or seek permission for the owner to plant the tree within the SINC.

DISCLAIMER

Arbor-Eco Consultancy accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

It should be noted that trees are dynamic living organisms that are subject to natural changes as they age or are influenced by changes in their environment. As such following any significant meteorological event or changes in the growing environment of the tree it should be re-assessed by a suitably qualified and experienced arboriculturist.

Yours sincerely,



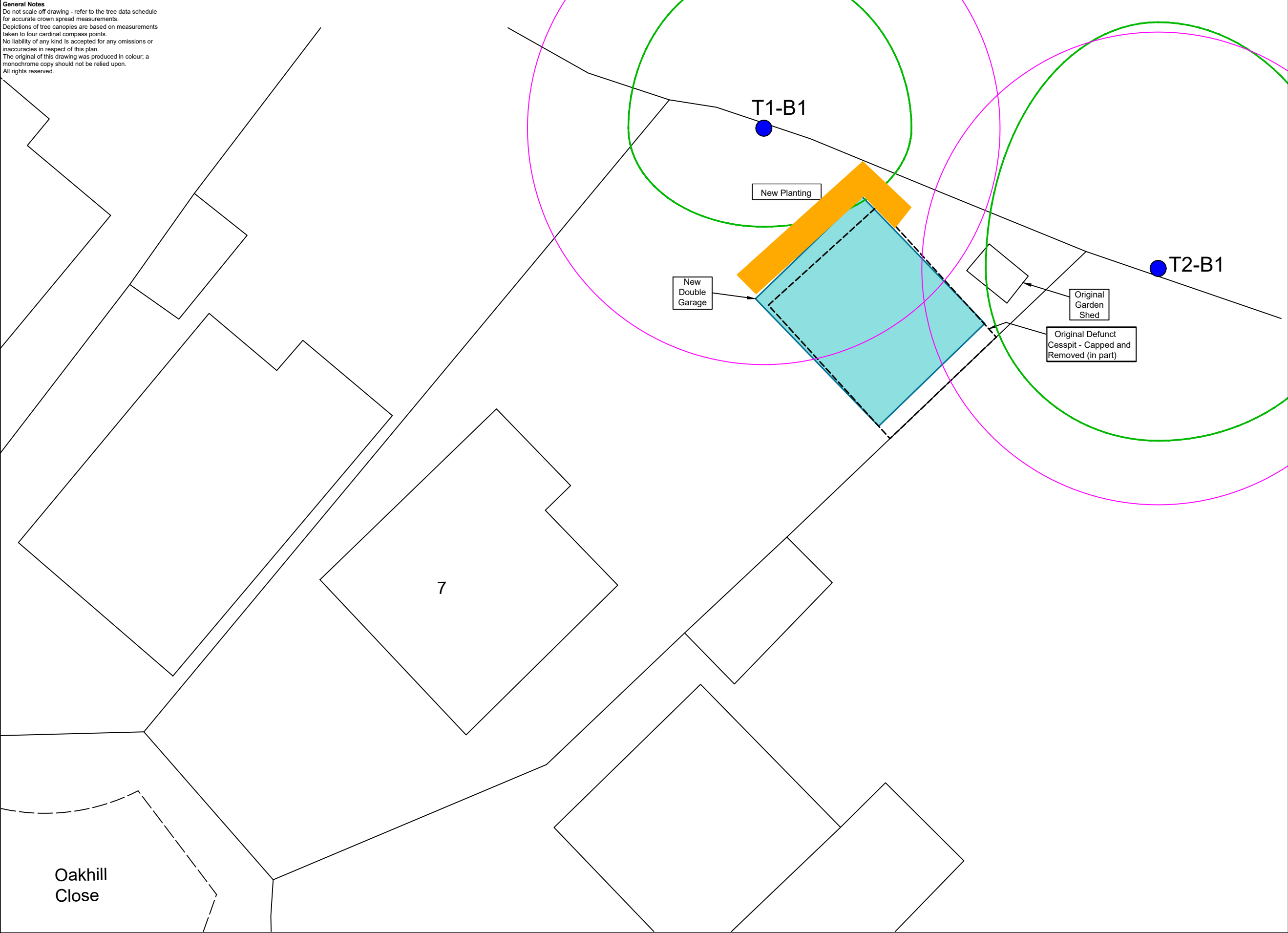
Marco Bartolini
Arboricultural Consultant TechArborA, PTI, FdScWM, Dip Mgmt
For and On Behalf of Arbor-Eco Consultancy



Enclosure;

Arbor-Eco Consultancy Tree Constraints Plan, Drawing Number MB230703-01-01 dated July 2023.

General Notes
Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
Depictions of tree canopies are based on measurements taken to four cardinal compass points.
No liability of any kind is accepted for any omissions or inaccuracies in respect of this plan.
The original of this drawing was produced in colour; a monochrome copy should not be relied upon.
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Key

Trees
Showing Canopy extents, category colour and tag number (with category).

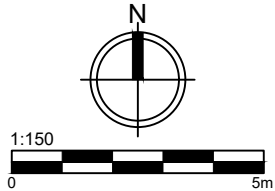
Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

Category C
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.

Category U
Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.

BS 5837:2012 Root Protection Area



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Technician Member

Client
Miss S Knee

Project
7 Oakhill Close, Burseldon.

Drawing Title
Tree Constraints Plan

Scale 1:150 - A3	Date 1/07/2023	DB CS	CB MB
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Drawing Number MB230703-01	Rev A
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