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Our Ref: IH/Land R/o 6&8 Sedgwick Road, SO50 6FB/sur/imp/7217

23rd April 2025

Mr M Whitfield
Osman Homes Ltd
White Building
1-4 Cumberland Place
Southampton
SO15 2NP

Dear Mr Whitfield

TREES AT LAND R/O 6&8 SEDGWICK ROAD, EASTLEIGH, SO50 6FB

Brief: Survey trees that have a potential impact on the proposed development at Land r/o 6&8 Sedgwick Road, Eastleigh, SO50 6FB from the plans provided. Comment upon their condition, suitability for retention and the impact they may have upon the proposed development.

Date of Inspection: 04.07.24.

Inspected by: Ivan Hinsley BSc

Survey method: On foot ground level visual.

Findings: From the on-site, ground level survey that was conducted at Land r/o 6&8 Sedgwick Road, Eastleigh, one individual tree and one group of trees were identified as potentially having an impact on the proposed development.

T1 Oak is covered by Tree Preservation Order (TPO) 100-E, as shown on the Eastleigh Borough Council TPO map when checked on 04.07.2024.

TREE SURVEY FOR LAND R/O 6&8 SEDGWICK ROAD, EASTLEIGH, SO50 6FB

Survey Technique

The surveyed trees were visually assessed from ground level as far as access allowed. No climbing inspections or invasive examination techniques were carried out. Access to some trees was restricted, in such cases the descriptions of the trees given in the survey schedule are subject to the tree being free of significant defects that were not clearly visible. Detail on the individual trees assessed is given in the survey schedule using the format in BS5837: 2012 'Trees in Relation to Design, Demolition and Construction – Recommendations', please read in conjunction with the enclosed Tree Survey Plan.

The columns and abbreviations used are:

Column 1 = T – Tree number marked on the submitted plan.

Column 2 = The Latin binomial and common name if applicable.

Column 3 = Hgt – Approximate tree height, in metres; to the nearest 0.5m if under 10m.

Column 4 = Dbh – Diameter (rounded to the nearest 10mm). Single stemmed trees, at 1.5m above ground level. Low branched trees, at the narrowest point below the fork. Trunks with irregular swellings, at the narrowest point below the swelling. Multi stemmed trees, each stem measured at 1.5m above ground level. # estimated value if unable to gain access.

Column 5 = RPA – The Root Protection Area: radius measured in metres from the centre of the trunk.

Column 6 = B/S – Approximate branch spread to the four cardinal points of the compass, in meters.

Column 7 = FSB – Height of first significant branch above ground level in meters and direction of growth

Column 8 = C/C – Height of canopy above ground level, in meters.

Column 8 = Age – Age class as representation of passage through normal life cycle – Y=Young, SM= Semi-Mature, EM = Early Mature, M=Mature, FM = Fully Mature, OM = Over Mature.

Column 9 = R/C – Estimated remaining contribution, in years.

Column 10 = Cat – BS5837: 2012 Survey category.

Categories are:-

U Trees unsuitable for retention (Red on plan)

Trees that cannot realistically be retained, in the context of the current land use, for longer than 10 years.

A Trees of high quality (Green on plan)

Trees able to make a substantial contribution for a minimum of 40 years.

Particularly good examples of trees, or essential components of groups of arboricultural features e.g. avenues. Visual importance or significant conservation, historical or other value. Veteran trees, especially if ancient.

B Trees of moderate quality (Blue on plan)

Those in such a condition as to be able to make a significant contribution for a minimum of 20 years. Might be category A but have defects or lack special qualities; or growing in a high value group. Has conservation or cultural values.

C Trees of low quality (Grey on plan)

Unremarkable trees of limited merit, with a life expectancy of at least 10 years; or growing in a low value group. Also young trees with a stem diameter of below 150mm.

Column 11 = General Observations - notes re structural and/or physiological condition, and/or preliminary management recommendations.

SURVEY SCHEDULE

T	Name & Species	Hgt	Dbh	RPA	B/S	C/C	Age	R/C	Cat	General Observations
1	<i>Quercus robur</i> Oak	22	1300	15.00	N 7 E 10 S 12 W 9 FSB	4 6 6 6	FM	40+	A	Bifurcation at 4 metres. Signs of historical tree work. Epicormic growth throughout. Good vigour.
G2	<i>Crataegus monogyna</i> Hawthorn	9	150 90 110 70 90	2.70	N 3 E 3 S 3 W 3 FSB	2 2 2 2	SM	10-20	C	Multi stem trees, show signs of being a hedge originally. Good vigour. Compromised structure.

General Constraints: Trees placed in the removal ‘U’ category are assessed upon their condition and not on any planning proposals which may require the removal of the tree for other reasons; category U trees are unsuitable for retention in a development context and should be removed for sound arboricultural reasons.

When considering the retention of trees in a planning context, preference should be given to retaining trees in categories A and B as these are the trees that contribute most to the amenity of the site and surroundings for the longest time.

Category C trees are of lesser importance, they would not usually be retained where they would impose a significant restraint on development.

Groups of even low value trees may have a collective screening or group value in the landscape that is higher than the individual categories of the component trees might suggest.

The enclosed tree survey plan indicates the initial root protection areas produced from the survey data. The Root Protection Areas (RPAs) for the trees have been calculated using the formula given in BS5837:2012. This is the recommended area around the tree in square metres within which no construction, excavation, soil stripping, level changes or other potentially harmful activities should take place unless appropriate precautions or techniques are employed to avoid root damage. Barriers should protect this area for the duration of any development works to avoid damage to the root system.

Adequate space should also be allowed for future growth, particularly around young and middle-aged trees.





Conclusion: From the plans provided, drawing 102 of the proposed development at Land r/o 6&8 Sedgwick Road, Eastleigh and the information gathered by the onsite tree survey that was completed on 04.07.2024, we conclude that the development as shown in the plans provided would have an impact on T1 and G2.

G2 has been categorized as C in accordance with BS5837:2012, *Trees in relation to design, demolition and construction – Recommendations. Table 1 4.5.1, unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.* As these trees have very low amenity value and are category C trees, they would not normally be a reason to decline a planning application. We believe this applies to Land r/o 6&8 Sedgwick Road, Eastleigh and so any planning application should not be declined on the presence of G2.

T1 is a very successful Oak tree that is prominent within its environment. It has stood there for many years and survived the construction of the roads and houses around it. It has been suggested that the dominance of this tree is something to be frightened of rather than be admired. We would suggest that this dominance is a positive, as it gives the surrounding properties protection. Trees are vital to disrupt and slow down wind speeds, with or without leaves, reducing damage to the surrounding buildings. As the prevailing wind is from the southwest, then T1 is almost in the perfect position to do this.

The leaves of a tree absorb UV rays from the sun, trees can protect us in the summer when the sun burns us the most, we all now know the dangers of getting sun burnt and so seek out the shade during the hottest period of the day. In countries that regularly deal with high summer temperatures, trees are planted to regulate temperatures and keep areas cooler, this cooling effect can be up to 11 C lower than the ambient surrounding temperature. The orientation of the proposed dwellings with regards to T1 means that they will be bathed in the morning summer sun as it rises east north east and then the evening sun as it sets west north west in the summer, but protected by the tree from the strong midday sun, which will reduce the amount that the proposed dwellings will heat up during the summer days creating a cooler environment. In

winter when T1 has dropped its leaves the proposed dwellings will continue to be bathed in morning and evening sun, even with the shorter traveling distance of the sun, but will have the added benefit of having the midday sun, helping to warm up the dwellings, reducing energy bills. The dappled effect created from the sunlight permeating through the canopy of trees has been proven to lower stress levels and improve mental health. The Japanese call it shinrin yoku and we know it as forest bathing, which is the practise of walking beneath the canopies of trees and reconnecting with nature.

To protect the rooting environment of T1 in the area used for the parking of cars and for the access road a cellular confinement system as shown in Diagram 1, should be used. The specific construction of this would in our experience not be finalised until the requirement of a method statement or be a condition of the approval of planning permission however, due to the level and flat nature of the site there would not need to be very much preparation before construction could be completed. The specification and construction of the cellular confinement system will need to be confirmed with either the manufacturer or the supplier as we are neither then we are unable to comment. However, this type of cellular confinement system has been used for more than 20 years for the protection of tree roots. There are hundreds and thousands of examples where this system has been used and the trees have continued to be successful, we believe this will also be the case on this proposed site. This method of protecting roots has been very successful because of its ability to spread load and protect against compaction within the rooting zones and when constructed with permeable materials the water that would normally be intercepted by the grass or other competitors is able to permeate down to the roots of the tree. As this water percolates through the cellular confinement system, it draws oxygen down with it making it available to the roots of the tree. This system also has the benefit of being able to store water on a short-term basis, slowing down runoff and helping to prevent the drains being swamped. The wearing layer and sub-base layers will need to be permeable to enable moisture, nutrients and gases to be accessible for the roots and from a non-marine source. The permeable wearing layer will need to be constructed of a material that promotes easy maintenance. Being able to clear up the detritus that falls from a tree will promote a positive relationship between the tree and the residence of the proposed dwellings.

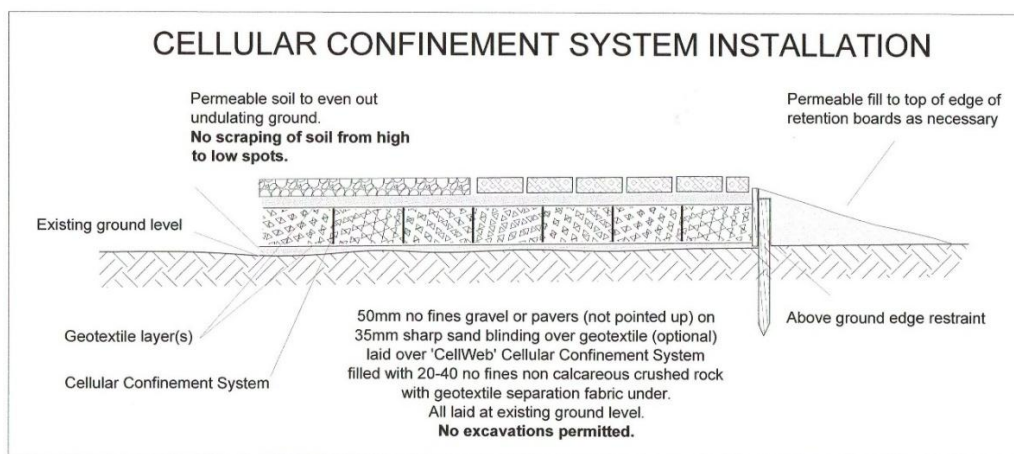


Diagram 1

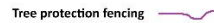
BS5837:2012, *Trees in relation to design, demolition and construction – Recommendations*, 7.4.2.7 *The hard surface should be set back from the stem of the tree and its above-ground root buttressing by a minimum of 500mm to allow for growth and movement.* This exclusion area round the tree has been worked into the design. This area that extends into the area south of D2 should be filled with a composted wood chip mulch and planted with an appropriate native shrubs and plants, such as, Ferns, Viburnums, Hostas, Azaleas and Dogwoods. All of these are able to thrive under the canopy of an Oak tree and give colour, scents and fruits that will attract wildlife. This will also enhance the rooting environment as it replaces the ruthlessly competitive lawn and increase the biodiversity of the site due to the varied species.

BS5837:2012, *Trees in relation to design, demolition and construction – Recommendations*, 5.3.1 *If operations within the RPA are proposed, the project arboriculturist should: Demonstrate that the tree can remain viable and that the area lost to encroachment can be compensated for elsewhere, contiguous with the RPA.* T1 can exploit the area to the south of D1, as shown in drawing 102 to compensate for the encroachment of the proposed dwellings. As this area more than makes up for the encroachment, this area can be explored by the rooting system. The areas of the rear gardens of number 6 and 8 Sedgwick Road would also give T1 room to harvest nutrients, moisture and exchange gases. In Photo 1 shows the parking area for Sedgwick Court and within this area there is evidence that the roots of T1 are distorting the tarmac. The evidence is slight undulations that radiate out from the tree that are also starting to crack the tarmac. This cracking is created by the annual thickening of the fibrous roots of T1. There are a few studies that conclude that roots will survive and exploit the areas under tarmac. This is because there is very little competition from other plants in this area, the roots can find the pockets of nutrients that other plants can't and because the tarmac is very good at absorbing heat. This heat absorption is creating a temperature gradient on the underside of the tarmac which then becomes moist. This moist warm environment is great for roots. Plus, as the tarmac opens up, oxygen can penetrate through at higher concentrations than before and create a fantastic rooting environment. There are also small sections to the front of the flats that are not hard surfacing, the area around the buttress roots and along the fence on the Sedgwick Court side is not sealed, giving T1 open access to unsealed areas.

Creating an asymmetrical RPA for T1 that all parties would be happy with is very difficult. This is because depending on what scientific findings you have read and at what time they were published depends on what that individual believes. Without air spading the entire area and DNA testing the roots to find their exact locations this is very difficult to predict. A fully mature Oak tree the size of T1, that has stood in this position for a good many years would be pulling resources from areas all over the site and potentially places we will never know about, as trees have developed this ability over millions of years. We believe that T1 is utilising the unsealed areas in front of the flats, the car park area and the garden area to the south of the car park. The Tree Officer's suggestion that the RPA should be moved more to the north tells us that they do not believe this. We do not disagree with the Tree Officers theory but feel that we cannot ignore the fact that there is a vast area with no competition under the car park that T1 has access to. With the symbiotic relationship that trees and fungi have the resources within this area are readily available. We should also be looking at the structure of the tree, as Oak trees are strongest in tension it would suggest that due to the prevailing wind coming from the southwest the largest anchoring roots would be on the southwest side of the T1, the area of the car park. For these reasons we believe that the RPA around T1 should be a linear circle.

The following two studies, *Tree species tolerance of site development activities (Coder 2010)* and *Species resistance to construction damage (Matheny & Clark 1998)* both conclude that Oak trees are highly tolerant and very resistant to development activities and construction damage within their RPAs. Although every effort will be made to minimise the impact of the construction of the two dwellings as shown on the plans provided of the proposed development at Land r/o 6&8 Sedgwick Road, Eastleigh, these two studies give scientific evidence that backs up our final conclusion.

In order to protect T1 and its rooting environment tree protection fencing will need to be erected. The position of this fencing is shown on Diagram 2 by the purple line. This fencing will need to comply with BS5837:2012, *Trees in relation to design, demolition and construction – Recommendations*. Figure 3 shows the required fencing that will need to be in place before any works can start on the proposed project. There is a proposal to erect a 1.8m high close boarded timber fence along the boundary of the rear gardens of 6&8 Sedgwick Road, this fencing would meet the requirements for protecting the rooting environment and so the fencing as shown in figure 3 would not need to be erected. To protect the roots within the parking area and access road while construction is being completed, we suggest that the cellular confinement system be constructed first. Due to the nature of the product, it can be constructed in layers.



HERAS WELDMESH PANEL
PROTECTION BARRIERS
with above ground stabilizing
system

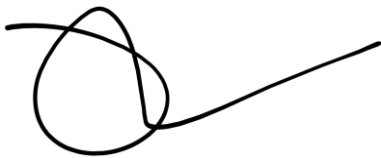
The diagram illustrates two methods for stabilizing a heavy-duty weldmesh panel. On the left, a panel is shown with a diagonal stabilizer strut. A callout points to the base of the strut, labeled 'Base plate secured with ground pins'. On the right, another panel is shown with a similar diagonal stabilizer strut. A callout points to the base of the strut, labeled 'Stabilizer strut mounted on block tray'. A third callout points to the connection between two panels, labeled 'Panels secured together by scaffold clamps'. The central panel is labeled 'Heavy Duty Weldmesh Panel'.

Figure 3. Examples of above-ground stabilizing systems

We believe that the construction of the proposed dwellings at Land r/o 6&8 Sedgwick Road, Eastleigh from the plans provided would not have a detrimental impact on the health and longevity of T1 and we believe that the residence of these dwellings will enjoy and benefit greatly from living near to such a wonderful tree.

If you require any further information at this stage, please do not hesitate to contact us.

Yours sincerely



Ivan Hinsley

Response to Tree Officers comments to planning application F/25/99457 Land r/o 6&8 Sedgwick Road, Eastleigh dated 24.06.2025

There are 2 issues that have been highlighted within the report, and we hope to address both in the below response.

Issue 1 – We do not consider that the applicant has accurately assessed the impact of the proposed development because the arboricultural information has not taken into account the site conditions, namely adjustment of the RPA due to existing hardstanding to the south.

Issue 2 – We do not consider that the applicant has suitably demonstrated that the amount of new surfacing within the RPA of T1 can be achieved without negative impact on the tree's health, and thus the amenity it provides.

In drawing 7217TP A the RPA of T1 has been adjusted and moved to the north, reflecting the sealed nature of the parking area for Sedgwick Court and the footprint of the houses, 6-8 Sedgwick Road. This brings the RPA inline with the parts of BS5837:2012 as highlighted by the Tree officer. This now creates a number of new calculations to assess the impact of the planned development as shown in the plans provided on T1.

The total RPA of T1 calculated using the formular in BS5837:2012 is 706.86 m²

The starting point of the RPA for T1 as a linear circle is 354.20 m² (50.1 %) of garden area and 352.22 m² (49.9 %) of tarmacked car park area. As a result of adjusting the RPA and including the proposed development from the plans provided the results are as follows:

The area of D1, D2 and the tarmacked car park have been put together due to the sealed nature of the ground cover, which equates to 102.8 m² (14.5%)

The proposed area of cellular confinement 194.5 m² (27.5 %)

And 409.6 m² (58 %) garden area.

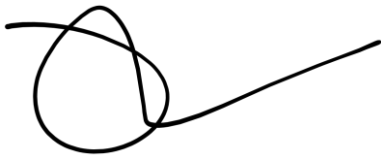
The adjustment of the RPA for T1 and the resulting calculations give a clear picture of the potential impact of the proposed development. The total proposed area of surfacing, permeable or otherwise is 42% of the adjusted RPA of T1, which is considerably less than the Tree Officers prediction of 65-70%. Of that 42% two thirds of it is permeable, which reduces the impact of the overall surfacing.

The Use of Cellular Confinement Systems Near Trees: A Guide to Good Practice, does caution against more than 20 % coverage however, it does not state what the original surface cover is. The reason that this is important is because an established lawn, such as the one at 6&8 Sedgwick Road will have a dense root mat that will intercept rainwater, nutrients and oxygen before the root system of T1 can. But with a Cellular Confinement System constructed using permeable materials that fierce competition is removed enabling more resources to permeate down to the roots. T1 is used to this competition and so is able to compensate for it, which is seen by how successful it is. Removing this competition will inevitably compensate for the footprint of the proposed development. We believe that T1 has the resources to adjust to its new surroundings during construction and will be able to replenish any energy used by the reduction of competition.

BS5837:2012, *Trees in relation to design, demolition and construction – Recommendations*, 5.3.1 *If operations within the RPA are proposed, the project arboriculturist should: Demonstrate that the tree can remain viable and that the area lost to encroachment can be compensated for elsewhere, contiguous with the RPA.* The most obvious areas that T1 can exploit are the gardens of houses 2-8 Escombe Road, although the gardens are not within the sphere of influence, they are still viable rooting environments.

If you require any further information at this stage, please do not hesitate to contact us.

Yours sincerely



Ivan Hinsley