

Development tree report for Mr./Mrs. Mount

This report is an arboricultural assessment to cover the requirements under B.S.5837:2012 - Trees in relation to design, demolition and construction.

Prepared By

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Prepared by Steve Wood (O.N.D. Arboriculture M.Arbor.A.) for and behalf of SMW (Tree) Consultancy Ltd on 14th October 2019

A brief account of the conclusive points of the report, for more in-depth detail please see the [conclusion](#).

1. The proposal is to construct two single storey side extensions. The one to the north will be of the same footprint as the existing patio area, the one to the south on the grassed area. Both will attach to the main building.
2. To allow this development to proceed, there will NOT be a requirement to remove any trees or carryout any remedial works.
3. Both proposed extensions have a very slight foundation intrusion of the RPA's of T1 and T7. The northern extension which will occupy the same footprint as the existing patio, it has an intrusion of 7.5 Sq.m with a total of 163 Sq.m of completely open root growth area. This equates to a percentage of 4.6%. The southern extension has a foundation intrusion of T7 of 4.5 Sq.m. with a total of 76 Sq.m of completely open root growth area. This equates to a percentage of 6%.
4. The drawings do show some new patio around the southern extension as this will be within the RPA of T7 and the construction must not incur any excavations.
5. With the extremely minimal foundation intrusion of T1 & T7 and their unobstructed root growth zone, it's our opinion that there are no advantages of a specialist foundation.
6. As a precaution we propose to use an Air Spade to remove the soil in the foundation zones where it's within the RPA's. This will reveal if any root activity is present and of what dimensions. With our experience it's highly unlikely that root over 25mm in diameter will be found and that in accordance with the B.S. Standards guidance notes these can be carefully pruned and allow the foundation trench to be excavated to the required depth and backfilled with concrete to create a standard foundation.
7. If, in the highly unlikely event of roots being revealed above this size then an alternative foundation construction will be prepared and submitted to the Tree Officer for consideration. As the determination is essential to allow the project to start and run smoothly, we would propose that this specialist soil excavation procedure is carried out as soon as possible during the submission duration period and the results submitted to the Tree Officer for the records. If there are any objections of this procedure, then we must be notified by return.

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ACCOMPANYING DOCUMENTS AND APPENDICES FOR THIS REPORT ARE AS FOLLOWS:

This report should be read along with the accompanying tree survey plan and tree protection plan,
Tree survey plan [TSP]: SMW/3 Treetops Dr/TSP/001

Tree protection plan [TPP]: SMW/3 Treetops Dr/TPP/002

This report also should be read with the following appendices. If you are a customer of SMW (Tree) Consultancy Ltd or a tree officer and have received this report without these additional documents, please contact SMW (Tree) consultancy and we will be happy to supply them to you.

APPENDIX 1 - GUIDANCE FOR TREE PROTECTIVE BARRIERS

APPENDIX 2 - SITE GUIDANCE FOR WORKING IN ROOT PROTECTION AREAS (RPAs)

APPENDIX 3 - SPECIAL SURFACE CONSTRUCTIONS UNDER TREE'S RPAS

APPENDIX 4 - KEY

APPENDIX 5 - CASCADE CHART FOR TREE QUALITY ASSESSMENT

APPENDIX 6 - REFERENCES

INTRODUCTION

COPYRIGHT DISCLOSURE NOTICE

Copyright and Non-disclosure Notice. The content and layout of reports are subject to the copyright and owned by SMW (Tree) Consultancy Ltd. Save to the extent that copyright has been legally assigned to us by another party or is used by SMW (Tree) Consultancy Ltd under license. Any report may not be copied or used without prior written agreement for any purpose other than those indicated.

PURPOSE OF THIS ARBORICULTURAL METHOD STATEMENT

This document draws together all the information relevant to tree protection and management on the site. A copy must be given to the site manager before development commences. It must be available on site throughout the development process as a quick reference for the site manager.

RELEVANT REFERENCES

This arboricultural method statement is based on the assumption that the minimum general standards for development issues are those set out in British Standards Institution B.S.5837: 2012: Trees in relation to construction Recommendations and National Joint Utilities Group (1995) Publication Number 10:

Guidelines for the planning, installation and maintenance of utility services in proximity to trees.

It is based on a ground level tree assessment and examination of external features only – described as the 'Visual Tree Assessment' method expounded by Mattheck and Breloer (The Body Language of Trees, DoE booklet Research for Amenity Trees No. 4, 1994).

SITE OVERVIEW AND DESCRIPTION:

Site Address:	3 Treetops Drive, Cowplain, Waterlooville, Hampshire, PO8 8JF	Description of development environment:	Bungalow property set in a secluded collection of houses
Local authority:	Havant Borough Council	Council planning reference:	APP/19/00980

SURVEY EXTENT AND SITE DESCRIPTION:

SITE DESCRIPTION

A single storey bungalow, constructed from brick, Located in a secluded area of a small collection of properties. The property is accessed from a block paved constructed driveway.

SURVEY EXTENT

Our survey covered the indicated area in the below satellite mapping image:



SOIL TYPE:

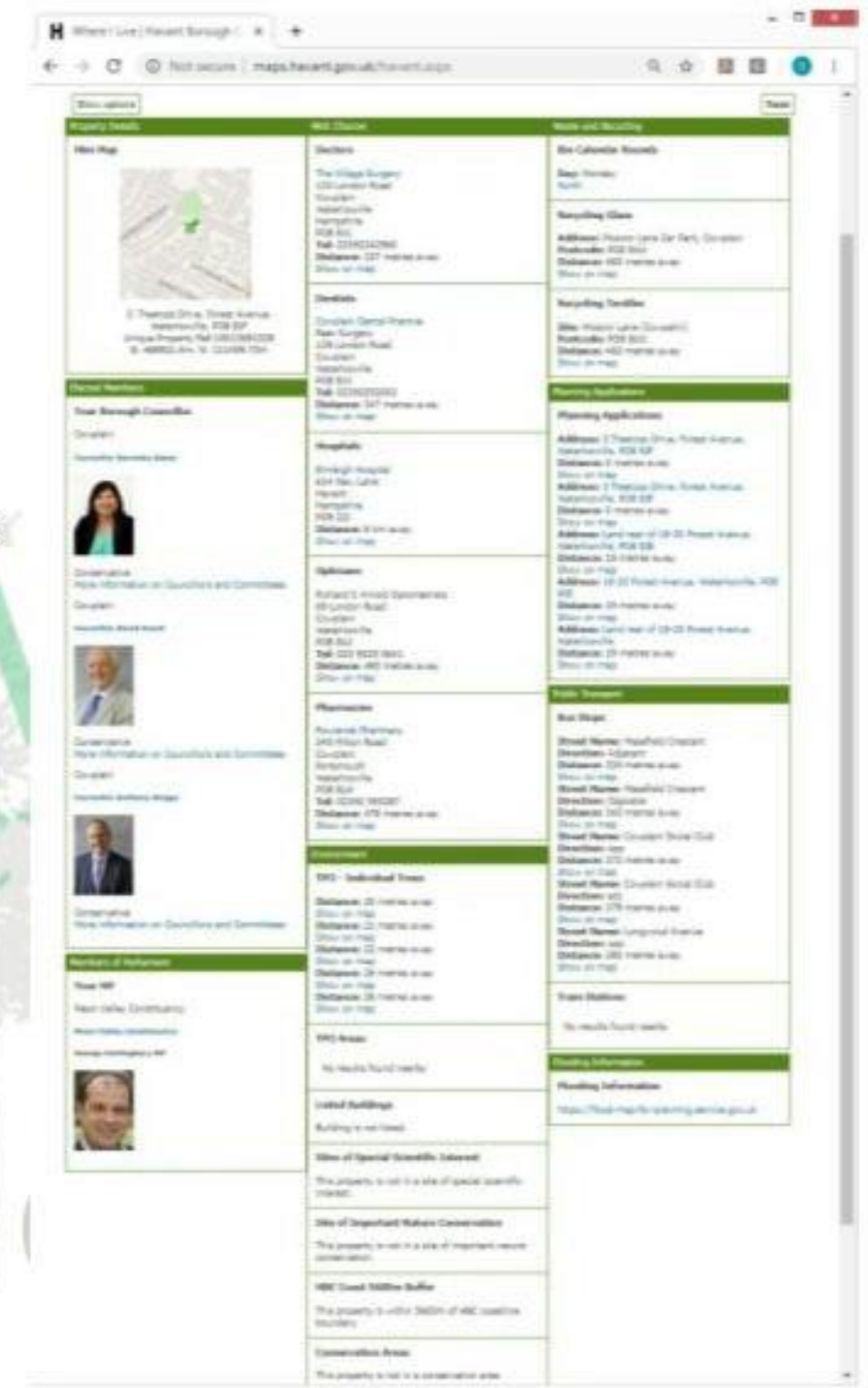
An online soil analysis search was carried out and the findings are that the soil is of a slowly permeable, seasonally wet, slightly acidic but base-rich, loamy and clayey soil type.

This should not be used as a definitive determination and other sources should be used I.E. Geological Survey Maps or a full soil analysis, where reactive soils are a high probability.

TREE PROTECTION STATUS

On the 10th October 2019, we assessed the local authority's website for information on tree preservation orders and conservation areas. We found that:

No TPO's or conservation areas were found on the 'Where I live' page but after some searching, we have found that there is in fact a woodland TPO on the site. Confirmation should be sought from your local authority before proceeding with any works. This covers any size of tree and subsequently grown or planted trees.



TREE SURVEY:

SCOPE AND LIMITATIONS OF THE SURVEY

1. The survey and this report are concerned with the arboricultural aspects in relation to the proposed development and should not be interpreted as a health and safety report.
2. This survey is restricted to trees within the site or those outside the site that may be affected by its re-development. No other trees were inspected.
3. It is based on a ground level tree assessment and examination of external features only unless otherwise stated – described as the 'Visual Tree Assessment' method expounded by Mattheck and Breloer (The Body Language of Trees, DoE booklet Research for Amenity Trees No. 4, 1994).
4. This survey and report are valid for one year from the date stated on the covering page. If this date has past, then a new survey must be commissioned to ascertain the current conditions on site and their impacts on the proposals.
5. Only trees of significant stature were surveyed. In general, trees with a stem diameter at breast height [DBH] of less than 75mm have been excluded unless they have particular merit that warrants comment.
6. No plant tissue samples were taken, and no internal investigation of the trees was carried out.
7. The risk of tree-related subsidence to structures has not been assessed.
8. I have no knowledge of existing or proposed underground services.
9. The positions of trees have been plotted by GPS using a SXBlue II + GPS which delivers sub-60 cm (2dRMS, 95% confidence) positioning.

GENERAL EXCLUSIONS

Unless specifically mentioned, the report will only be concerned with above ground inspections. No below ground inspections will be carried out without the prior confirmation from the client that such works should be undertaken. This report should not be interpreted as a Health and safety assessment this is a different aspect of inspection requiring a more in-depth inspection regime. This can be undertaken if requested.

The validity, accuracy and findings of this report will be directly related to the accuracy of the information made available prior to and during the inspection process. No checking of independent third-party data will be undertaken. SMW 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 building works are carried out upon the property, soil levels altered in any way close to the property, or tree work undertaken before permission from your local authority has been given.

If alterations to the property or soil levels are carried out, or tree work undertaken, it is strongly recommended that a new tree inspection be carried out.

SURVEY METHOD:

1. The survey was conducted from ground level with the aid of binoculars (when required).
2. In some cases, groups of trees are discussed collectively where individual identification has been deemed unnecessary.
3. The trees stem diameter for single trees was measured at 1.5m, for trees with up to 5 stems all were measured and the mean diameter determined; over 5 stems the mean diameter was used.
4. The circle representing the RPA can be adjusted to provide a more accurate representation of the likely root development area when taking into consideration any physical obstructions (roads etc.), topography and drainage, and soil type.
5. The height of each tree was estimated visually or, where possible, by using a Clinometer.
6. The crown radii were laser measured (where possible) and is given for each main compass point: north, east, south and west.
7. The lowest branch was also recorded, and its compass direction noted.
8. The dimensions of trees within groups are given as an average figure unless otherwise stated.
9. Where access to trees was obstructed or obscured measurements/dimensions have been estimated, this will be documented in the tree survey data section of this report.

B.S. CATEGORIES:

Each tree has been assessed in terms of its arboricultural, landscape and conservation values in accordance with BS 5837:2012 and placed within one of the four following categories:

Category A:

Trees of high quality and value: in such a condition to make a substantial contribution to the site aesthetics (a minimum of 40 years is suggested). Rare or unusual trees and very good examples of the species.

Category B:

Trees of moderate quality and value: those in such a condition as to make a significant contribution, but may have slight defects or imperfections, poor quality past surgery techniques which could lead to future complications. (A minimum of 20 years is suggested).

Category C:

Trees of low quality and value which might remain for a minimum of 10 years, individually or collectively don't offer enhancement to the sites aesthetic value, or young trees with stems of less than 150mm diameter.

Category U:

Trees in such condition having serious defects, immanent loss due to potential collapse, fungal activity which could significantly reduce its life expectancy, or of very low quality.

Whilst the assessment of a tree's condition is a subjective process, Table 1 of BS 5837:2012 (see APPENDIX 5 - CASCADE CHART FOR TREE QUALITY ASSESSMENT document) This gives clear guidance on the appropriate criteria for categorising trees and the factors that would assist the Arboriculturist in determining the suitability of a tree for retention.

ASSESSED TREES:

A total of 8 trees have been included in the report as being considered close to have an impact. There are other trees which we consider outside of any possible influence towards the proposed development. These are located on the gardens to the east and north all of which have no possible impacts.

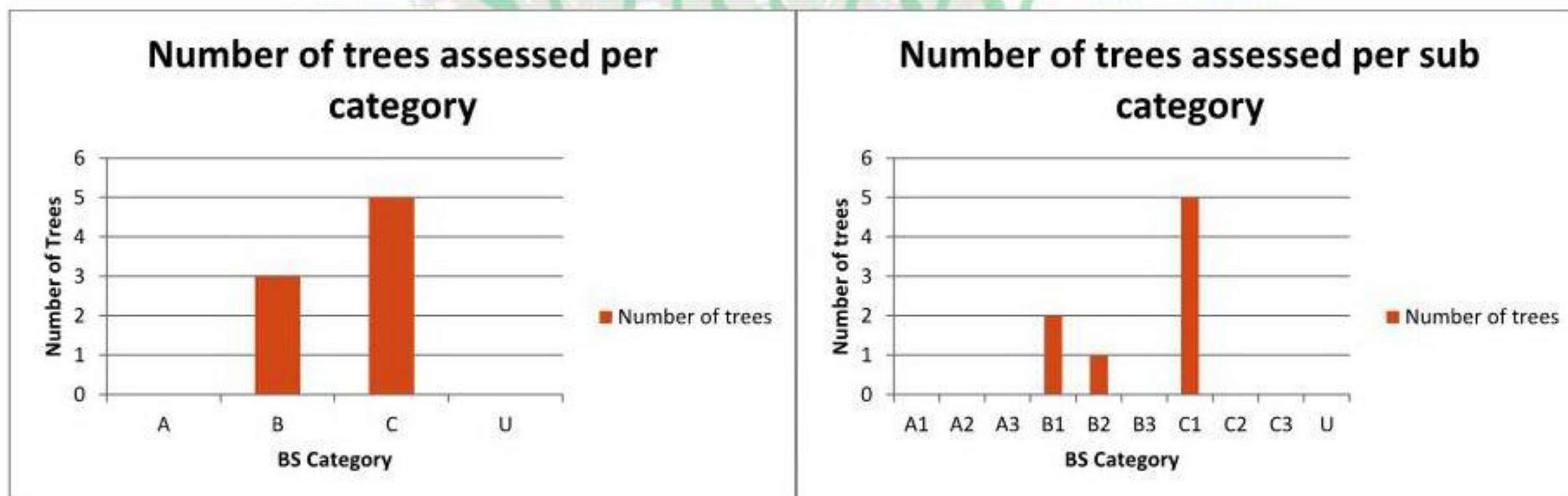
No Category A trees were identified within the inspected area or adjacent to it. These provide a significant enhancement on the area.

3 Category B trees were assessed non have high individual merit but benefit the general landscape.

5 Category C trees / groups have been categorised to be included in the report these have little benefit to the landscape, due to the high density of the surrounding vegetation resulting in poor habit, poor standard of previous maintenance.

No Category U trees / groups were assessed on site.

Bar Chart showing number of trees surveyed within each British Standard assigned category



DEVELOPMENT PROPOSAL:

1. The proposal is to construct two single storey side extensions. The one to the north will be of the same footprint as the existing patio area, the one to the south on the grassed area. Both will attach to the main building.
2. No information has been provided as to the positioning of any underground services to the buildings, it is presumed these will be positioned clear of any tree root protection areas.
3. Shading factor has been taken into consideration as to the affect this will have on the development proposal. There are no shading issues from the northern extension and a limited increase form the southern extension. This will not impose unnecessary pruning requests.

ISSUES AND SPECIFICATIONS:

PRE-COMMENCEMENT

Site meeting: A pre-commencement meeting should be held on site before any of the demolition or construction work starts. This must be attended by the site manager/agent, the arboricultural consultant and preferably council representative. If a council representative is not present, the arboricultural consultant must inform the council in writing of the details of the meeting. **All tree protection measures detailed in this document must be fully discussed so that all aspects of their implementation and sequencing are understood by all the parties. To avoid any possible disagreement with the Tree officer over the correct location of the tree protection barriers I would strongly recommend that this is erected with onsite Arboricultural supervision. If this is not authorised we cannot accept any liability if issues arise over the incorrect positioning of the barrier and possible site construction delays.** Any clarifications or modifications must be recorded and circulated to all parties in writing.

ARBORICULTURAL IMPLICATIONS ASSESSMENT:

The primary criterion in arboricultural terms is the retention of as many appropriate trees as is practicable. Quite apart from the requirement to retain some of the existing character, the presence of trees is generally accepted as being beneficial to the environment. The following is an assessment of the effects of the proposed development on existing trees and the future landscape. Full details of recommended works are provided within the tree survey data schedule.

There are some areas where there will be some slight detrimental impact on the retained trees, this has been taken into consideration and mitigation solutions made.

Where temporary access is necessary within the RPA ground protection has been shown on the Tree Protection Plan as a shaded area. This will be covered with anti-compaction surface as detailed in APPENDIX 2 - SITE GUIDANCE FOR WORKING IN ROOT PROTECTION AREAS (RPAs) document.

The storage of materials clear of any trees RPAs is of high importance, a suggested location for this facility has been shown on the plan.

No Topographical survey has been provided. A visual observation is that the site has a level aspect with the existing patio of a slightly raised aspect of approximately 200mm above the surrounding areas.

Both proposed extensions have a very slight foundation intrusion of the RPA's of T1 and T7. The northern extension which will occupy the same footprint as the existing patio, it has an intrusion of 7.5 Sq.m with a total of 163 Sq.m of completely open root growth area. This equates to a percentage of 4.6%. The southern extension has a foundation intrusion of T7 of 4.5 Sq.m. with a total of 76 Sq.m of completely open root growth area. This equates to a percentage of 6%.

Both trees are in reasonably good health and this amount of intrusion will not affect the tree health or warrant any specialist foundation construction.

The drawings do show some new patio around the southern extension as this will be within the RPA of T7 and the construction must not incur any excavations.

RECOMMENDED TREE WORK AND MANAGEMENT:

To permit the development to proceed, it will NOT be necessary to remove any trees, or carry out any remedial works. Some minor shrubs below 75mm in stem diameter were on the site but not assessed. These may need to be removed as part of the development programme – none of which should have any detrimental effect. All trees are to be retained.

TREE PROTECTION MEASURES:

PROTECTIVE BARRIERS AND ROOT PROTECTION AREAS (RPAS)

Illustrative guidance for four methods of protective barriers based on advice in BS 5837 2012 is included in APPENDIX 1 - GUIDANCE FOR TREE PROTECTIVE BARRIERS document. The location of the barriers, type and RPA is illustrated on the Tree Protection Plan [TPP]: SMW/3 Treetops Dr/TPP/002 as set out on the plan key. The precise location of the barriers must be agreed with the council on site before any development activity starts. Measurements for the

protective fencing can be found by using a scale rule on the TPP at the appropriate drawing scale. Prior to erecting the fencing, the measurements must be confirmed with the arboricultural supervisor. They are further identified in text as P.B. Protective Barriers.

ROOT PROTECTION AREA:

B.S. 5837:2012 provides guidance within section 4.6 for the calculation of root protection areas [RPAs] of those trees to be retained. The RPA is the recommended area in square metres that should be left undisturbed around each tree to ensure that excessive damage to its roots or rooting environment is avoided.

In the case of open grown trees with an even, radial root distribution it would be normal for the boundaries of the RPA to be equidistant from the trunk of the tree. However, B.S. 5837:2012 acknowledges that the disposition of tree roots can be significantly affected by a number of factors and that the actual position of the RPA will be influenced by specific tree and site factors. These factors are to be assessed by the Arboriculturist and appropriate adjustments to the sighting of the RPA made.

B.S. 5837:2012 requires that the RPA of all retained trees are protected from the effects of development by the installation of protective barriers.

It should be noted however, that the position of these barriers may also be influenced by the presence of any tree canopies that extend beyond the RPA and that could be damaged by construction works or where it is desirable to protect areas for future tree planting. Until this is completed no machinery should be allowed into this area.

The protective barriers demarcate the 'Construction Exclusion Zone' [CEZ] and should be installed prior to the commencement of any construction works, including clearance or demolition. They should be maintained for the duration of the works. All weather notices should be erected on the barriers. These can be found within the attached appendices titled as "Tree protection signs for fencing". Protective barriers should be in accordance with Figure 2 of B.S. 5837:2012. Under no circumstances should any work be carried out within this area without prior approval of the Arboricultural Consultant or Local Authority Tree Officer.

The position of protective barriers and the boundary of the CEZ are shown as a solid Blue line in [TPP]: SMW/3 Treetops Dr/TPP/002

Due to the proximity to some of the trees to the construction area and desire to retain them, the Protective barriers have been shown not as per the standards guidelines; to overcome this, various methods of alternative protection have been suggested.

All the fencing can be erected as a single operation prior to any work on the site.

The only slight adjustment we've made to the location of the protective barrier location is around both extension areas, to offset this we've shown anti compaction ground protection which will prevent any possible damage occurring. The installation of this is detailed in APPENDIX 2 - SITE GUIDANCE FOR WORKING IN ROOT PROTECTION AREAS (RPAs) document.

We have shown barriers by trees T3 to T6 this is to protect these trees if construction access is to be used in this zone. If at the prestart meeting this is not required, then it should be possible to agree a variation to this.

GUIDANCE FOR WORKING WITHIN RPAS:

REMOVAL OF EXISTING SURFACING AND REPLACEMENT NEW SURFACING:

Trees which have existing surfacing and structures to be removed and replaced within their RPA's and may be adversely affected by this activity. Any work within a tree's root protection area must be done with care as set out in APPENDIX 2 - SITE GUIDANCE FOR WORKING IN ROOT PROTECTION AREAS (RPAs). Any adverse impact must be minimised by following the general guidance set out in APPENDIX 2 - SITE GUIDANCE FOR WORKING IN ROOT PROTECTION AREAS (RPAs). Any works must be carried without the use of machinery and by hand tools unless under Arboricultural supervision and on anti-compaction surfaces. This relates the existing patio which will need removing for the norther extension.

INSTALLATION OF NEW SURFACING:

Trees having new surfaces to be installed on exposed soil within their RPAs and may be adversely affected by this activity. Any adverse impact must be minimised by following the general guidance set out in APPENDIX 3 - SPECIAL SURFACE CONSTRUCTIONS UNDER TREE'S RPAS document. Illustrative specifications for special surfacing are included in APPENDIX 3 - SPECIAL SURFACE CONSTRUCTIONS UNDER TREE'S RPAS document - This may be under arboricultural supervision.

It is proposed that any future patio areas that fall within the RPA(s) will be constructed in accordance of the British standard – B.S.5837:2012. Where it is necessary to remove the existing hard surface, or lower the ground level exposing roots within the RPA, this will be excavated by hand and the roots surrounded by sharp sand, with the greatest of care being taken to cause the minimum of damage to the roots.

Where such work is required the following steps should be undertaken:

- 1) The removal of the surface turf/vegetation by hand tools, no further excavation must be carried out.
- 2) Edge retention: Softwood boards pinned using Tanalised softwood pegs at 1500mm centres to prevent movement.
- 3) Geo-textile matting "Terram" laid on top of ground surface.
- 4) "Geocell" Cellular Confinement System (50mm deep filled with a none fines aggregate.
- 5) Geo-textile matting "Terram" laid on top of cellular confinement system.

6) Top surface laid preferably of a permeable nature.

INSTALLATION OF NEW STRUCTURE:

The building of any new retaining walls required for the parking area close to the RPAs may adversely impact the trees. Any adverse impact must be minimised by following the general guidance set out in APPENDIX 2 - SITE GUIDANCE FOR WORKING IN ROOT PROTECTION AREAS (RPAs) document.

SITE STORAGE, CEMENT MIXING AND WASHING POINTS:

All site storage areas, cement mixing and washing points for equipment and vehicles must be outside RPAs unless otherwise agreed with the council. Where there is a risk of polluted water run-off into RPAs, heavy-duty plastic sheeting and sandbags must be used to contain spillages and prevent contamination. Any facilities for the storage of oils, fuels or chemicals shall be sited on impervious bases and surrounded by impervious bund walls. The volume of the bund compound shall be at least equivalent to the capacity of the tank plus 10%. If there are multiple tanks, the compound shall be at least equivalent to the capacity of the largest tank, or the combined capacity of interconnected tanks, plus 10%. All filling points, vents, gauges and sight glasses shall be located within the bund. The drainage system of the bund shall be sealed with no discharge to any watercourse, land or underground strata. Associated pipework shall be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets shall be detailed to discharge downwards into the bund. A suitable location for this facility has been shown on the plans [TPP]: SMW/3 Treetops Dr/TPP/002

SERVICES:

If services need to be installed within RPAs, great care must be taken to minimise any disturbance. Trenchless installation should be the preferred option but if that is not feasible, any excavation must be carried out by hand according to the guidelines in APPENDIX 2 - SITE GUIDANCE FOR WORKING IN ROOT PROTECTION AREAS (RPAs) document. If services do need to be installed within RPAs, written approval must be obtained from the council before any works are carried out.

It is presumed that any services will utilise the main house supplies and that no external excavations are required. If this alters the locations and construction method must be discussed with the appointed arboricultural supervisor who will advise on its feasibility and then contact the Tree Officer for consideration. No works must commence until full approval has been gained.

TREE PROTECTION DURING DEMOLITION:

No site work of any nature should be carried out until the protective fencing has been constructed and approved by the Tree Officer.

Where this must be carried out within the RPA this should be carried out by hand tools or if not practical under full Arboricultural supervision and machinery on anti-compaction surfaces.

SPECIALIST ENGINEERED FOUNDATIONS WITHIN RPAS:

With the extremely minimal foundation intrusion of T1 & T7 and their unobstructed root growth zone, it's our opinion that there are no advantages of a specialist foundation.

As a precaution we propose to use an Air Spade to remove the soil in the foundation zones where it's within the RPA's. This will reveal if any root activity is present and of what dimensions. With our experience it's highly unlikely that root over 25mm in diameter will be found and that in accordance with the B.S. Standards guidance notes these can be carefully pruned and allow the foundation trench to be excavated to the required depth and backfilled with concrete to create a standard foundation.

If, in the highly unlikely event of roots being revealed above this size then an alternative foundation construction will be prepared and submitted to the Tree Officer for consideration. As the determination is essential to allow the project to start and run smoothly, we would propose that this specialist soil excavation procedure is carried out as soon as possible during the submission duration period and the results submitted to the Tree Officer for the records.

If there are any objections of this procedure, then we must be notified by return.

When demolition is required to permit the development to be carried out, under no circumstances should this be carried prior to erection or within any protective barriers, by machinery unless fully supervised and with prior approval.

When the use of machinery is unavoidable then this must be on an anti-compact surface adequate to support the weight, such as steel or wooden sheeting pinned into the ground and fixed together, or Aluminium tracking.

Prior to installing the ground protection surface, to further disperse any additional localised compaction a 'Terram' type membrane should be placed over the ground surface, over this a layer of sharp sand to provide a level platform for the final layer of sheeting to be positioned. These should be pinned by steel or wooden stakes to prevent any movement.

SCHEDULE OF TREES:

A schedule of trees is in the tree survey data schedule. All trees are shown on the plan with a reference letter T for trees followed by a number. All work should be carried out to the recognised standard B.S.3998:2010 as a minimum.

SCHEDULING OF WORKS THAT MAY AFFECT PROTECTED TREES:

In general terms, no construction, excavation or other site operations will commence until tree protection measures are in place and have been agreed in writing as acceptable by the Local Authorities Tree Officer.

If this application is approved, any recommended remedial works in the schedule affecting the development proposal will be authorised. Any additional works required, an application to the local authority will be essential. This will need to be confirmed by careful understanding of the conditions imposed if approval is granted. Confirmation should be sought from the relevant Local Authority if there are any restrictive orders affecting the trees on the site, and if so, the appropriate consent gained. Prior to commencement of any works detailed in the schedule of work in the tree survey data schedule, discussions should be held with an appropriately qualified arboricultural contractor to ensure both parties are fully conversant with the nature of the work to be undertaken.

DEVELOPER'S RESPONSIBILITIES, INITIAL SITE VISIT AND SUBSEQUENT PROCEDURES FOR REPORTING:

It is the developer's responsibility to ensure that the details of this arboricultural method statement are known and understood by all site personnel. A copy must be kept on site at all times and the site manager must brief all personnel who could have an impact on trees on the specific tree protection requirements. This must be a part of the site induction procedures and written into appropriate site management documents. The developer must instruct an arboricultural consultant to comply with the supervision requirements set out in this document before any work begins on site. More specifically, the following guidance must be observed:

TREE PROTECTION SIGNS

The developer must display tree protection signs on all protective barriers for the whole construction period. The signs to be used are contained within the appendices documentation called "tree protection signs for fencing".

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SUPERVISION VISITS:

The supervising Arboriculturist must visit at an interval agreed at the pre-commencement site meeting. The supervision arrangement must be sufficiently flexible to allow the supervision of all sensitive works as they occur. An example of such is below:

		Procedure	Date of attendance	Comments	Subsequent actions
Interim monthly site visits (random intervals)		Tree protection set up			
		Tree protection approval			
		Pre-Start Meeting			
		Air Spade Foundation excavation			
		Completion meeting and approval of tree protection removal			

REPORTING:

The Arboriculturist must advise the site manager on any relevant tree issues at the time of the visit, followed by an email of confirmation circulated to all parties, including the Local Authority.

These site visit reports will form the mechanism for confirming that the tree related planning conditions have been complied with for the duration of the development activity.

REMOVAL OF PROTECTIVE FENCING:

When **ALL** the construction processes are completed which includes any drainage and landscaping works, the fencing can be removed, and this should be carried out without any machinery entering the previously protected areas and with consideration for the trees protection. This should ideally be carried out under Arboricultural supervision.

COMPLETION MEETING:

After the works have been completed but before the main contractor has left a meeting should be arranged between the site supervising officer, the Local Authority Tree Officer and the appointed Arboricultural Consultant. The purpose being, to inspect the site and check that all procedures have been conformed too and agree to any correctional remedial works if required.

WILDLIFE CONSIDERATIONS:

Prior to commencement of any tree works a full wildlife survey must be carried out to ascertain the possible presence of any wildlife on the ground or within the trees and appropriate action must be taken. Greater detail is covered under the Landscape protection, recreation and public access: Countryside and Rights of Way Act 2000 (CROW) <http://jncc.defra.gov.uk/page-1378>



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CONCLUSION:

1. The proposal is to construct a two single storey side extensions. The one to the north will be of the same footprint as the existing patio area, the one to the south on the grassed area. Both will attach to the main building.
2. To allow this development to proceed, there will NOT be a requirement to remove any trees or carryout any remedial works.
3. Both proposed extensions have a very slight foundation intrusion of the RPA's of T1 and T7. The northern extension which will occupy the same footprint as the existing patio, it has an intrusion of 7.5 Sq.m with a total of 163 Sq.m of completely open root growth area. This equates to a percentage of 4.6%. The southern extension has a foundation intrusion of T7 of 4.5 Sq.m. with a total of 76 Sq.m of completely open root growth area. This equates to a percentage of 6%.
4. The drawings do show some new patio around the southern extension as this will be within the RPA of T7 and the construction must not incur any excavations.
5. With the extremely minimal foundation intrusion of T1 & T7 and their unobstructed root growth zone, it's our opinion that there are no advantages of a specialist foundation.
6. As a precaution we propose to use an Air Spade to remove the soil in the foundation zones where it's within the RPA's. This will reveal if any root activity is present and of what dimensions. With our experience it's highly unlikely that root over 25mm in diameter will be found and that in accordance with the B.S. Standards guidance notes these can be carefully pruned and allow the foundation trench to be excavated to the required depth and backfilled with concrete to create a standard foundation.
7. If, in the highly unlikely event of roots being revealed above this size then an alternative foundation construction will be prepared and submitted to the Tree Officer for consideration. As the determination is essential to allow the project to start and run smoothly, we would propose that this specialist soil excavation procedure is carried out as soon as possible during the submission duration period and the results submitted to the Tree Officer for the records. If there are any objections of this procedure, then we must be notified by return.
8. With the very minimal foundation RPA intrusion, the trees good health and the detailed foundation pre investigative procedures we don't consider the proposed alterations to the house will have any health issues towards these trees and that there are no justifications for not approving the application.

TREE SURVEY DATA

Tree ID	In Conservation Area/TPO	Species & Maturity	Likely Bat Habitat	Measurements estimated	Height (m)	Height and direction of first significant branch (m)	Number of Stems	Stem 1 (mm) or average diameter for trees with more than 5 stems	Stem 2 (mm)	Stem 3 (mm)	Stem 4 (mm)	Crown Spread (m) N E S W				CH - Average	Crown, Stem, Basal Area	B.S. Category	Life Expectancy	Phys Condition	Build Stage	Recommended action	Date	Comment
T1	Yes	Species: Common Oak Latin: Quercus robur Maturity: Mature	Unknown	No	13	3w	4	195	335	345	305	3	3	2	3	3	Crown-Fair, Stem-Fair, Basal Area-Fair	B1	20 to 40 yrs.	Fair	pre-construction	Recommended action: No action	10.10.19	Multi stemmed tree at ground level. Located in grassed area of the rear garden. A large wooden shed to the east. Crowns have been recently reduced with a reasonable amount of regrowth occurring. Tree is 10.5m from the north corner of the main building and 6.6m from the north corner of the garage.
T2	Yes	Species: Common Ash Latin: Fraxinus excelsior Maturity: Mature	Unknown	No	15	6e	1	410				5	6	4	2	8	Crown-Declining, Stem-Fair, Basal Area-Good	C1	<10 yrs.	Declining	pre-construction	Recommended action: No action	10.10.19	Tree located in small vegetation area to the north-east corner of the property. Tree is in acute decline from Ash Dieback disease with no more than 10-years life expectancy. Tree has no bearing on the proposed building alterations. Tree is 16.2m from the north corner the building and 18.5m from the north corner of the garage.
T3	Unknown	Species: Common Ash Latin: Fraxinus excelsior Maturity: Early Mature	No	No	5	3w	1	180				3	3	2	3	3	Crown-Good, Stem-Fair, Basal Area-Fair	C1	10 to 20 yrs.	Fair	pre-construction	Recommended action: No action	10.10.19	Tree located along the northern boundary in small vegetation area. Tree has ivy covering most of the stem. Two trees between this tree and T2 on the fence line have not been recorded and have a stem diameter of approximately 100mm. Tree is 9.9m from the north corner of the building and 21.4m from the north corner of the garage.

Tree ID	In Conservation Area/TPO	Species & Maturity	Likely Bat Habitat	Measurements estimated	Height (m)	Height and direction of first significant branch (m)	Number of Stems	Stem 1 (mm) or average diameter for trees with more than 5 stems	Stem 2 (mm)	Stem 3 (mm)	Stem 4 (mm)	Crown Spread (m) N E S W	CH - Average	Crown, Stem, Basal Area	B.S. Category	Life Expectancy	Phys Condition	Build Stage	Recommended action	Date	Comment
T4	Unknown	Species: Common Ash Latin: Fraxinus excelsior Maturity: Early Mature	No	No	6	3n	1	185				3 2 2 1	3	Crown-Fair, Stem-Fair, Basal Area-Fair	C1	<10 yrs.	Fair	pre-construction	Recommended action: No action	10.10.19	Row of trees located close to northern boundary fence with laurel between this tree and the fence line. Tree is of poor quality and has no more than 10 years life expectancy. Tree has been previously reduced. Tree is located 8.9m from the north corner of the property and 20.9m from the north corner of the garage.
T5	Unknown	Species: Common Ash Latin: Fraxinus excelsior Maturity: Early Mature	No	No	7	4e	1	225				2 2 2 1	5	Crown-Fair, Stem-Fair, Basal Area-Good	C1	<10 yrs.	Fair	pre-construction	Recommended action: No action	10.10.19	Located as part of a row of Ash trees located parallel to the northern boundary. Tree has a slight kink stem at 2m. Smaller ash tree of approximately 100mm to the east of this tree, between this tree and T4. Tree has been previously reduced along with all trees along this row. Tree is 10.4m from the north corner of the building and 23m from the north corner of the garage.
T6	Unknown	Species: Common Ash Latin: Fraxinus excelsior Maturity: Early Mature	No	No	7	4w	1	235				2 1 2 3	5	Crown-Fair, Stem-Fair, Basal Area-Good	C1	<10 yrs.	Fair	pre-construction	Recommended action: No action	10.10.19	Last tree in the row of Ash trees with two other Ash between this and T5. Tree has a slightly biased crown towards the north-west. As per all other Ash along this row, this tree has been previously reduced. Tree is 15m from the north corner of the building and 8.1m from the west corner of the building.

Tree ID	In Conservation Area/TPO	Species & Maturity	Likely Bat Habitat	Measurements estimated	Height (m)	Height and direction of first significant branch (m)	Number of Stems	Stem 1 (mm) or average diameter for trees with more than 5 stems	Stem 2 (mm)	Stem 3 (mm)	Stem 4 (mm)	Crown Spread (m) N E S W				CH - Average	Crown, Stem, Basal Area	B.S. Category	Life Expectancy	Phys Condition	Build Stage	Recommended action	Date	Comment
T7	Yes	Species: Common Oak Latin: Quercus robur Maturity: Mature	Unknown	Yes	15	5w	1	410				5	4	2	4	4	Crown-Fair, Stem-Good, Basal Area-Fair	B2	10 to 20 yrs.	Fair	pre-construction	Recommended action: No action	10.10.19	Tree located in neighbouring property's garden, approximately 1m from the boundary fence. Tree has been previously reduced. Tree is 12.6m from the west corner of the house and 8.2m from the south corner.
T8	Yes	Species: Common Oak Latin: Quercus robur Maturity: Mature	Unknown	Yes	17	5n	1	490				7	5	6	5	4	Crown-Fair, Stem-Good, Basal Area-Fair	B1	>40 yrs.	Fair	pre-construction	Recommended action: No action	10.10.19	Tree located in neighbouring property's garden. Main stem forks at 8m into well-structured crown. Tree has some epicormic growth on the main stem. Tree is 13.3m from the south corner of the building and 14.2m from the south-east corner.

FINAL REPORT

ROOT PROTECTION CALCULATIONS

Tree number	No. of stems	Stem 1 (or mean diameter for >5 stems)	Stem 2	Stem 3	Stem 4	RPA for 1 stem (m2)	Radius (m)	RPA between 2 and 5 stems (m2)	Radius (m)
T1	4	195	335	345	305			163.90	7.22
T2	1	410				76	4.92		
T3	1	180				15	2.16		
T4	1	185				15	2.22		
T5	1	225				23	2.70		
T6	1	235				25	2.82		
T7	1	410				76	4.92		
T8	1	490				109	5.88		

FINAL REPORT

SITE PHOTOGRAPHS



T1 multi stemmed at ground level with shed to the north.



T2 located in the north-east corner of the site.



T3 (with other smaller trees not recorded due to impacts of T2 and T3 far greater).



Row of Ash trees, largest stems recorded.



Area of the northern single storey extension proposals



Area of second southern, single storey extension proposals.

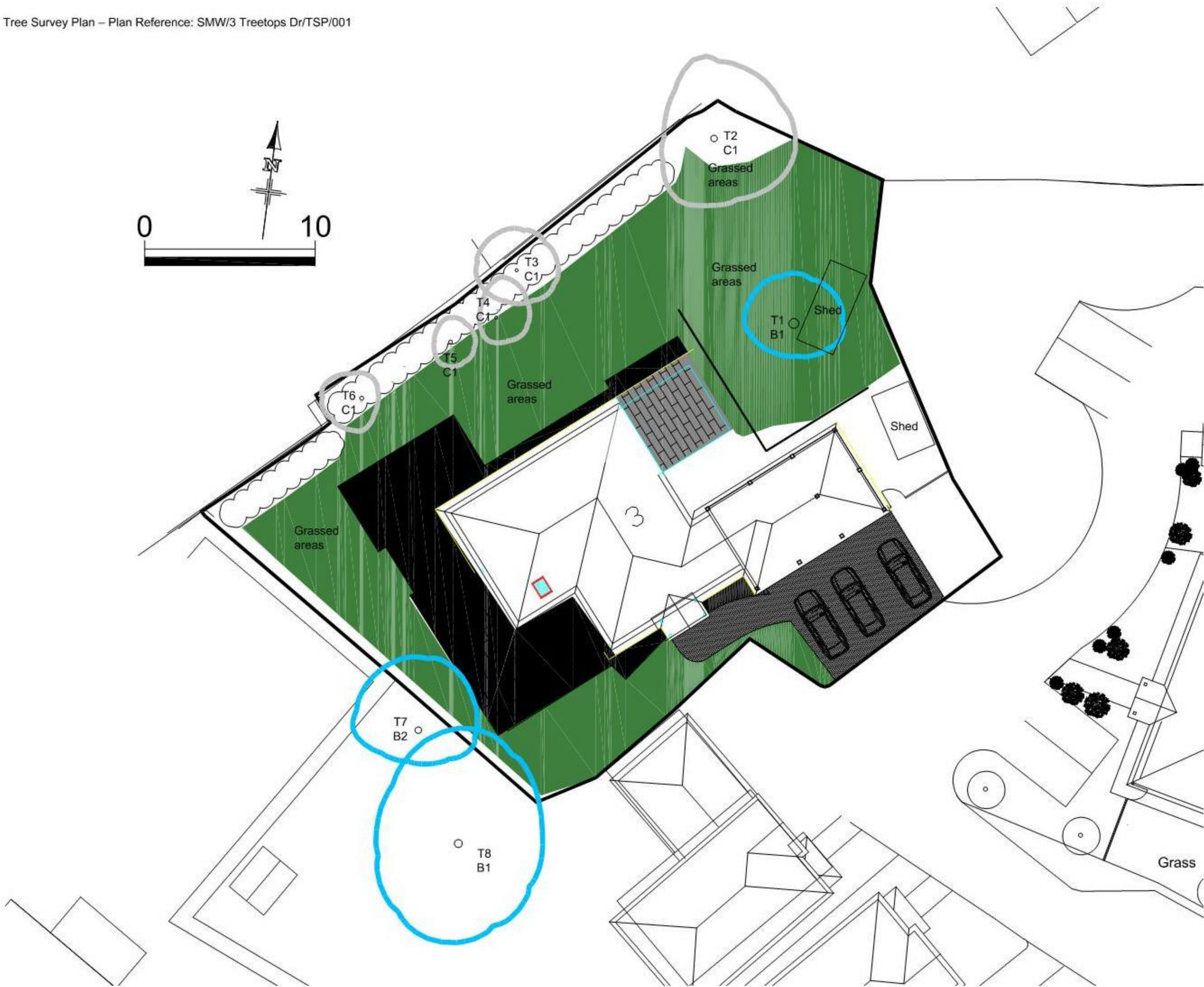


Area of second southern single storey extension proposals.

T7 and T8 located in neighbouring property's garden (open grassed area)

Consultancy
Ltd

FINAL REPORT



- KEY
- Category 'B' Tree
 - Category 'C' Tree

No.	Date	Revision	Initial

SMW CONSULTANCY
Stain-wait Tree Consultant
3 Orchard Close
Haseley, Cheshire
Sutley, GU17 9EX
Tel 01276 36565 Fax 01771 640056
Email: steve@stainycottage.demon.co.uk

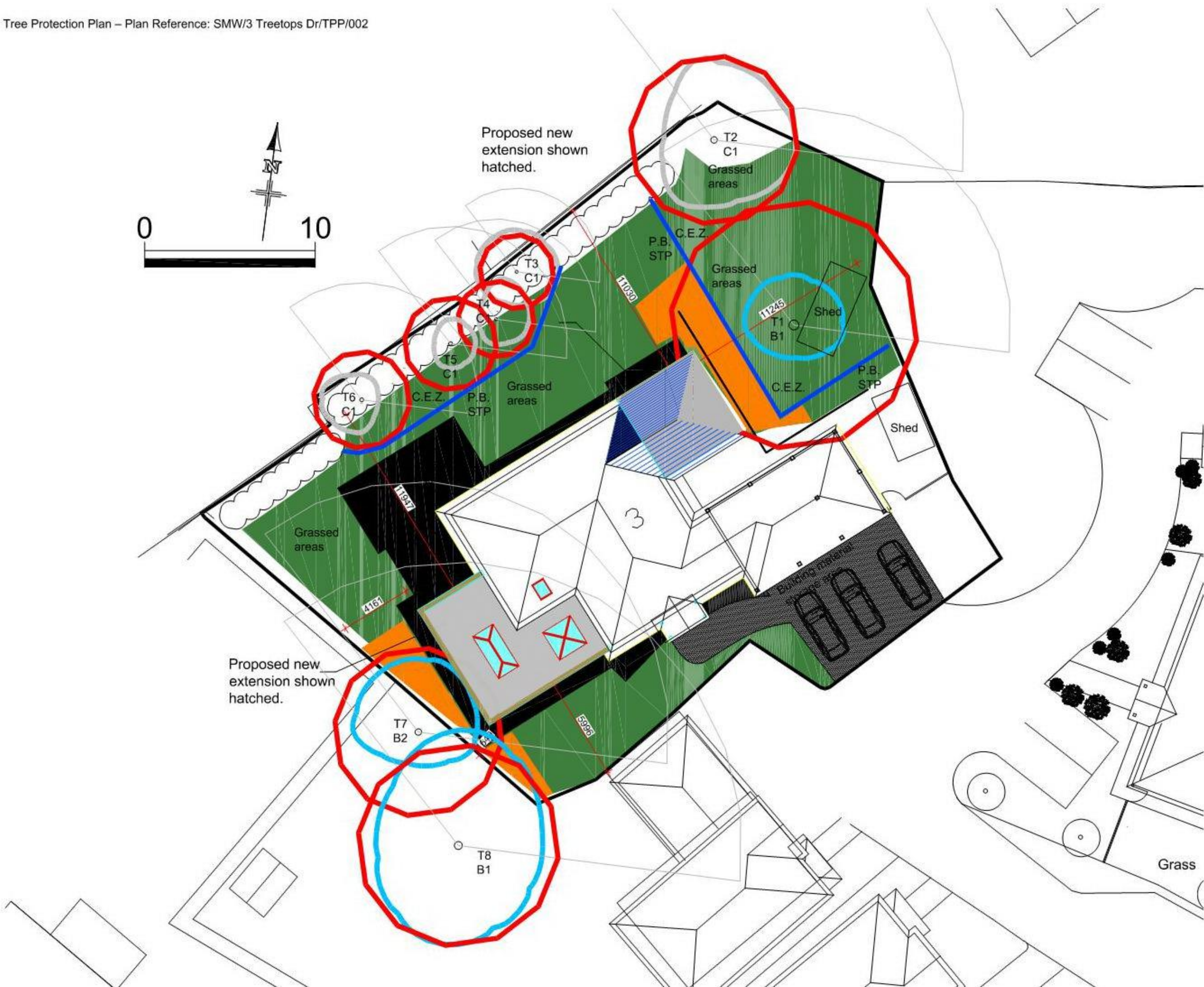
Project
Construction of two single storey
extension on the north & west
elevations

Client
Mr Mount
3 Treetops Drive, Forest Avenue,
Cowplain, Waterloooville,
PO8 8JF

Drawing
**Tree Survey Plan
(TsP)**
Scale 1:200 @ A3
Drawn by SMW
Checked by
Date Oct19

Drawing No.
SMW/3 Treetops Dr
/TSP/001

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preparing shop drawings.



KEY

- Category 'B' Tree
- Category 'C' Tree
- Root Protection Area for each retained tree: No offsetting shown

Protective Barrier
Standard Tree Protection
STP

Daylight shadow

Shaded area represents the proposed alteration

Anti compaction Surface

No.	Date	Revision	Initial

SMW CONSULTANCY
Sustainable Tree Consultant

3 Orchard Close
Hemel Hempstead
Hertfordshire, GU10 2EX
Tel: 01276 36555 Fax: 01771 640055
Email: steve@smwconsultancy.co.uk

Project
Construction of two single storey extension on the north & west elevations

Client
Mr Mount
3 Treetops Drive, Forest Avenue,
Cowplain, Waterloooville,
PO8 8JF

Drawing
Tree Protection Plan (TPP)
Scale: 1:200 @ A3
Drawn: SMW
Checked: SMW
Date: Oct19

Drawing No.
SMW/3 Treetops Dr /TPP/002

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