

Development tree report for Mr./Mrs. Bunch

Site Address:
16 Bedford Close,
Whitehill,
Bordon,
Surrey,
GU35 9PS

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



M
S (Tree) W
Consultancy
Ltd

Prepared by Steve Wood (O.N.D. Arboriculture M.Arbor.A.) for and behalf of SMW (Tree) Consultancy Ltd on 30th March 2021

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

1. The proposal is to demolish the existing conservatory and construct a double storey extension measuring 4m wide (east to west) and 6m deep (north to south). Effectively squaring off the building.
2. To allow this development to proceed, there will NOT be a requirement to remove any trees.
3. No Topographical survey has been provided. Our visual assessment is that the whole site has a considerable level increase from the house to the southern boundary, this has been supported with an established brick wall of approximately 850mm in height. This will have acted as a robust structure and prevented any root activity in the house direction beyond the wall.
4. The only possible tree impact is from T1. However, prior to proceeding with the project on our advice, air spade excavations were carried out and have revealed no major root structures within the 300mm wide, 600mm deep excavation. This is most likely due to the retaining wall which is located 4.5m from T1, to which, the ground level of the proposals is 850mm lower than the ground level of T1.
5. With the nature of the proposed extension, we assume that all services will connect in to the existing supplies and that no excavation will be necessary within trees RPA. If this changes the appointed Arboricultural consultant must be contacted for advice on how and where this can be achieved without causing root damage.
6. With the nature of the proposed extension, we assume that all services will connect in to the existing supplies and that no excavation will be necessary within trees RPA. If this changes the appointed Arboricultural consultant must be contacted for advice on how and where this can be achieved without causing root damage.
7. The removal of the conservatory should not encounter any root activity due to the established retaining wall and supported by the Air spade investigation. Based on this substantiated information we don't envisage any affect towards the trees health.
8. The information gathered by the Air spade works and the retaining wall, all demonstrate that there is no root activity which justifies the use of a specialist foundation. Based on this evidence we would recommend the foundations are excavated using light weight machinery located on an anti-compact surface adequate to support the weight, such as steel or wooden sheeting pinned into the ground and fixed together.

FINAL REPORT

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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/16 Bedford CI/TSP/001

Tree protection plan [TPP]: SMW/16 Bedford CI/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:	16 Bedford Close, Whitehill, Bordon, Surrey, GU35 9PS	Description of development environment:	Double storey property, brick construction.
Local authority:	East Hampshire District Council	Council planning reference:	

Survey extent and site description:

Site description

A double storey property with double garage, all of brick construction. To the south is a steeply ascending garden leading to council owned land.

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 freely draining, very acidic, sandy and loamy soil type. This information was sourced from: <http://www.landis.org.uk/soilscapes/>. 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 2nd of March 2021 we assessed the local authority's website for information on tree preservation orders and conservation areas. We found that: The site is covered by the area TPO: (EH89)80 as seen below.

The screenshot shows a web browser window displaying a mapping application. The address bar shows the URL: maps.easthants.gov.uk/easthampshire.aspx. The search bar contains the address: [16 Bedford Close, Whitehill, Bordon, GU35 9PS](#). The map shows a residential area with a green hatched area representing a Tree Preservation Order (TPO). A pop-up window titled "TPO Areas Info" provides the following details:

- TPO Number:** (EH89)80
- TPO Title - Plan:** [Pinewood House/Whitehill Chase](#)
- Harvey File Number:** 4753709
- Date of Confirmation:** 02/01/1981 00:00:00
- Class of Trees:** Area
- Road Name:** /Forest Rd
- town:** Bordon
- Date TPO Made:** 20/10/1980 00:00:00
- TPO Type:** Area Order
- Tree Ref:** A1
- Description:** All species

The map interface includes a search bar, a "Find Nearest" button, and a "Show Map Categories" section with various filters. The map shows a residential area with a green hatched area representing a TPO. The map is powered by iShare.

No conservation areas were found. This does not mean that the site is not covered by tree restrictive orders and confirmation in writing should be sought from your local authority before proceeding with any works.

Tree survey:

Scope and limitations of the survey

- 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.
- 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.
- 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).
- 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.
- 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.
- No plant tissue samples were taken, and no internal investigation of the trees was carried out.
- The risk of tree-related subsidence to structures has not been assessed.
- I have no knowledge of existing or proposed underground services.
- The positions of trees have been plotted by GPS using a SXBlue II + GPS which delivers sub-60 cm (2dRMS, 95% confidence) positioning.
- The report is based on present ground levels. During the construction phase, if level alterations are required, then we must be informed of this to allow us to assess whether this will have any effect on the trees rooting area.

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 is not made available or is 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 do not 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 2 trees have been included in the report as being considered close to have an impact. There are other trees which I consider outside of any possible influence towards the proposed development.

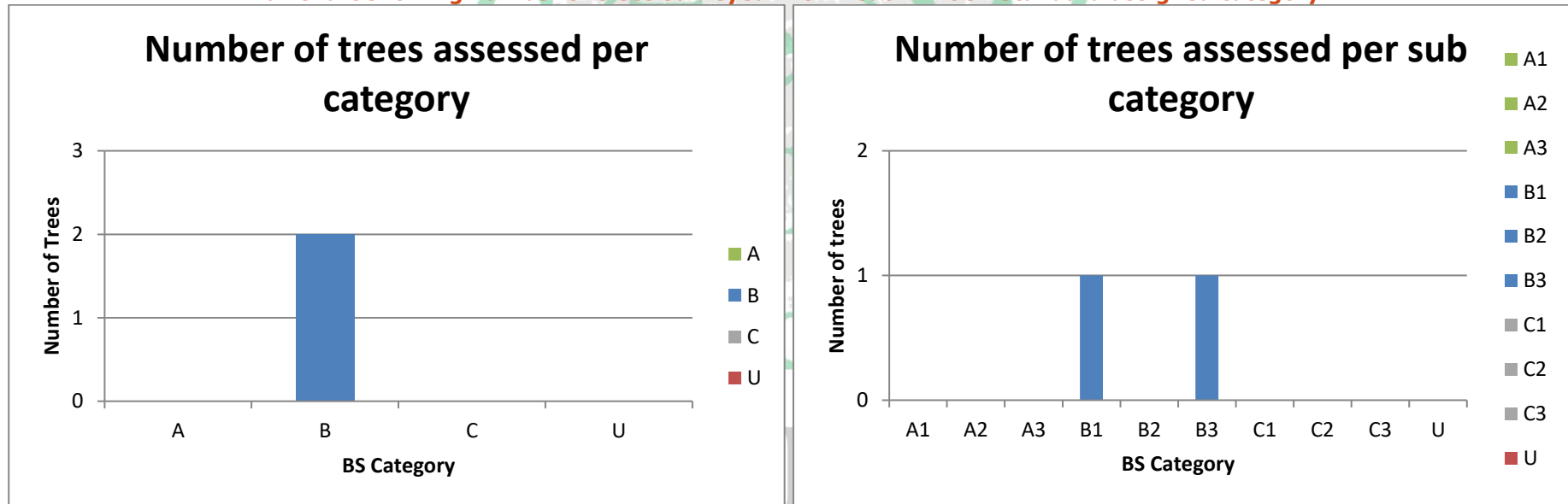
No category A trees were identified within the inspected area or adjacent to it.

2 category B trees were assessed, none have high individual merit but benefit the general landscape.

No category C trees/groups have been categorised to be included in the report.

No Category U tree(s)/group(s) were assessed on site.

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



Development proposal:

1. The proposal is to demolish the existing conservatory and construct a double storey extension measuring 4m wide (east to west) and 6m deep (north to south). Effectively squaring off the 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. Clearly indicated on the TPP drawing, there is some shading but no greater than currently towards the conservatory which with its construction would have been more of a demand to prune the tree than the proposed alteration.

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 we 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. It may be appropriate for the tree surgery contractor to attend this meeting.

Arboricultural implications assessment (AIA):

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 the following 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. Our visual assessment is that the whole site has a considerable level increase from the house to the southern boundary, this has been supported with an established brick wall of approximately 850mm in height. This will have acted as a robust structure and prevented any root activity in the house direction beyond the wall.

The only possible tree impact is from T1. However, prior to proceeding with the project on our advice air spade excavations were carried out and have revealed no major root structures within the 300mm wide, 600mm deep excavation. This is most likely due to the retaining wall which is located 4.5m from T1, to which, the ground level of the proposals is 850mm lower than the ground level of T1.

Recommended tree work and management:

To permit the development to proceed, it will NOT be necessary to remove any trees.

All other trees are to be retained, some will require surgery as detailed in the survey schedule in tree survey data schedule and should be carried to the minimum levels as detailed in B.S. 3998:2010.

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/16 Bedford CI/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 (RPA):

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 be 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/16 Bedford CI/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.

It is at the discretion of the tree officer as to whether the tree protection measures are required. The only tree protective fencing that has been shown is located at the entrance to a gate, where there is access to the surveyed trees. As previously mentioned in this report, the ground level ascends by 850mm and is retained by a brick wall, thus it is very unlikely that construction materials or workers will access the area due to the natural physical restrictions.

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 out without the use of machinery and by hand tools unless under Arboricultural supervision and on anti-compaction surfaces.

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 footpaths that fall within the RPA(s) will be constructed in accordance with 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/16 Bedford CI/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.

With the nature of the proposed extension, we assume that all services will connect in to the existing supplies and that no excavation will be necessary within trees RPA. If this changes the appointed Arboricultural consultant must be contacted for advice on how and where this can be achieved without causing root damage.

Tree protection during demolition:

The removal of the conservatory should not encounter any root activity due to the established retaining wall and supported by the Air spade investigation. Based on this substantiated information we don't envisage any affect towards the trees health.

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

Specialist engineered foundations within RPAs:

The information gathered by the Air spade works and the established retaining wall, all demonstrate that there is no root activity which justifies the use of a specialist foundation. Based on this evidence we would recommend the foundations are excavated using light weight machinery located on an anti-compact surface adequate to support the weight, such as steel or wooden sheeting pinned into the ground and fixed together.

Access road:

No alterations are proposed to the present entrance drive that we are aware of. If this changes then the appointed arboricultural supervisor must be informed so the proposals can be evaluated and submitted to the Tree Officer for consideration and hopeful approval.

Schedule of tree works:

A schedule of recommended tree works is in the tree survey data schedule. No work recommendation are required from the proposed alterations. Previous approval has been given for the crown lifting of T1 and the removal of an early mature English Oak to the south of the property. 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 appendix's documentation called "tree protection signs for fencing".

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.

Procedure	Date of attendance	Subsequent actions	Comments
Tree protection set up	TBC	Construction contractor to set up tree protection measures and inform SMW (Tree) Consultancy Ltd when all measures are in place.	
Tree protection approval	TBC	Photos are to be sent to SMW (Tree) Consultancy Ltd of the tree protection measures installed as per this report's recommendations. These photos will then be sent to the LPA's Tree Officer.	
Pre-Start meeting	TBC	If photos are not sufficient for the LPA's Tree officer to approve the correct implementation of the tree protection measures, then a site pre-start meeting may be required with the site contractor, SMW (Tree) Consultancy Ltd and the LPA's Tree Officer.	
Access drive construction	N/A	As per this report's recommendation, if access roads are planned to enter the RPA's, then SMW (Tree) Consultancy Ltd may be required to attend site and supervise the installation.	
Services installation	N/A	As per this report's recommendation, if services are planned to enter the RPA's, then SMW (Tree) Consultancy Ltd may be required to attend site and supervise the installation.	
Demolition	TBC	If the LPA's Tree Officer deems it necessary, then SMW (Tree) Consultancy Ltd may be required to supervise the demolition of the base of the existing ancillary building.	
Foundation excavation	N/A	As per this report's recommendation, if foundations are planned to enter the RPA's, then SMW (Tree) Consultancy Ltd may be required to attend site and supervise the installation.	
Completion meeting and approval of tree protection removal	TBC	If the LPA's Tree Officer deems it necessary, then a site completion meeting may be required.	
Landscaping	N/A	If this project includes tree planting, then SMW (Tree) Consultancy Ltd may be required to attend site in order to ensure that the trees have been planted correctly.	

Interim monthly site visits (random intervals)

Reporting:

The Arboriculturist must advise the site manager on any relevant tree issues at the time of the visit, followed by a formal letter 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 tree's 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 demolish the existing conservatory and construct a double storey extension measuring 4m wide (east to west) and 6m deep (north to south). Effectively squaring off the building.
2. To allow this development to proceed, there will NOT be a requirement to remove any trees.
3. No Topographical survey has been provided. Our visual assessment is that the whole site has a considerable level increase from the house to the southern boundary, this has been supported with an established brick wall of approximately 850mm in height. This will have acted as a robust structure and prevented any root activity in the house direction beyond the wall.
4. The only possible tree impact is from T1. However, prior to proceeding with the project on our advice, air spade excavations were carried out and have revealed no major root structures within the 300mm wide, 600mm deep excavation. This is most likely due to the retaining wall which is located 4.5m from T1, to which, the ground level of the proposals is 850mm lower than the ground level of T1.
5. With the nature of the proposed extension, we assume that all services will connect in to the existing supplies and that no excavation will be necessary within trees RPA. If this changes the appointed Arboricultural consultant must be contacted for advice on how and where this can be achieved without causing root damage.
6. With the nature of the proposed extension, we assume that all services will connect in to the existing supplies and that no excavation will be necessary within trees RPA. If this changes the appointed Arboricultural consultant must be contacted for advice on how and where this can be achieved without causing root damage.
7. The removal of the conservatory should not encounter any root activity due to the established retaining wall and supported by the Air spade investigation. Based on this substantiated information we don't envisage any affect towards the trees health.
8. The information gathered by the Air spade works and the retaining wall, all demonstrate that there is no root activity which justifies the use of a specialist foundation. Based on this evidence we would recommend the foundations are excavated using light weight machinery located on an anti-compact surface adequate to support the weight, such as steel or wooden sheeting pinned into the ground and fixed together.
9. It's our conclusion that the proposed alterations to the house will not have any detrimental affects towards the trees and that we see no reason why the application should not be approved.

FINAL REPORT

Tree survey data

Tree ID	In Conservation Area/TPD	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	Crown Spread (m)				Crown height (average)	Crown, Stem, Basal Area	B.S. Category	Life Expectancy	Physical Condition	Build Stage	Recommended action	Date	Comment
									N	E	S	W									
T1	Yes	Species: Common Oak Latin: Quercus robur Maturity: Mature	Unknown	No	16	3n	1	555	6	6	7	6	4	Crown-Fair, Stem-Poor, Basal Area-Fair	B1	20 to 40 yrs.	Fair	Pre-construction	Recommended action: No action	01.03.21	Tree is located to the south of the house on a steeply sloping bank. Tree is located 9.67m from the south-east corner of the property and 12.97m from the north-east corner. There is a brick retaining wall 4.5m towards the conservatory. The retaining wall has a height of 850mm. Air spade works established there is no root activity in this area.
T2	Yes	Species: Scots Pine Latin: Pinus sylvestris Maturity: Mature	No	No	16	5s	1	480	3	5	6	3	5	Crown-Fair, Stem-Fair, Basal Area-Poor	B3	10 to 20 yrs.	Fair	Pre-construction	Recommended action: No action	01.03.21	Tree is located in sloping area to the south of the house, where there is dense vegetation plus other trees. Ground of undulating levels and soft composition. There is an Oak 3m to the north, which is scheduled for removal under approval. Tree is located 7.9m from the south-west corner of the property and 10.2m from the south-east corner.

FINAL REPORT

Root protection calculations

Tree number	No. of stems	Stem 1 (or mean diameter for >5 stems)	RPA for 1 stem (m2)	Radius (m)
T1	1	555	139	6.66
T2	1	480	104	5.76



FINAL REPORT

Site photographs



Surveyed trees in relation to existing property.



Air spade trench showed no major root activity.



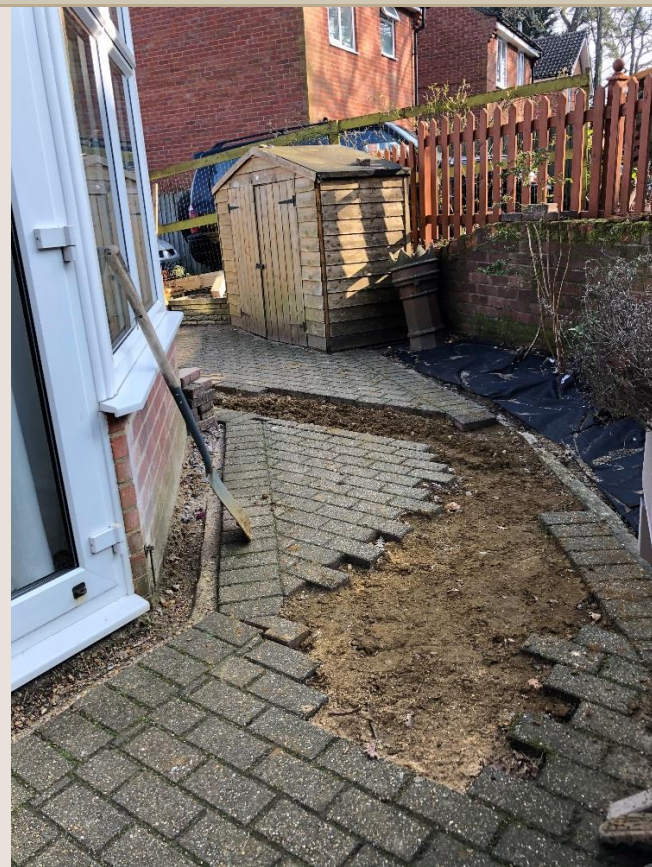
Area of proposed double storey extension.



Overview of surveyed trees in relation to existing property.



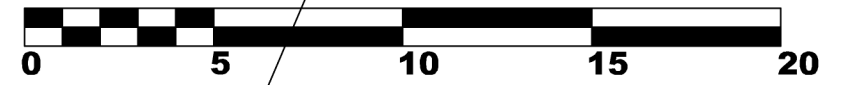
Air spade excavations on the corner closest to T1



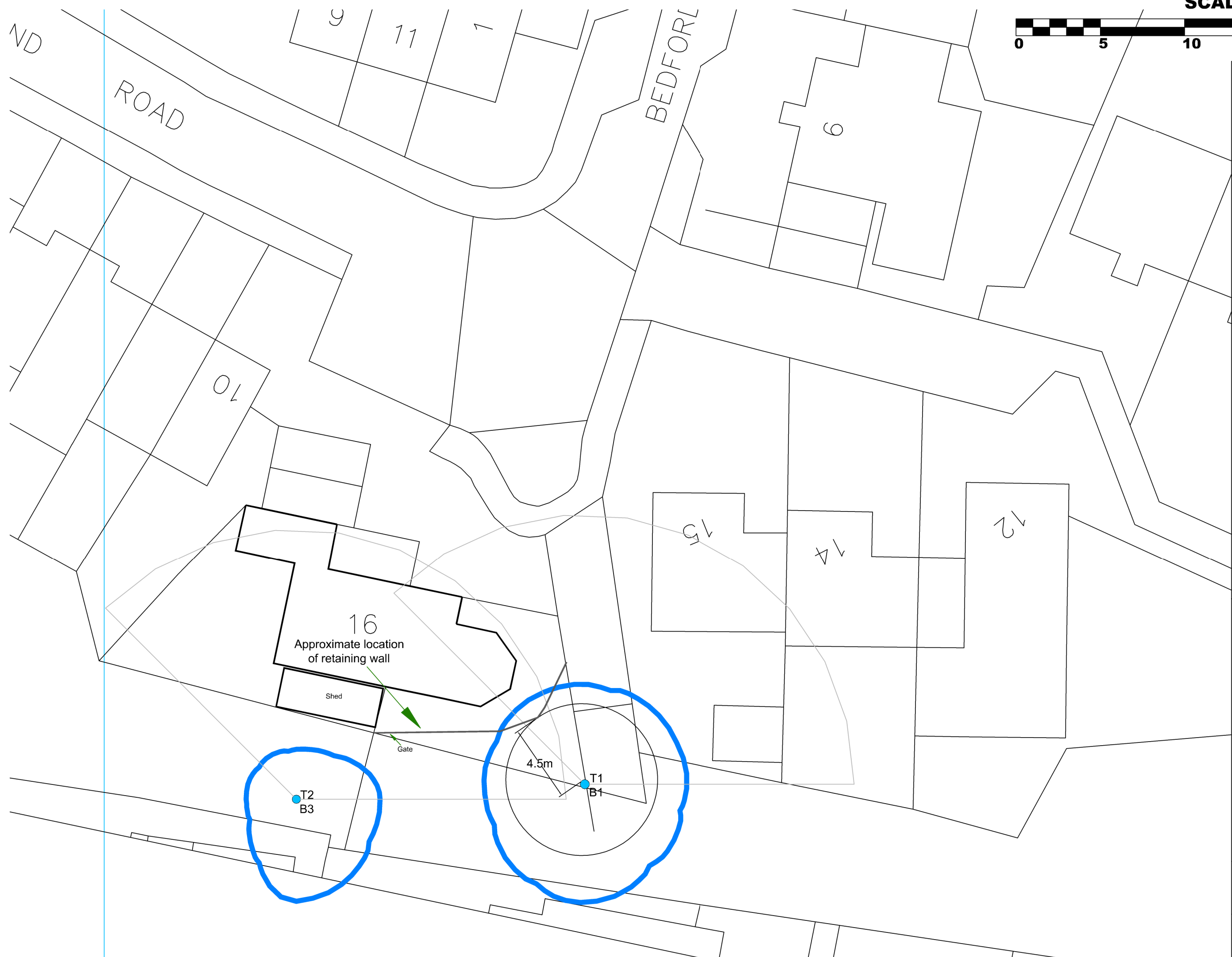
Air spade works in proximity to existing.



Air spade trench, property left of trench



- T1 Tree identifier
- B1 British standard Tree category
- Category 'B' Tree Canopy shown N E S W



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Drawing

Tree Survey Plan
TSP

Scale Drawn

1:100@A3 SMW

Checked

March 2021

Drawing No.

SMW/16 Bedford CI/TSP/001

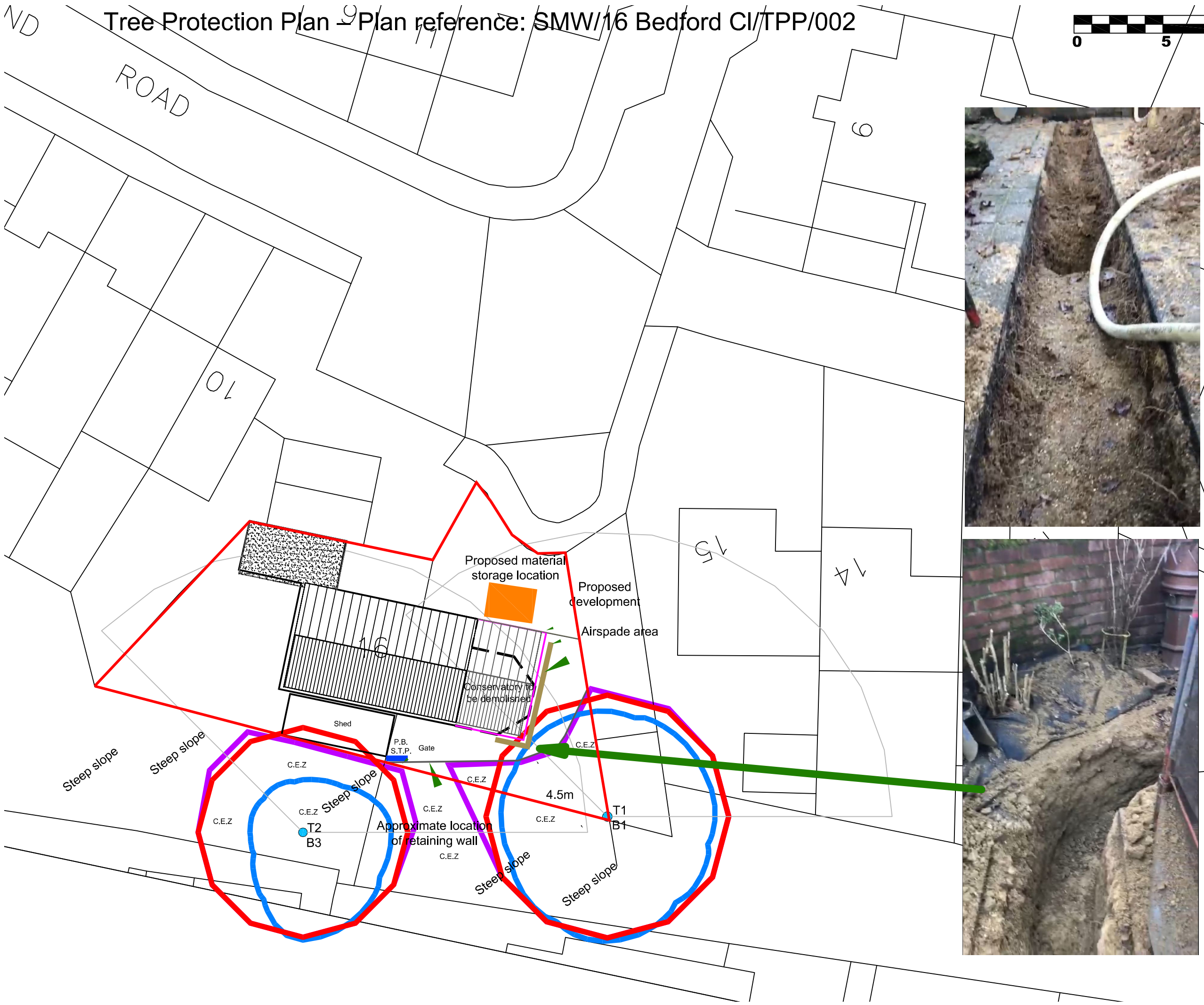
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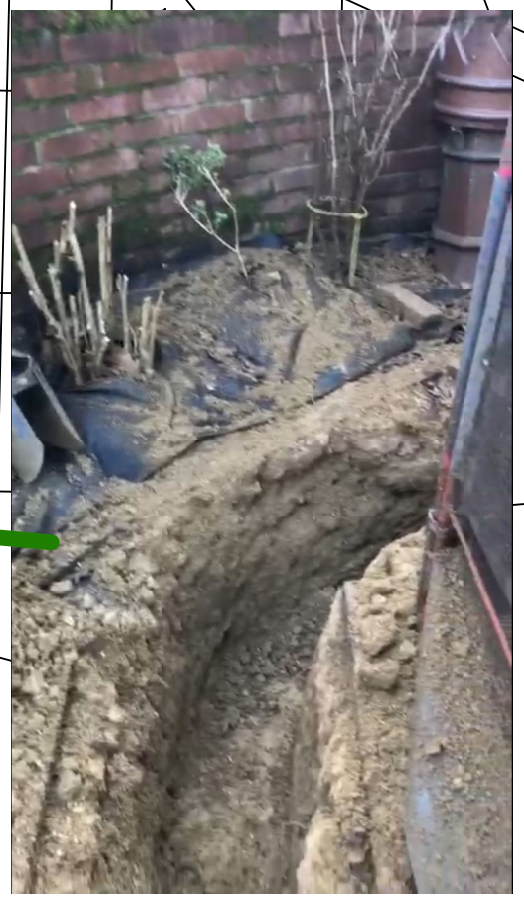
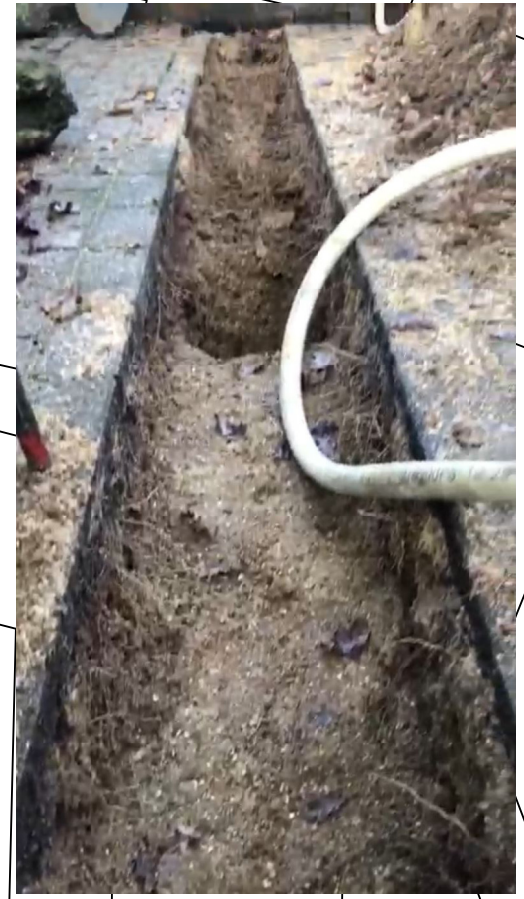
Tree Protection Plan - Plan reference: SMW/16 Bedford CI/TPP/002

ND

ROAD



- T1 Tree identifier
- B1 British standard Tree category
- Category 'B' Tree Canopy shown N E S W
- Adjusted RPA
- Root Protection area (RPA)
- Daylight shadow
- Protective Barrier (P.B.)
- Standard Tree Protection (S.T.P.)
- C.E.Z. Construction exclusion zone
- Proposed material storage location



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Drawing
**Tree Protection Plan
 TPP**

Scale 1:100@A3
 Drawn: SMW

Checked: March 2021

Drawing No.
SMW/16 Bedford CI/TPP/002

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