BS 5837
Arboricultural Impact Assessment
and
Arboricultural Method Statement

Location of property surveyed:

Proposed self-build dwelling on land off Vicarage Lane, Wilpshire

Arboricultural report for:

Mrs M Riding

Date of site survey:

11/05/2026

Date of report:

12/05/2026

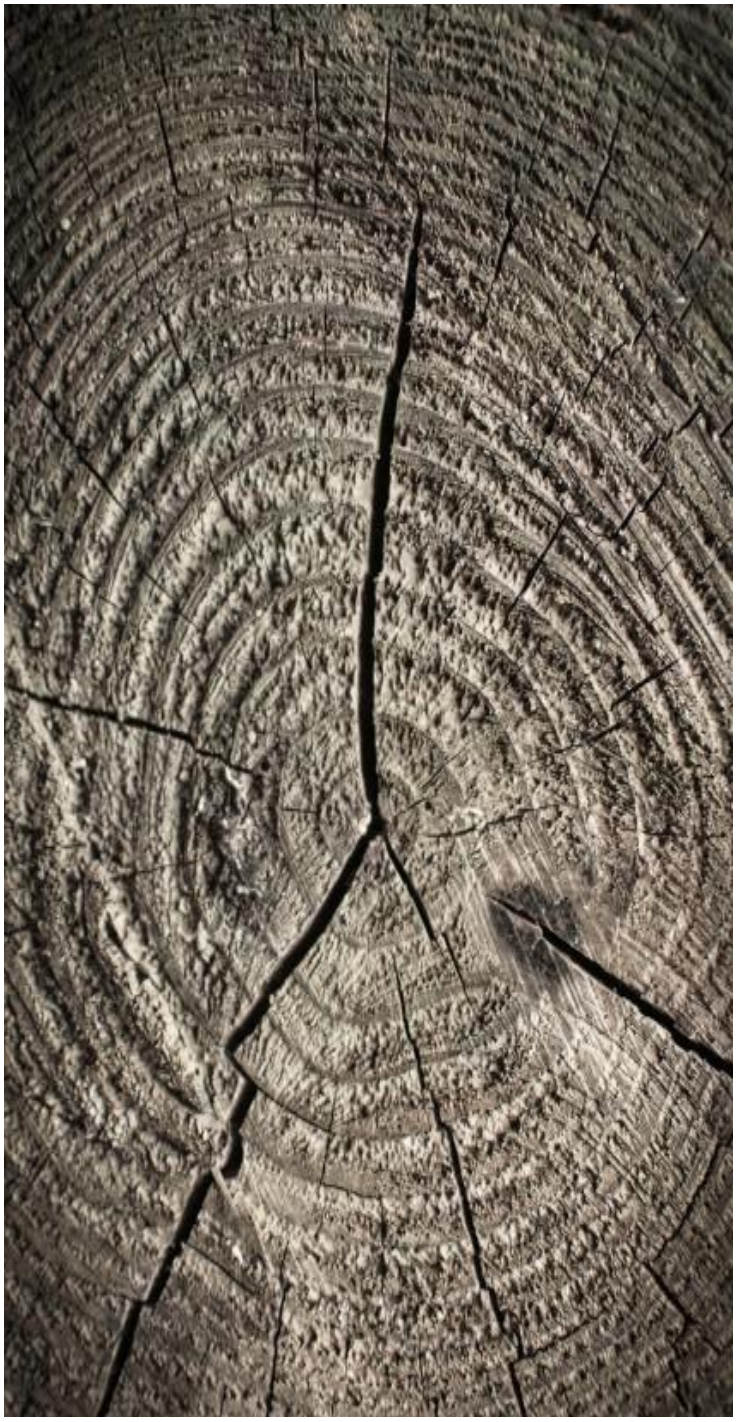
Job Ref: 2326

Survey and report undertaken by:

Gary Marsden

FDSc Arb, M.Arbor.A.

GMTREE CONSULTANTS



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I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact me.

Any enquiries regarding this report should be addressed to:

GM Tree Consultants Ltd
16, Farfield Drive,
Lower Darwen,
Darwen,
Lancashire,
England,
BB3 0RJ.

Tel: 077 61 66 73 84
Email: gary@gmtreeconsultants.co.uk
Web: www.gmtreeconsultants.co.uk
Registered in England and Wales – CRN: 07548009



Gary Marsden FDSc Arb M.Arbor.A
Professional Member - Arboricultural Association (AA)
Professional Member - Consulting Arborist Society (CAS)

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Validation statement for council registration of this report.

1. Validation.

1.1. To allow the validation of planning applications, this report fulfils the recommended national list criteria for tree survey / arboriculture information. More specifically, it contains the following:

- A full tree survey compliant to the requirements of BS5837; (2012) Trees in relation to design, demolition, and construction – Recommendations, undertaken by a qualified arboriculturist.
- A plan to a suitable scale with a north point and showing tree survey information, retention categorisation and root protection areas, and tree height.
- An assessment of the arboricultural implications of development detailing trees to be retained / removed and appropriate protection measures.
- An arboricultural method statement detailing the means of tree protection, implementation, and phasing of works.

Summary of the report.

2. Summary.

2.1. I have inspected all the relevant trees that could influence the development of this site and listed their details within this report, a root protection area and crown spread are indicated around each tree on the Tree Constraints Plan (TCP) with any protective measures indicated on the Tree Protection Plan (TPP).

2.2. At the time of the tree survey no trees require removal solely on the grounds of good tree management within the clients' boundaries. **Note – the Ash trees in G002 are not under the ownership of the client, the landowner must be notified of these recommendations as the trees are dangerous with the potential for failure.

2.3. As a result of the development and site activities, no additional trees will need removing.

2.4. All the significant boundary tree cover located on the site will remain intact.

2.5. The construction activity and proposed changes may adversely affect further trees if appropriate protective measures are not taken. However, if adequate precautions to protect the retained trees are specified and implemented through the arboricultural method statement included in this report, the development proposal will have no adverse impact on the contribution of trees to local amenity or character.

Gary Marsden FDSc Arb, M.Arbor.A

Introduction

3. Qualifications and experience.

3.1. I have based this report on my site observations and any provided information, and I have come to conclusions in the light of my 25+ years' experience in the arboricultural industry. I have professional indemnity and public liability insurance at the required level to undertake such work.

4. Instruction.

4.1. I am instructed by Mrs M Riding (referred to as the 'client' from here on) to provide the following information to accompany the planning application:

- A schedule of the relevant trees to include basic data and a condition assessment as per section 4.4.2.5 of BS 5837:2012 Trees in relation to design, demolition, and construction - Recommendations.
- A Tree Constraints Plan (TCP) showing: Tree numbers, species, tree height, root protection areas, crown spreads and retention categories.
- An Arboricultural Impact Assessment (AIA).
- An Arboricultural Method Statement (AMS).
- Tree Protection Plan (TPP).

5. Relevant background information.

5.1. A summary of the intended development is to construct a new residential dwelling within the site boundary.

5.2. A tree survey has been carried by GMTC and documented in drawing ref: 2326/TCP/2026. This was used by the client to influence the potential development at the site so that any impact from trees could be assessed and factored into the designs.

6. Documents and information provided.

6.1. My client provided me with copies of the following documents or information:

- Their email of instruction outlining the situation.
- Their email commissioning this report and agreeing to the T&C and cost.
- Electronic map to plot tree locations in computer tree management software.
- Existing site layout drawing: 09.03.2026 - Water Tower self build - M Riding - A2 - Rid.1216.3795-01
- Proposed site layout drawing: 09.03.2026 - Water Tower self build - M Riding - A2 - Rid.1216.3795-01

7. Correspondence with local arboricultural / planning officer:

7.1. There is no significant correspondence that needs documenting at the time of writing this report.

8. Purpose of this report.

8.1. The primary purpose of this report is to show the local authority that all due considerations have been made in relation to retaining suitable trees within the site layout while considering any impact this may have on the retained trees on site. It will also serve as a management tool for the methods of protecting the retained trees while the development is undertaken.

8.2. Within this planning process, this report will be available for inspection by people other than tree experts, so the information is presented to be helpful to those without a detailed knowledge of the subject.

9. Scope of this report.

9.1. This report is only concerned with the prominent trees within or around the proximity of the site that could influence the development of this site. It takes no account of any trees outside this remit or any building structural issues. It includes a preliminary assessment based on the site visit and any documents provided, listed in section 4 above.

9.2. The survey is based upon information that was available at the time of the inspection. Further inspections are necessary over time to give a fuller picture of the health of trees.

10. Mapping.

10.1. I have not been provided with a topographical survey of the site. A digital ordnance survey map has been purchased, and I have plotted the trees by the combined / individual use of land features, manual measurements, laser measurements and GPS. It is estimated that the accuracy is within 1-2m. For more accuracy a topographical survey will need to be provided.

10.2. To make the tree details clearer some elements of the topographical plan may have been "turned off" but are still available on the DWG file.

10.3. Site plans showing all the tree locations and any relevant details can be found in Appendix 'C'.

11. Technical references.

11.1. This arboricultural report is based on the following primary technical references:

- British Standards Institution (2012) BS 5837: Trees in relation to design, demolition, and construction – Recommendations.
- National Joint Utilities Group (2007) Volume 4, Issue 2: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees.
- British Standards Institution (2010) BS 3998 Recommendations for tree work.

Limitations

12. Survey.

12.1. The inspection was carried out from ground level only and relates only to arboricultural aspects. All visual observations and recommendations relate to the condition of the trees on the day of

the survey. Any unusual weather conditions, changes in soil, soil levels and changes to surroundings may result in a dramatic change in the trees health.

13. Time limit.

13.1. Due to the changing nature of trees and other site circumstances, this report and any recommendations made are limited to a 24-month period. Any alteration to the site and any development proposals could change the current circumstances and may invalidate this report and any recommendations made.

14. Tree health.

14.1. Trees are dynamic structures that can never be guaranteed 100% safe: even in good condition they can suffer damage under average conditions. Regular inspections can help to identify potential problems before they become acute.

15. Justification of works.

15.1. Where management action / tree surgery is recommended, this is based on maximizing the tree's safe useful life expectancy (SULE), given its current situation or the safety of persons and surrounding targets. A lack of recommended work does not imply that a tree is safe and likewise it should not be implied that a tree would be made safe following the completion of any recommended work.

16. Buildings.

16.1. This report does not consider the structural condition of existing buildings, nor the impact of existing trees on their foundations. If there are concerns over such matters the advice of a structural engineer should be sought.

Arboricultural Implications Assessment

17. Summary of the impact on trees.

17.1. I have assessed the impact of the proposal on the trees / groups by the extent of disturbance in and around the RPAs and the current and future canopy height and spread. All the trees / groups that may be affected by the development proposal are listed in table 1.

Table 1: Summary of the trees / groups that may be affected by the development on this site if the current proposed plans are implemented.

Impact	Reason	Important trees		Unimportant trees		Total number of trees to be removed per category
		A	B	C	U	
Trees / groups to be removed	Good arboricultural management regardless of development			n/a	Ash trees within G002	0 Trees 1 Groups 0 Hedges
	Building construction, new surfacing, and / or, proximity	n/a	n/a	n/a		0 Trees 0 Groups 0 Hedges
Total number of trees to be removed per category		0 Trees 0 Groups 0 Hedges	0 Trees 0 Groups 0 Hedges	0 Trees 0 Groups 0 Hedges	0 Trees 1 Groups 0 Hedges	

Impact	Reason	Important trees		Unimportant trees		Total number of trees to be retained per category
		A	B	C	U	
Tree / group that may be adversely affected through disturbance to RPAs or canopy due to removal of existing surfacing / structures / landscaping and or installation of new surfacing / structures / landscaping	Protect tree with protective fencing only	n/a	n/a	T001		1 Trees 0 Groups 0 Hedges
	Protect tree with protective fencing and ground protection / engineering solutions within RPA	n/a	G003	n/a		0 Trees 1 Groups 0 Hedges
Total number of trees to be retained per category needing protection		0 Trees 0 Groups 0 Hedges	0 Trees 1 Groups 0 Hedges	1 Trees 0 Groups 0 Hedges		
*Note - Any trees / groups not mentioned above will be unaffected by this development proposal						

18. Category A and B trees to be removed.

18.1. There are no category 'A' trees located on or immediately adjacent to the site that are to be removed.

18.2. There are no category 'B' trees located on or immediately adjacent to the site that are to be removed.

19. Category A and B trees that may be adversely affected through RPA disturbance.

19.1. There are no retained category 'A' trees located on or immediately adjacent to the site that may be adversely affected through RPA and canopy disturbance.

19.2. One retained category 'B' group of trees may be adversely affected by site activities. The reason for this is:

- Due to proximity construction of the access driveway.

19.3. It should be noted that the trees on site are starting to show some slight imperfections and on a sliding scale, are closer to be a category 'C' tree than a category 'A' tree.

19.4. These trees are considered important for retention and have potential to contribute to amenity, so any adverse impacts on them should be minimised. I have reviewed the situation carefully and my experience is that these trees could be successfully retained without any adverse effects if appropriate protective measures are properly specified and controlled through a detailed Arboricultural Method Statement (AMS).

20. Category C trees to be removed.

20.1. There are no category 'C' trees located on or immediately adjacent to the site that are to be removed.

21. Retained category C trees that may be adversely affected through RPA disturbance.

21.1. One category 'C' tree has the potential to be damaged but is considered to have limited potential for long term retention. As such it is considered unworthy of influencing any layout. However, it is proposed for retention, and so special precautions will be necessary to ensure that any adverse impact is minimized. These are set out in more detail in section 4 of this report. Although this tree is proposed for retention, I believe it is not important in the overall planning context and any risk of damage to it should not influence the determination of this application.

22. Category U trees.

22.1. Any trees that have been given a category 'U' rating should be removed regardless of any development works being undertaken, the reason for removal will be due to structural or physiological defects or in line with good arboricultural management. Further notes are available in the survey schedule. ****Note – the Ash trees in G002 are not under the ownership of the client, the landowner must be notified of these recommendations as the trees are dangerous with the potential for failure.**

23. Effects of new buildings on amenity value on or near the site.

23.1. The effect of the new construction on this site has been assessed and have been found not to have any significant effect on the amenity value of the remaining trees on site.

24. Below ground constraints

24.1. The zone of influence has been determined using the calculation outlined in Table 2, of section 5.2.2 of BS 5837:2012 Trees in relation to design, demolition, and construction - Recommendations. This calculation utilises the diameter of the trunk, at a height of 1.5m from the surrounding ground level; and calculates the root protection area (RPA) by multiplying the diameter by a value of 12; the result is then used to calculate the total area (m2) of the RPA. The calculations are illustrated in the tree survey data in Appendix 'D'.

24.2. No construction of foundations or the installations of services are to take place within any retained Root Protection Area (RPA). Protective fencing, and permanent ground protection will still be required to protect the retained trees as per the tree protection plan (TPP).

24.3. The proposed driveway will require the use of a cellular confinement system to reduce the loading onto the soil structure without any removal of soil / tree roots. This area is to be constructed without soil compaction or soil stripping and laid in accordance with the Arboricultural Method Statement.

24.4. **Important** - The driveway entrance with the use of a cellular confinement system will need to be the first phase of the construction process this will allow site access of construction vehicles to facilitate the groundworks without causing damage to the tree's rooting system. No vehicle access to the site shall occur until this is implemented.

25. Above ground constraints

25.1. There is no development encroachment into the canopy areas of any retained trees on or off site, therefore no conflict with above ground constraints is foreseen with the planned proposal. Protective fencing will still be required to protect the retained trees as per the tree protection plan (TPP).

25.2. The canopies of G003 will require to be raised to give 3 metre clearance by removal of secondary tertiary branches from the underside of the main branch structure where they extend over the proposed driveway to allow vehicular access for construction and homeowner access once the development is completed.

25.3. Pruning will be required. All tree surgery works will be undertaken prior to construction activity and in accordance with the Arboricultural Method Statement.

26. Construction processes of the proposed development

26.1. Development processes that lead to soil compaction in tree rooting zones and physical damage to trees can adversely affect long-term tree health. This can lead to unnecessary tree loss if not controlled properly on site during the demolition of a building and then the construction phases that follow.

26.2. No access to the RPAs of any retained tree will be permitted before or during construction activity unless the RPA falls within an already existing hard standing, road / tarmac or protected with suitable ground protection measures. This will limit the risk of contractors or machinery causing damage to root, trunk, and low branches.

26.3. The processes of construction are unlikely to have a detrimental effect upon the health of the retained trees assuming recommendations made in this report are always adhered to by the contractors e.g., the positioning of a stout fence between the retained trees construction activities is placed prior to commencement of works and remains intact and in position throughout the duration of the construction activities.

26.4. Prior to any construction activity on site the driveway will be constructed. This driveway is to be constructed without soil compaction or soil stripping and laid in accordance with the Arboricultural Method Statement appendix 'H'.

27. Modifications proposed to accommodate trees

27.1. The siting of the development dispenses with a need to modify building construction to accommodate retained trees. The retained trees are far enough away from the siting of the dwellings to permit light infiltration to the windows. This will negate the need for subsequent calls for tree pruning due to shading.

28. Infrastructure requirements – highway visibility, lighting, CCTV, services etc

28.1. The installation of services within the rooting zones of trees can have a large detrimental impact on the long-term survival of retained trees leading to their unnecessary loss or root failure in high winds.

28.2. No services are to be installed within any tree RPA.

28.3. Any retained trees on site do not have any impact on highway visibility.

28.4. Undisclosed sighting of above ground services, CCTV cameras, electrical sub-stations, refuse stores, lighting and other infrastructure requirements can lead to unnecessary pruning of tree crowns or root loss during or post development. There are no such developments planned to take place adjacent or within the RPA of any retained trees.

29. Proximity of trees to structures.

29.1. With the impact of trees on buildings, and vice versa, allowances for future growth have all been considered in the sighting of the new dwelling. Tree size, future growth, light / shading, leaf, and fruit nuisance etc. have received due attention and are not considered to be a significant issue. This is due to the distance of the retained trees from the development.

29.2. The structure/s have been placed outside of the RPAs of retained tree/s and therefore exceeds the recommendations of BS 5837:2012 Trees in relation to design, demolition, and construction - Recommendations.

29.3. Leaf-fall onto the roofs has been highlighted to the client and accept this issue, leaf guards in the gutters are recommended to minimise the risk of rainwater blockages.

30. Protection of retained trees

30.1. The successful retention of trees depends on the protection and the administrative procedures to ensure those protective measures remain in place whilst there is an unacceptable risk of damage. An effective means of doing this is through an arboricultural method statement that can be specifically referred to in a planning condition. An arboricultural method statement for this site is included in this report.

31. Mitigating tree loss / New planting.

31.1. No tree loss will take place because of the development of the site and as a result no replanting will be required on this site as part of a planning condition.

32. Summary.

32.1. At the time of the tree survey no trees require removal solely on the grounds of good tree management within the clients' boundaries. **Note – the Ash trees in G002 are not under the ownership of the client, the landowner must be notified of these recommendations as the trees are dangerous with the potential for failure.

32.2. As a result of the development and site activities, no additional trees will need removing.

32.3. All the significant boundary tree cover located on the site will remain intact.

32.4. The construction activity and proposed changes may adversely affect further trees if appropriate protective measures are not taken. However, if adequate precautions to protect the retained trees are specified and implemented through the arboricultural method statement included in this report, the development proposal will have no adverse impact on the contribution of trees to local amenity or character.

Other Considerations

33. Trees outside the property boundaries.

33.1. Any trees that are in adjacent properties are effectively out of the control of the client / landowner. It will not be possible to easily carry out any recommended works without the full co-operation of the tree owners. The implications of non-cooperation require legal interpretation and are beyond the scope of this report. By common law, branches from trees on adjacent properties extending over boundaries can be pruned back to the boundary line without the permission of the owners. However, the material belongs to the tree owner and the same guidance on statutory controls applies as.

34. Implementation of works.

34.1. All tree works should be carried out to BS 3998 Recommendations for Tree Work as modified by more recent research. It is advisable to select a contractor that has appropriate qualification and insurance to carry out the required works. Additional guidance can be obtained from the Arboricultural Association.

Arboricultural Association The Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire GL10 3DL, UK	Tel: Email: Website: Fax:	+44 (0)1242 522152 admin@trees.org.uk www.trees.org.uk/contractors.htm +44 (0)1242 577766

35. Local Arboricultural Contractors.

35.1. If requested, I can provide a list of reputable arboricultural contractors that have carried out work on previous projects.

36. Safety.

36.1. Tree works can be a hazardous profession, so it is important that all operatives have the necessary and relevant training, health and safety policy and valid forms of insurance.

37. Statutory wildlife obligations.

37.1. The below references provide statutory protection to birds, bats and other species that inhabit trees. Please note that GM Tree Consultants are not responsible for the content contained in the links or the availability of the above resources.

- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 https://www.legislation.gov.uk/ukdsi/2019/9780111176573

- The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 https://www.legislation.gov.uk/ukpga/2000/37/contents

37.2. All tree work operations are covered by these provisions and advice from an ecologist must be obtained before undertaking any works that might constitute an offence.

38. Future considerations.

38.1. Any remaining trees should be inspected on a regular basis by a qualified arboricultural consultant and should not exceed a 5-year interval.

Arboricultural Method Statement: Introduction

39. Terms of reference.

39.1. The arboricultural implications assessment identified the impact on trees and how that affects local character. The following sections are an arboricultural method statement setting out management and protection details that must be implemented to secure successful tree retention.

39.2. It assumes that the minimum general standards for development issues are those set out in:

- British Standard 5837:2012 Trees in relation to design, demolition, and construction – Recommendations.
- The National Joint Utilities Group (2007) Volume 4, Issue 1: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees.
- British Standards Institution (2010) BS 3998 Recommendations for tree work.

39.3. I have used my arboricultural expertise to interpret these references in the context of evolving good practice and the specific circumstances on this site.

40. Tree Protection Plan (TPP):

40.1. The Tree Protection Plan in Appendix 'D' is illustrative and based on the site visit and report. This plan can only be used for dealing with the tree issues and all scaled measurements must be checked against the original submission documents. The precise location of all protective measures must be confirmed at the pre-¬commencement meeting before any demolition, site preparation or construction activity starts. The TPP shows all existing trees on site with their corresponding colours indicating:

- Tree classification.
- Trees to be retained.
- Trees to be removed - identified with a broken red line.
- Protective fence positions therefore the Construction Exclusion Zones (CEZ).
- Any root protection area outside the protective fencing where special precautions must be taken.

Tree protection on site

41. Construction Exclusion Zone.

41.1. The Construction Exclusion Zone (CEZ) required by the current edition; BS5837; (2012) Trees in relation to design, demolition, and construction - Recommendations; relates to the stem diameter of each tree when measured at a height of 1.5m from ground level, the values indicate the area of soil around the base of the tree to be retained undisturbed. The CEZs are always to be afforded protection and will be protected by fencing and /or ground protection This area should be protected with vertical barriers and considered sacrosanct. Signs should be erected on the fencing to indicate that the area is a Construction Exclusion Zone (CEZ). No works will be undertaken within any CEZ that causes compaction to the soil or severance of tree roots.

42. Protective Fencing.

42.1. Illustrative guidance for fencing design based on BS 5837 recommendations is included as Appendix 'F'. The location of the fencing and the RPAs is illustrated on the TPP as set out on the plan key.

42.2. The precise location of the fencing must be agreed with the council on site before any development activity starts e.g., before any materials or machinery are brought on site, development or the stripping of soil commences.

42.3. The fence will have signs attached to it stating that this is a Construction Exclusion Zone and that NO WORKS ARE PERMITTED WITHIN THE FENCE OR GROUND PROTECTION. The protected fence may only be removed following completion of all construction works.

42.4. There are no new areas of planting to be protected during the construction phase.

42.5. No access to the site from any other part of the property, other than the main entrance that will be constructed along the southern boundary of the site will be permitted for construction traffic or delivery of supplies.

43. Permanent ground protection (left in-situ after construction):

43.1. Any RPAs outside protective barriers where construction will occur (for example a new road) must be covered in ground protection, so that there is no risk of damage from construction activities and movement over the tree roots once the development has finished.

43.2. Due to the nature of the site and the intended method of construction, permanent ground protection will need to be established using a three-dimensional cellular subbase product or another method designed by an engineer and passed by the local planning authority. *If implemented as a planning condition.

43.3. These proposals have been discussed and verbally agreed by the arboricultural officer.

43.4. This area will have signs attached to it stating that this is a Construction Exclusion Zone and that NO WORKS ARE PERMITTED WITHIN THE FENCE OR BELOW THE GROUND PROTECTION.

43.5. This product will be installed as identified on the Tree Protection Plan (TPP), prior to the commencement of any construction activity.

- The cellular confinement system will be placed on top of existing ground levels, (subject to limited clearance of 50mm to remove any spoil) before being filled with 40/20mm angular stone as per the manufacturers' specification.
- A geotextile fabric will then be placed in position before a temporary aggregate surface is deployed to act as a wearing course for the construction phase of the project.
- Once all construction activities are complete this temporary wearing course will be removed, to allow for the installation of a permeable final wearing course.

- Edge retention will be custom designed to avoid any significant excavation into existing soil levels either using pre-formed edging or wooden boards secured by metal pins or wooden pegs.
- Illustrative specifications for special surfacing are included as Appendix 'H' and installation methods should accord with guidance set out in Appendix 'I'.

44. Temporary ground protection (removed after construction):

44.1. Any RPAs outside protective barriers must be covered in ground protection where movement on site will occur either by people or vehicles, so that there is no risk of damage from construction activities.

44.2. Due to the nature of the site and the intended method of construction, temporary ground protection will not be needed.

45. Foundation design

45.1. No special foundation designs in relation to their interaction with trees will be needed for this development.

46. Precautions when working in RPAs / CEZ.

46.1. Any work in RPAs must be done with care as set out in Appendix 'H' and with appropriate reference to the sections above.

46.2. If temporary access is required to a CEZ then access may only be gained after consultation with the Local Planning Authority and following placement of materials such as geo-textile fabrics that will spread the weight of any vehicular load and prevent compaction to the soil.

46.3. No temporary access into RPAs / CEZ will be required on this site.

Additional tree related site works

47. Tree work recommendations.

47.1. Tree work proposals based on my preliminary inspection are set out in the management recommendations column of the tree schedule in Appendix 'D'. The location of each tree is shown on Tree Protection Plan (TPP) and all trees to be removed are indicated with a red dashed crown outline.

48. Site storage, cement mixing and washing points.

48.1. All site storage areas, cement mixing and washing points for equipment and vehicles must be outside CEZ unless otherwise agreed with the council.

48.2. Where there is a risk of polluted water runoff into CEZ, heavy-duty plastic sheeting and sandbags must be used to contain spillages and prevent contamination.

48.3. No storage or discharge of any materials likely to be injurious to the tree, i.e., oil bitumen, cement within 10m of a tree stem.

48.4. No fires are to be lit under or within 20m of a tree stem and will consider fire size and wind direction so that, (where wind or radiated heat may be a problem) no flames come within 5m of any foliage or canopy of any retained tree.

48.5. No signs, cables or telephone wires or other services etc. are to be attached or fixed to trees.

48.6. Care must be exercised when using cranes or similar equipment near the canopies of trees. Note: No high-sided vehicles or cranes have access to the site therefore their movement on the site is not an issue.

48.7. No retained trees are to be used as anchorage for equipment used to remove stumps or other trees, nor for any other purpose.

49. Protection of soil in areas for proposed new planting.

49.1. No new tree planting is proposed on this site.

50. Access Details.

50.1. There is no requirement for any special measures related to the retained trees as all access for construction vehicles will be outside of the CEZ.

50.2. Monitoring of the site access for the height of all vehicles, particularly high sided vehicles and cranes must be controlled as to omit any damage to the trees upon entering and exiting the site. The designated arboricultural consultant must be contacted if this is seen to be an issue.

51. Site Gradients.

51.1. No significant alterations of soil levels will take place within any CEZ of protected trees.

52. Demolition.

52.1. Demolition of the existing Water Tower and Valve House on the north of the site will take place as the first phase of the construction process. This is not foreseen to impact on any retained trees.

52.2. Prior to demolition activity, protective fencing must be installed and constructed as per BS 5837 2012 and be fit for the purpose of excluding any construction activity. The location of the fencing can be seen on the Tree Protection Plan (See appendix ‘C’). This fencing forms part of the CEZ.

53. Hard Surfaces.

53.1. Hard landscaping is scheduled to be carried out in a CEZ. Control measures detailed in Appendix “H” must be followed.

54. Soft landscaping.

54.1. Soft landscaping is scheduled to be carried out in a CEZ. Control measures detailed in Appendix "H" must be followed.

55. Use of Herbicides.

55.1. If any herbicide is used within the RPA of a retained tree, it shall be systemic, spot applied and mixed according to manufacturer's recommendations.

56. On site Monitoring Regime.

56.1. All operations will be monitored by the main contractor.

57. Use of subcontractors

57.1. The main contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any tree on site.

58. Contractors Parking.

58.1. Located within the site compound and outside of all RPA's, therefore not impacting on any trees or protective measures.

59. Site Huts and Toilets.

59.1. Located within the site compound and outside of all RPA's, therefore not impacting on any trees or protective measures.

60. Emergency Procedures.

60.1. Should any problem or emergency that relates to any tree or its protection arise, work in that area is to cease and the area is to be secured against the risk of further damage or possible injury to any person or property.

60.2. Once the area is secured both the Consulting arborist and the LPAs tree officer are to be informed so that appropriate action may be taken to remedy the situation.

60.3. Water is readily available on site and will be used to flush spilt materials through the soil and avoid contamination to tree roots. At the time of any spillage the main contractor will contact an arboriculturist for advice.

61. Remedial Tree Works.

61.1. Tree works including remedial pruning will be undertaken prior to any demolition / construction on site and the erection of protective fencing or ground protection to form the CEZ. All tree works are to be carried out in accordance with British Standard 3998: 2010 Recommendations for Tree Work.

62. Responsibilities.

62.1. It will be the responsibility of the main contractor to ensure that the planning conditions attached to planning consent are always adhered to and that a monitoring regime regarding tree protection is adopted on site.

62.2. The main contractor will be responsible for contacting the Local Planning Authority at any time issues are raised related to the trees on site.

62.3. If at any time pruning works are required permission must be sought from the Local Planning Authority first and then carried out in accordance with BS 3998: 2010 British Standard Recommendations for Tree Work.

62.4. The main contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective fences will remain in position until completion of ALL construction works on the site.

62.5. The fencing and signs must always be maintained in position and checked on a regular basis by an onsite person designated that responsibility.

Specifications for new tree planting

63. Site preparation, supply, and planting of trees.

63.1. No new tree planting will be required on this site.

64. Maintenance.

64.1. No maintenance will be required due to no new trees being planted on site.

65. Root barriers / deflectors.

65.1. No root barriers will be required for this site.

66. Structured tree soil.

66.1. No structured tree soil will be required as there are no trees to be planted on this site.

Programme of tree protection and supervision

67. Overview.

67.1. Tree protection cannot be reliably implemented without arboricultural input. The nature and extent of that input vary according to the complexity of the issues and the resources available on site. An arboricultural consultant must be instructed to work within this framework to oversee the implementation of the protective measures and management proposals set out in this arboricultural method statement.

68. Supervision and the discharge of planning conditions.

68.1. Arboricultural planning conditions cannot be reliably or effectively discharged without supervision by an arboricultural consultant. These supervisory actions must be confirmed by formal letters / emails circulated to all relevant parties, including the council. These permanent records of each site visit will accumulate to provide the proof of compliance and allow conditions to be discharged as the development progresses. The developer must instruct an arboricultural consultant to comply with the supervision requirements set out in this document before any work begins on site.

69. Phasing of arboricultural input.

69.1. Trees can only be properly budgeted for and factored into the developing work programme if the overall project management takes full account of tree issues once consent is confirmed. An arboricultural consultant must be involved in the following phases of the project management.

70. Administrative preparation before work starts on site.

70.1. It is normal for a development proposal to vary considerably from the expectations before consent as the detailed planning of implementation evolves. The early instruction of an arboricultural consultant ensures that tree issues are factored into the complexities of site management and can often help ease site pressures through creative approaches to tree protection. Pre-commencement discussions between the arboricultural consultant and the developer's team are an effective means of project managing the tree issues to maximize site efficiency within often difficult constraints.

71. Pre-commencement site visit:

71.1. A pre-commencement meeting must be held on site before any of the site preparation or construction work begins. This must be attended by the site manager, the arboricultural consultant and a 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. Any clarifications or modifications to the consented details must be recorded and circulated to all parties in writing. This meeting is where the details of the programme of tree protection will be agreed and finalised by all parties, which will then form the basis of any supervision arrangements between the arboricultural consultant and the developer.

72. Site supervision.

72.1. Once the site is active, the arboricultural consultant 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. The arboricultural consultant's initial role is to liaise with developer and council to ensure that appropriate protective measures are designed and in place before any works start on site. Once the site is working, that role will switch to monitoring compliance with arboricultural conditions and advising on any tree problems that arise or modifications that become necessary.

73. Site management.

73.1. It is the developer's responsibility to ensure that the details of this arboricultural method statement and any agreed amendments are known and understood by all site personnel. Copies of the agreed documents must always be kept on site, 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.

How to use this report in the planning process

74. Limitations.

74.1. It is common that the detail of logistical issues such as site storage and the build programme are not finalized until after consent is issued. As this report has been prepared in advance of consent, some of its content may need to be updated as more detailed information becomes available once the post-consent project management starts. Although this document will remain the primary legal reference in the event of any disputes, some of its content may be superseded by authorised post-consent amendments.

75. Suggestions for the effective use of this report.

75.1. The Arboricultural Method Statement of this report, including the relevant appendices, is designed as an enforcement reference. It is constructed so the council can directly reference the detail in a planning condition, Referencing the report by name and relating conditions to specific subsections is an effective means of reducing confusion and facilitating enforcement in the event of problems during implementation. More specifically, the following issues should be directly referenced in the conditions for this site:

1. **Pre-commencement meeting.**
2. **Fencing.**
3. **Ground protection.**
4. **Installation of new surfacing.**
5. **Programming of tree protection.**
6. **Arboricultural supervision.**

75.2. Each of the above matters must be supervised by an arboricultural consultant and the relevant conditions can only be discharged once that supervision has been confirmed in writing to the council, normally via email. This is intended to act as a summary quick reference within the council file to help keep track of the progress of the supervision.

Gary Marsden FDSc Arb M.Arbor.A

APPENDIX ‘A’

Site Location aerial photo taken from Google Maps showing site location.



APPENDIX 'B'

Tree survey index.

Tree Locations:	Tree Number:
This has been plotted using GPS to an accuracy of <1m and / or using permanent land features to measure accurate offsets with a laser distancing device.	Each surveyed feature is assigned a number prefixed by a 'T' for individual trees, 'G' or 'L' for groups / lines of trees and 'H' for hedgerows. It is used to locate the tree in the data survey and the relevant position on the plan.
Species:	DBH calculations
The species identification is based on visual observations and the common English name of what the tree appeared to be is listed first. In some instances, it may be difficult to identify a tree quickly and accurately without further detailed investigations.	The 3 first columns of figures calculate, the stem diameter rounded up to the nearest 25mm, the radius of the calculated RPA and the calculated overall area of the RPA all derived from the stem diameter @ 1.5m above ground level as per BS5837.
Number of stems:	Stem Diameter:
The number of main stems of each individual tree.	These figures relate to stem diameter in millimetres at 1.5m above ground level. This is measured using a girthing tape unless access is restricted.
Height:	Height of first branch and direction:
Overall height of tree recorded in meters.	Existing height in metres of the first significant branch above ground level and the direction of growth in relation to the 4 cardinal points (NSEW).
Height of canopy above ground level:	Crown Spread:
Existing height in meters of the canopy above ground level.	This is measured in meters taken at the four cardinal points (NSEW) to derive a representation of the crown.
Life stages:	Physiological Condition:
Described as young, semi-mature, mature, over-mature / veteran.	Described as good, fair, poor, dead and notes as needed.
Preliminary management recommendations:	Structural Condition:
Practical arboricultural operations that are suggested and described as needed.	Described as good, fair, poor, dead and notes as needed.
Remaining Contribution:	Tree Retention Category Grading:
Estimated remaining contribution in years: e.g., <10, 10+, 20+, 30+, 40+. This is based upon Jeremy Barrels system of 'SULE' (Safe Useful Life Expectancy).	U or A to C category grading as referenced from BS 5837:2012 Trees in relation to design, demolition, and construction - Recommendations. (See Table 1 in appendix 'F')

APPENDIX 'C'

Inserted site plans.

Inserted Tree Constraints Plan (TCP) showing all relevant tree information including:

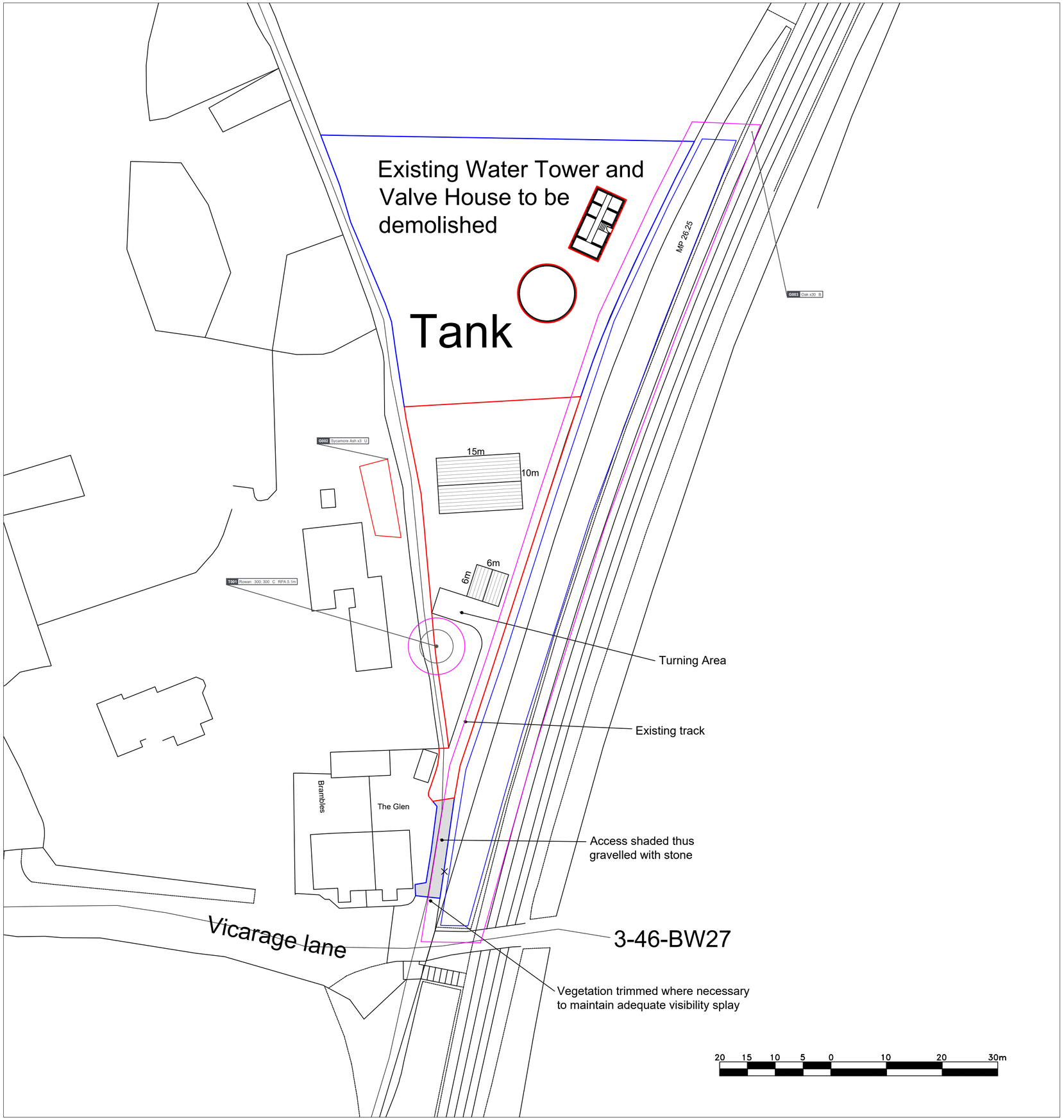
- Tree location
- Trees species
- Tree classification

Inserted Tree Protection Plan (TPP) showing all relevant tree information including:

- Tree classification.
- Trees to be retained
- Trees to be removed - identified with a broken red line
- Protective fence positions therefore the Construction Exclusion Zones (CEZ)
- Ground protection positions therefore the Construction Exclusion Zones (CEZ)
- Root protection area outside the protective fencing where special precautions must be taken.

Inserted Architect plans:

- Existing site layout
- Proposed site layout



1. Introduction

A follow up report with an arboricultural impact assessment (AIA) and arboricultural method statement (AMS) for the site will be required as part of the planning application process. This report contains the following information:

- A full tree survey compliant to the requirements of BS5837; (2012) Trees in relation to design, demolition, and construction - Recommendations, undertaken by a qualified arboriculturist.
- A plan to a suitable scale with a north point and showing tree survey information, retention categorisation and root protection areas, and tree height.

2. Qualifications and experience

I have based this report on my site observations and any provided information, and I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture.

3. Purpose of this report

This report primary purpose is to allow the design team to design relevant buildings / site layout while considering any impact this may have on the retained trees on site. Within this planning process, this report will be available for inspection by people other than tree experts, so the information is presented to be helpful to those without a detailed knowledge of the subject. A follow up report with an arboricultural impact assessment (AIA) and arboricultural method statement (AMS) for the site will be required.

4. Scope of this report

This report is only concerned with the prominent trees within or around the proximity of the site that could influence the development of this site. It takes no account of any trees outside this remit or any building structural issues. It includes a preliminary assessment based on the site visit and any documents provided. The survey is based upon information that was available at the time of the inspection. Further inspections are necessary over time to give a fuller picture of the health of trees.

5. Survey

The inspection was carried out from ground level only and relates only to arboricultural aspects. All visual observations and recommendations, relate, to the condition of the trees on the day of the survey. The trees have been assessed with the aid of a Nylon mallet for the purpose of detecting changes in resonance which may indicate that further investigation is required. Any unusual weather conditions, changes in soil, soil levels and changes to surroundings may result in a dramatic change in the trees health.

6. Time limit

Due to the changing nature of trees and other site circumstances, this report and any recommendations made are limited to a 24-month period. Any alteration to the site and any development proposals could change the current circumstances and may invalidate this report and any recommendations made.

7. Tree health

Trees are dynamic structures that can never be guaranteed 100% safe: even in good condition they can suffer damage under average conditions. Regular inspections can help to identify potential problems before they become acute.

8. Justification of works

Where management action / tree surgery is recommended, this is based on maximizing the tree's safe useful life expectancy (SULE), given its current situation or the safety of persons and surrounding targets. A lack of recommended work does not imply that a tree is safe and likewise it should not be implied that a tree would be made safe following the completion of any recommended work.

9. Buildings

This report does not consider the structural condition of existing buildings, nor the impact of existing trees on their foundations. If there are concerns over such matters the advice of a structural engineer should be sought.

10. Identification and location of the trees

I have illustrated the locations of the significant trees on the plan. These plan/s are for illustrative purposes only and it should not be used for directly scaling measurements. All the relevant information is contained within this report and the provided documents.

11. Trees outside the property boundaries:

Any trees that are in adjacent properties are effectively out of the control of the client / landowner. It will not be possible to easily carry out any recommended works without the full co-operation of the tree owners. The implications of non-cooperation require legal interpretation and are beyond the scope of this report. By common law, branches from trees on adjacent properties extending over boundaries can be pruned back to the boundary line without the permission of the owners. However, the material belongs to the tree owner.

12. Arboricultural Implication Assessment:

A detailed Arboricultural Implication Assessment (AIA), outlining the impact of proposal on trees by the extent of disturbance in RPAs and the encroachment of structures can by produced as an additional commission if required once a final design / layout has been agreed by the client.

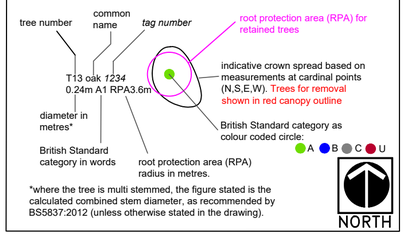
13. Arboricultural Method Statement

A detailed Arboricultural Method Statement (AMS), outlining the different stages and progression of construction is available as a further commission. This process should be undertaken once the final decision has been made on the proposed structure.

BS5837:2012 Cascade chart for tree quality assessment

Category & Definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention				
Category U				
Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse,including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality (Note: Category U trees can have existing or potential conservation value which it might be desirable to preserve)			Red on plan RGB 127,0,0
Trees to be considered for retention				
	1. Mainly arboricultural qualities	2. Mainly landscape qualities	3. Mainly cultural values, including conservation	
Category A				
Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Light Green RGB 0,255,0
Category B				
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	Sky Blue RGB 0,0,255
Category C				
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	Grey RGB 091,091,091

Legend



*where the tree is multi stemmed, the figure stated is the calculated combined stem diameter, as recommended by BS5837:2012 (unless otherwise stated in the drawing).

TREE CONSTRAINTS PLAN

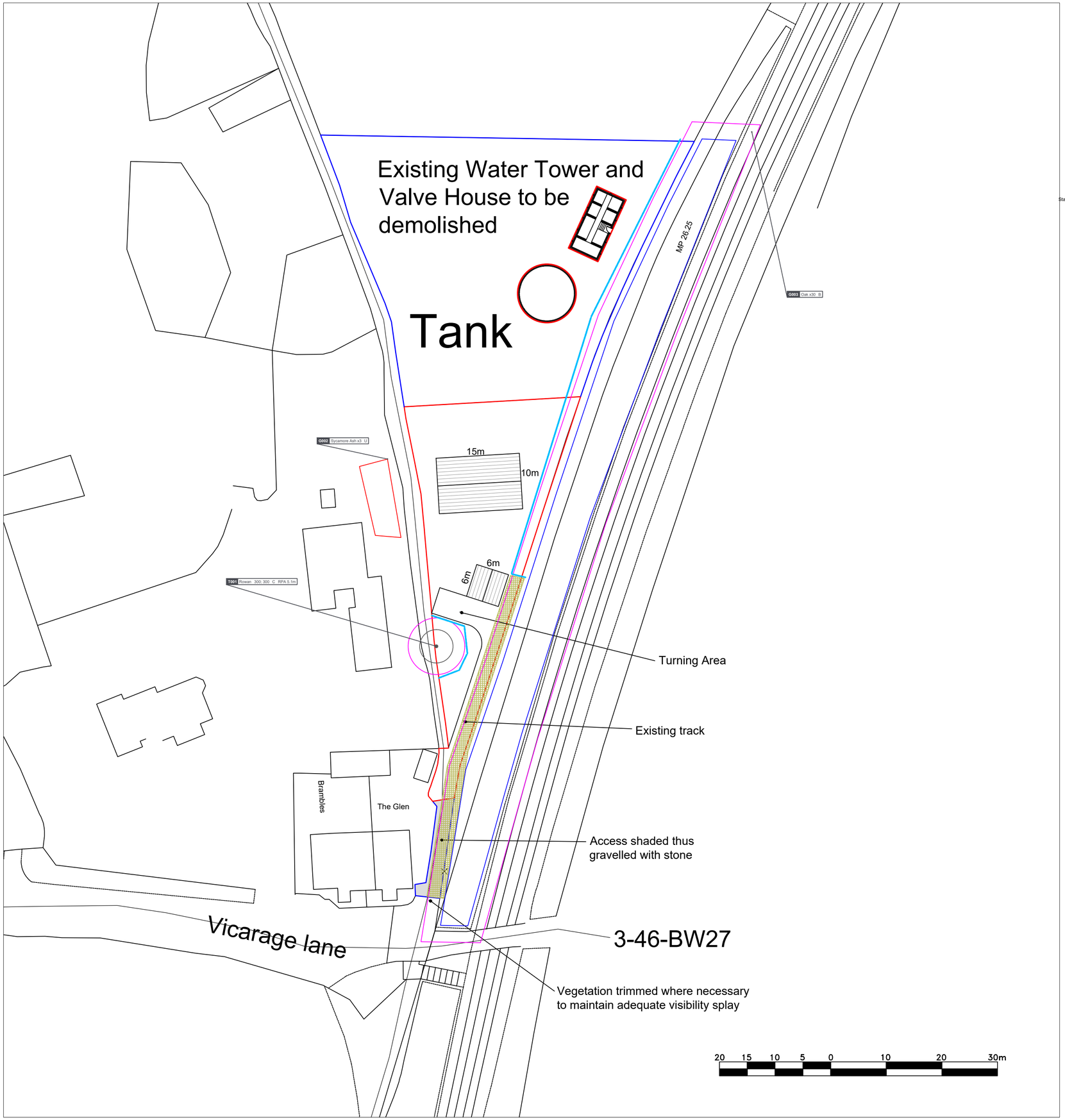
PROJECT:	Proposed self-build dwelling on land off Vicarage Lane, Wilpshire
JOB REF:	2326
FIGURE REF:	2326/TCP/001
DRAWN BY:	Gary Marsden
SCALE:	1:500 @ A2
DATE OF DRAWING:	12th May 2026
REVISION NUMBER:	1

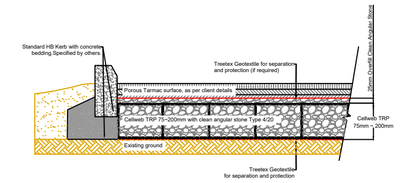
Drawing to be read in association with arboricultural impact appraisal and method statement. If in any doubt, details should be confirmed with project arboricultural consultant prior to commencement. Any work within root protection areas of trees should only commence following briefing from project arboricultural consultant.

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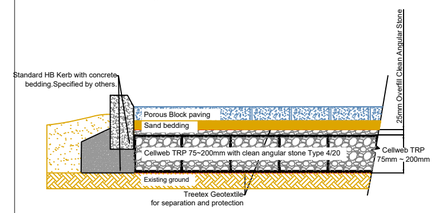
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16, Farfield Drive, Lower Darwen, Darwen, Lancashire, BB3 0RJ
Tel: 07761667384 Email: gary@gmtreeconsultants.co.uk
GMTREE CONSULTANTS
Arboricultural ASSOCIATION Professional Member

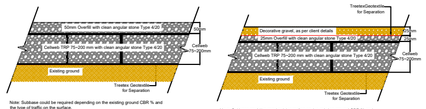




Note: Subbase could be required depending on the existing ground CBR % and the type of traffic on the surface.

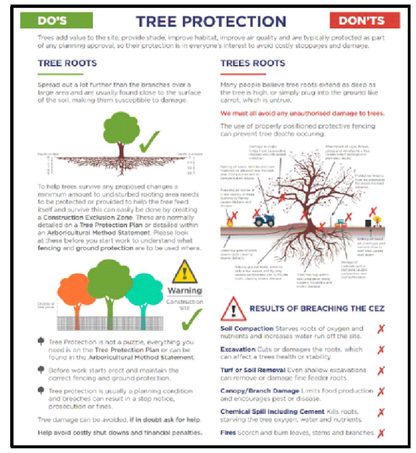


Note: Subbase could be required depending on the existing ground CBR % and the type of traffic on the surface.



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BS5837:2012 Cascade chart for tree quality assessment

Category & Definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention				
Category U				
Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse,including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve.			Red on plan RGB 127,0,0
Trees to be considered for retention				
	1. Mainly arboricultural qualities	2. Mainly landscape qualities	3. Mainly cultural values, including conservation	
Category A				
Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Light Green RGB 0,255,0
Category B				
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsymptomatic past wounds/defects and minor storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	Sky Blue RGB 0,255,255
Category C				
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	Grey RGB 091,091,091

Legend

tree number | common name | *tag number*

T13 oak *1234*
0.24m A1 RPA3.6m

diameter in metres*

British Standard category in words

root protection area (RPA) radius in metres.

root protection area (RPA) for retained trees

indicative crown spread based on measurements at cardinal points (N,S,E,W). Trees for removal shown in red canopy outline

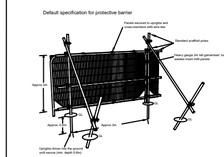
British Standard category as colour coded circle: A B C U

*where the tree is multi stemmed, the figure stated is the calculated combined stem diameter, as recommended by BS5837:2012 (unless otherwise stated in the drawing).

NORTH

Protective fencing to BS5837:2012. Refer to BS5837 figure 2 and figure 3 as appropriate.

Low impact surfacing will be required to install new access and/or parking areas within RPA to prevent root damage. Protective fencing may be relaxed to undertake operations following approval by project arborist and should be replaced once operation is completed. Refer to relevant sections of arboricultural impact appraisal and method statement.





TREE CONSTRAINTS PLAN

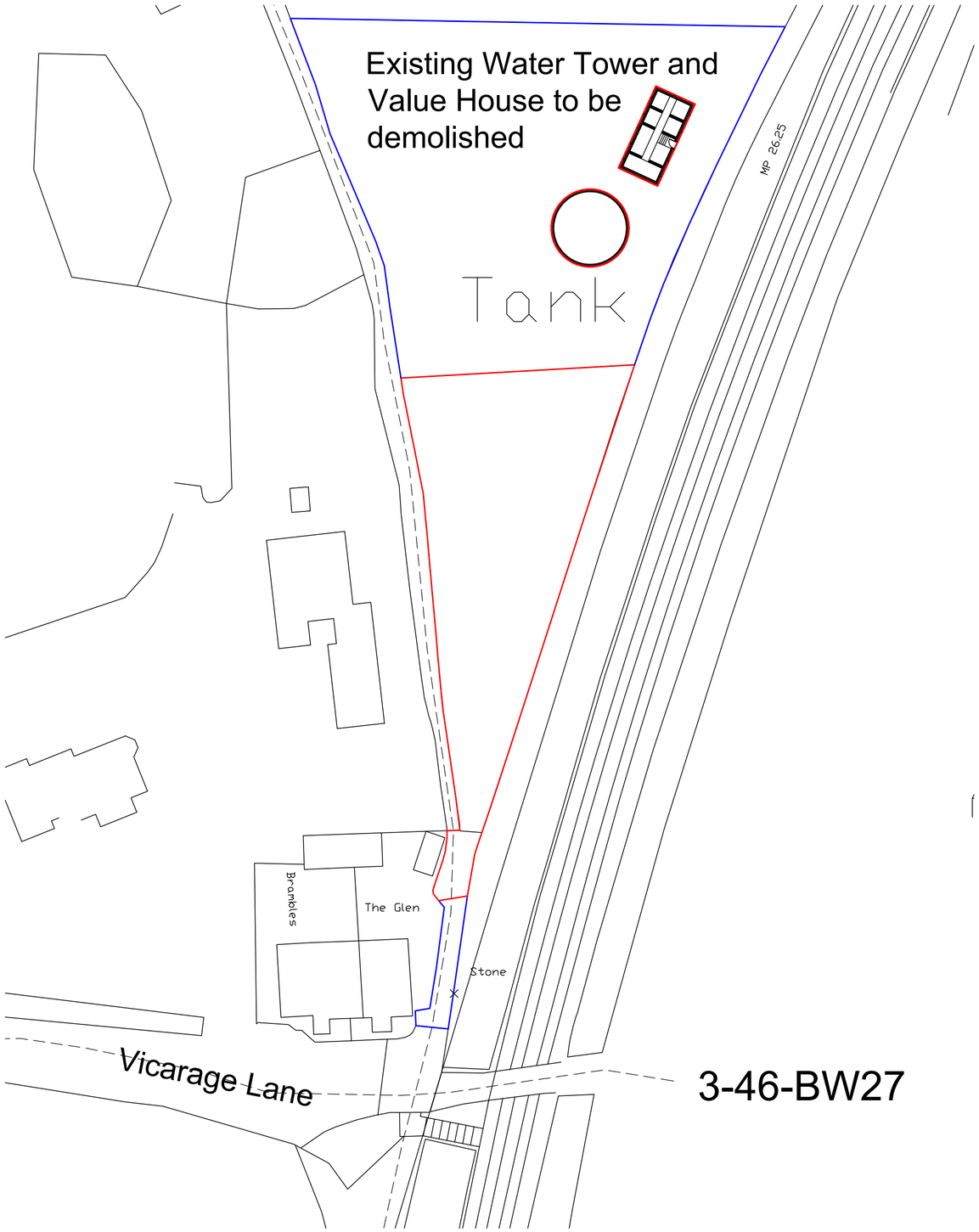
PROJECT:	Proposed self-build dwelling on land off Vicarage Lane, Wilpshire
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DRAWN BY:	Gary Marsden
SCALE:	1:500 @ A2
DATE OF DRAWING:	12th May 2026
REVISION NUMBER:	1

Drawing to be read in association with arboricultural impact appraisal and method statement. If in any doubt, details should be confirmed with project arboricultural consultant prior to commencement. Any work within root protection areas of trees should only commence following briefing from project arboricultural consultant.

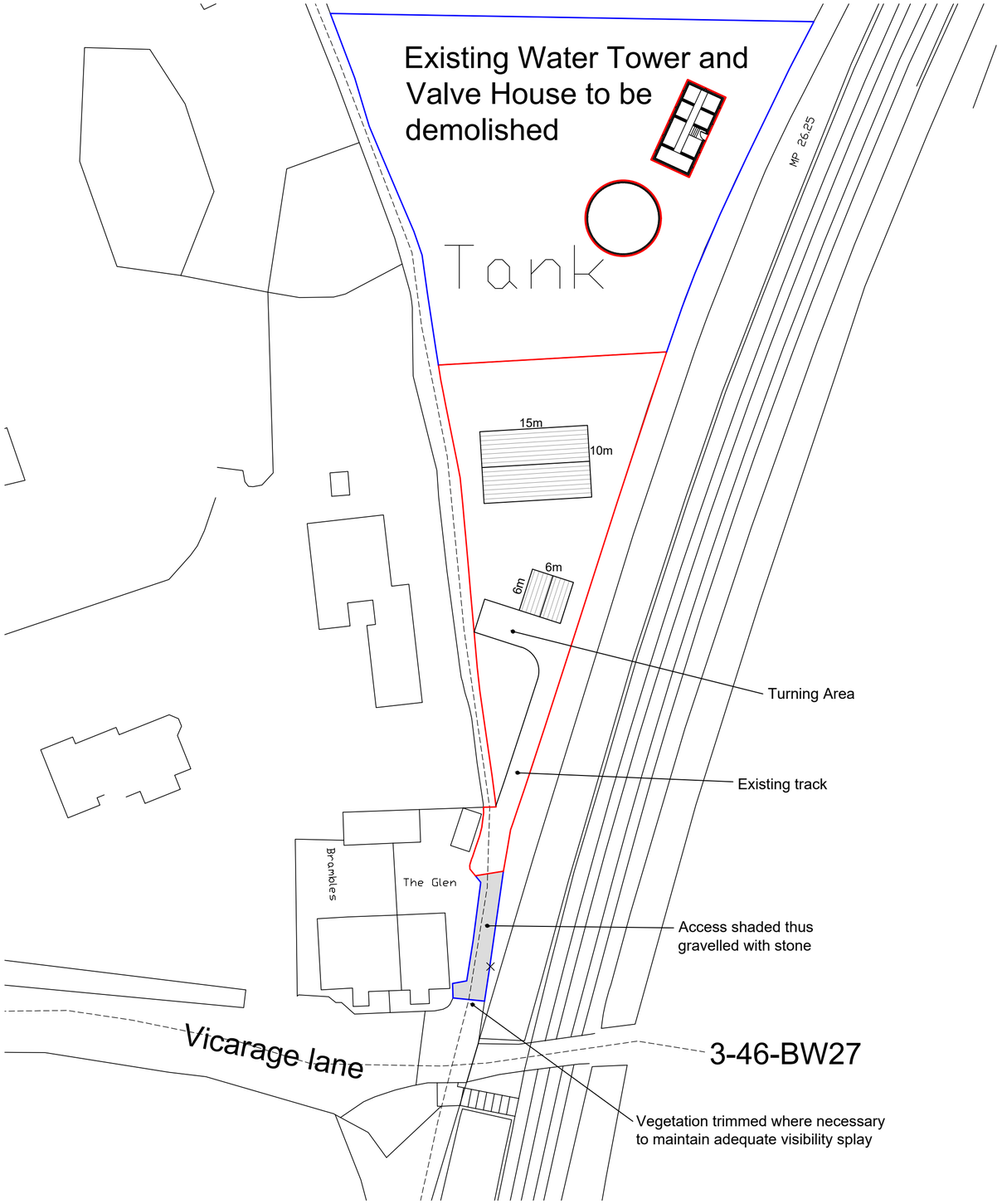
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16, Farfield Drive, Lower Darwen, Darwen, Lancashire, BB3 0RJ
Tel: 07761667384 Email: gary@gmtreeconsultants.co.uk
GMTREE CONSULTANTS
Arboricultural ASSOCIATION Professional Member



EXISTING
Site Plan



PROPOSED
Site Plan

Gary Hoerty Associates Chartered Surveyors
Suite 9 - Grindleton Business Centre
The Spinney
Grindleton
Clitheroe
Lancashire BB7 4DH

T: 01200 449700
Email: info@ghaonline.co.uk

Project: (Rid/1216/3795/GH)

Self-build dwelling and demolition of a water tower and valve house at:

Land off Vicarage Lane
Wilpshire
Blackburn
BB1 9HY

Title: Existing and Proposed Site Plans

Drawing No: Rid/1216/3795/01 **Drawn:** MP

Client: Mrs. M. Riding

Date: 09.03.2026 **Scale:** 1:500 @ A2

Amendments:

APPENDIX ‘D’

Tree survey data inserted including the calculations for the root protection zones.

- Initial tree survey data
- Root protection area calculations

Job Ref:	2326	Survey Date:	11 May 2026				Surveyor:		Gary Marsden		Site Address:		Vicarage Lane, Wilpshire				BS:5837 (2012) TREE SURVEY DATA	GMTREE CONSULTANTS		
Ref.	Species Name Common & (Botanical)	Structure	Num. Stems	Stem diameter(s) (mm)	Calculated Root Protection Area (radius in meters)	Height	Height of Canopy Above G/L (m)	Height of First Significant Branch (m)	First Significant Branch Direction (NSEW)	Crown Spread - NORTH (m)	Crown Spread - EAST (m)	Crown Spread - SOUTH (m)	Crown Spread - WEST (m)	Life Stage	Physiological Condition	Structural Condition	Pre Development Survey Notes	Pre Development Management Recommendations	Rem. Contrib.	Tree Quality Assessment Category
T001	Rowan *(Sorbus aucuparia)*	Tree	2	300	5.10	10.0	4.0	4.0	E	3.0	3.0	3.0	3.0	Semi Mature	Good	Good	_ The tree has no significant visual defects. Fungus: No visible fungus present at the time of inspection. Pests and Diseases: No visible pest or disease present at the time of inspection.	_ No work required at time of inspection.	20+ Years	C
G002	Sycamore *(Acer pseudoplatanus)* Ash x3 *(Fraxinus sp.)*	Group	4	500	0.00	16.0	3.0	4.0	N	5.0	5.0	5.0	5.0	Mature	Poor	Poor	_ Major deadwood >100 mm diameter. _ Disease / infection within canopy – comment. _ Tree under 3rd party ownership. Fungus: No visible fungus present at the time of inspection. Pests and Diseases: Ash Dieback Infection Level 4: 75% to 100%	_ Remove Ash trees to ground level for arboricultural management reasons.	<10 years	U
G003	Oak x30 *(Quercus sp.)*	Group	30	400	0.00	16.0	5.0	4.0	N	3.0	3.0	3.0	3.0	Semi Mature	Good	Good	_ The group of trees have no significant visual defects. _ Tree under 3rd party ownership. Fungus: No visible fungus present at the time of inspection. Pests and Diseases: No visible pest or disease present at the time of inspection.	_ No work required at time of inspection.	40+ Years	B

APPENDIX 'E'

Cascade chart showing tree retention categories exerted from: BS 5837:2012 Trees in relation to design, demolition, and construction – Recommendations.

Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
Trees unsuitable for retention (see Note)		
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve	RED
Trees to be considered for retention		
	1 Mainly arboricultural qualities / **2 Mainly landscape qualities** / **3 Mainly cultural values, including conservation**	
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue) / Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features / Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture	GREEN
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation / Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality / Trees with material conservation or other cultural value	BLUE
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories / Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits / Trees with no material conservation or other cultural value	GRAY

APPENDIX ‘F’

Illustrative specifications for tree protection:

Illustration of default specification for tree protective barrier, taken from BS 5837 2012 with an example of scaffold framework with ‘Heras’ fencing attached (Photo taken from within the CEZ)

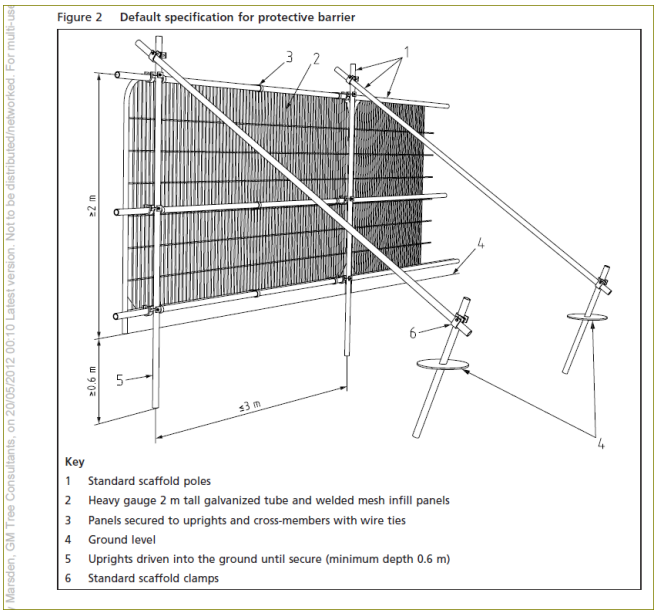


Figure 2 Default specification for protective barrier

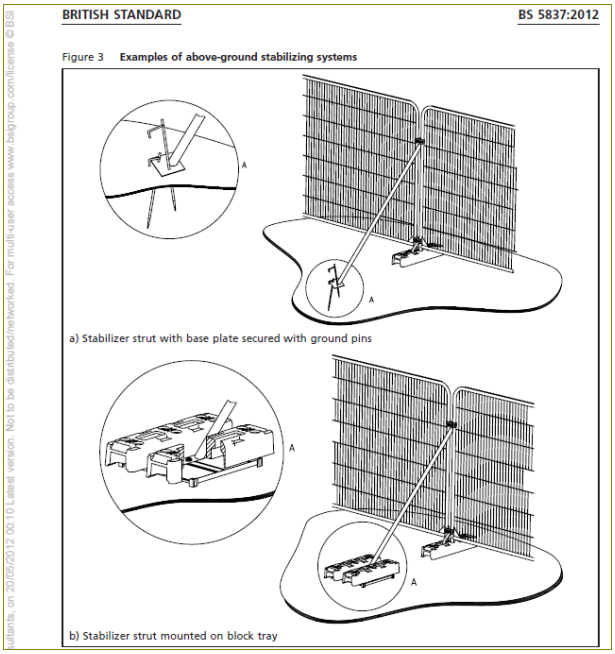
Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Marsden, GM Tree Consultants, on 20/05/2012 00:10 Latest version. Not to be distributed/networked. For multi-us



Illustration of specification for tree protective barrier without significantly penetrating the ground / surface, taken from BS 5837 2012 with an example of protective fencing where it is not safe to drive scaffold poles into the ground (Risk of striking underground cables / damaging surfacing)



BRITISH STANDARD BS 5837:2012

Figure 3 Examples of above-ground stabilizing systems

a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

ultants, on 20/05/2012 00:10 Latest version. Not to be distributed/networked. For multi-user access www.bsigroup.com/License © BSI



Illustrative specification for protective fencing located inside the Root Protection Zone with an example of ground protection for pedestrian access under scaffolding prior to 'Heras' fencing being attached to the scaffold framework; this will prevent access to CEZ (grassed area)

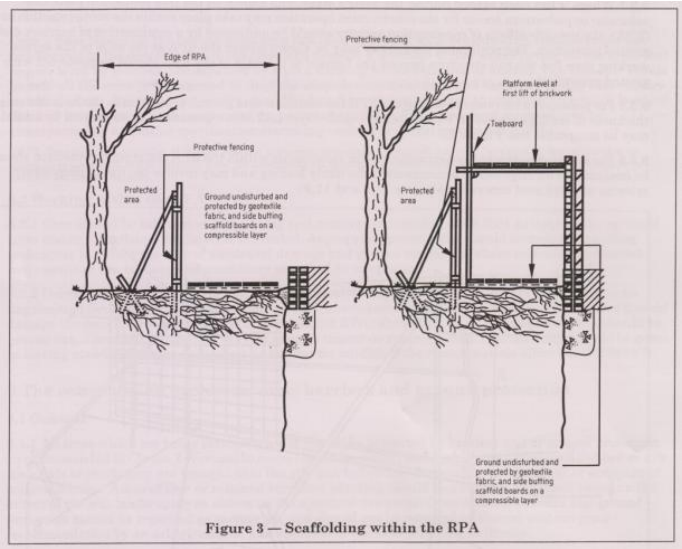
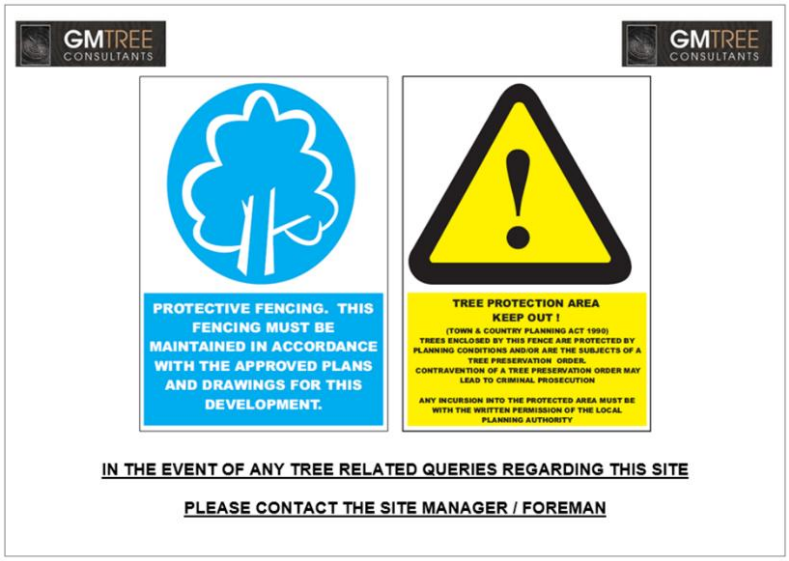


Figure 3 — Scaffolding within the RPA



Example of a warning / information sign to be fixed to the tree protection fencing.
*A PDF copy of this sign or a laminated version can be supplied if requested.
(Costs may be incurred for laminated version).





APPENDIX ‘G’

Illustrative specification for permanent ground surface protection measures and special surfacing within root protection areas.





Laying of geotextile fabric with the cellular confinement system pined in place.





Appropriate aggregates are back filled filling all the cells.





Geotextile fabric laid over filled cells then covered with temporary / permanent wearing course as per construction specifications.

Illustrative specification for temporary ground surface protection measures within root protection areas:

*Not included as temporary ground surface protection is not required on this site.

Inserted specification for foundation design measures within root protection areas:

*Not included as specification for foundation design measures within root protection areas is not required on this site.

APPENDIX 'H'

Site guidance for working in root protection areas (RPAs):

1. GENERAL GUIDANCE FOR WORKING IN RPAs:

What is the purpose of this guidance?

This guidance sets out the general principles that must be followed when working in RPAs. Where more detail is required, it will be supplemented by illustrative specifications in other appendices in this document. Before work starts on site, the purpose of this guidance is to demonstrate to the council that tree protection issues have been properly considered and to provide a written record of how they will be implemented. Once the site works start, this guidance is specifically for the site personnel to help them understand what has been agreed and explain what is required to fully meet their obligations to protect trees. All personnel working in RPAs must be properly briefed about their responsibilities towards important trees based on this guidance.

What are RPAs?

RPAs are the areas surrounding important trees where disturbance must be minimised if they are to be successfully retained. All RPAs close to the construction area are illustrated on the tree protection plans to accompany this guidance. Damage to roots or degradation of the soil through compaction and/or excavation is likely to cause serious damage. Any work operations within RPAs must be carried out with great care if trees are to be successfully retained.

When should this guidance be followed?

Anyone entering an RPA must follow this guidance if important trees are to remain unharmed. Anyone working in an RPA must take care to minimize excavation into existing soil levels and limit any fill or covering that may adversely affect soil permeability. There are two main scenarios where this guidance must be followed when entering and working within an RPA:

- Removal of existing surfacing / structures and replacement with new surfacing, structures and / or landscaping.
- Preparation and installation of new surfacing, structures and / or landscaping.
- Broad definitions of surfacing, structures and landscaping are set out in the following sections.

Where does this guidance apply?

This guidance should always be read in conjunction with the site plans illustrating the areas where specific precautions are necessary. Each area where precautions are required is annotated on the plans as identified on their keys. All plans are illustrative and intended to be interpreted in the Context of the site conditions when the work is started. All protective measures should be installed according to the prevailing site conditions and agreed as satisfactory by the appropriate supervising officer before any demolition or construction work starts.

What references is this guidance based on?

This guidance assumes that the minimum general standards for development issues are those set out in BS5837; (2012) Trees in relation to design, demolition, and construction - Recommendations and the National Joint Utilities Group (2007) Volume 4, Issue 1: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees. It is interpreted in the context of our experience of managing trees on development sites.

Preventing adverse impact to the RPA beyond the immediate work area:

Any part of the RPA beyond the agreed work area must be isolated from the work operations by protective barriers or ground protection to at least the minimum standard described in BS 5837 for the duration of the work. Appendix 'J': Site guidance for working in root protection areas (RPAs)

Excavation and dealing with roots:

All excavation must be carried out carefully using spades, forks, and trowels, taking care not to damage the bark and wood of any roots. Specialist tools for removing soil around roots using compressed air may be an appropriate alternative to hand digging, if available. All soil removal must be undertaken with care to minimize the disturbance of roots beyond the immediate area of excavation. Where possible, flexible clumps of smaller roots, including fibrous roots, should be retained if they can be displaced temporarily or permanently beyond the excavation without damage.

If digging by hand, a fork should be used to loosen the soil and help locate any substantial roots. Once roots have been located, the trowel should be used to clear the soil away from them without damaging the bark. Exposed roots to be removed should be cut cleanly with sharp saw or secateurs 10—20cm behind the final face of the excavation. Roots temporarily exposed must be protected from direct sunlight, drying out and extremes of temperature by appropriate covering. Roots greater than 2.5cm in diameter should be retained where possible. Roots 2.5—10cm in diameter should only be cut in exceptional circumstances. Roots greater than 10cm in diameter should only be cut after consultation with the appropriate supervisory officer.

Arboricultural supervision:

Any work within RPAs requires a high care. Qualified arboricultural supervision is essential to minimize the risk of misunderstanding and misinterpretation. Site personnel must be properly briefed before any work starts. On-going work must be inspected regularly, and on completion, the work must be signed off by the arboriculturist to confirm compliance by the contractor. In the context of this guidance, an appropriate supervising officer would normally be an arboriculturist.

2. REMOVING SURFACING / STRUCTURES IN RPAs:

Definitions of surfacing and structures: For the purposes of this guidance, the following broad definitions apply:

- Surfacing:

Any hard surfacing used as a vehicular road, parking or pedestrian path including tarmac, solid stone, crushed stone, compacted aggregate, concrete, and timber decking. This does not include compacted soil with no hard covering.

- Structures:

Any man-made structure above or below ground including service pipes, walls, gate piers, buildings, and foundations: Typically, this would include drainage structures, carports, bin stores and concrete slabs that support buildings.

Access:

Roots frequently grow adjacent to, and beneath existing surfacing/structures so great care is needed during access and demolition. Damage can occur through physical disturbance of roots and / or the compaction of soil around them from the weight of machinery or repeated pedestrian passage. This is not generally a problem whilst surfacing / structures are in place because they spread the load on the soil beneath and further protective measures are not normally necessary. However, once they are removed and the soil below is newly exposed, damage to roots becomes an issue and the following guidance must be observed:

No vehicular or repeated pedestrian access into RPAs unless on existing hard surfacing or custom designed ground protection.

Regular vehicular and pedestrian access routes must be protected from compaction with temporary ground protection as set out in BS 5837.

RPAs exposed by the work must be protected as set out in BS 5837 until there is no risk of damage from the development activity.

Removal: Removing existing surfacing/structures is a high-risk activity for any adjacent roots and the following guidance must be observed: Appendix 'J': Site guidance for working in root protection areas (RPAs)

Appropriate tools for manually removing debris may include a pneumatic breaker, crowbar, sledgehammer, pick, mattock, shovel, spade, trowel, fork dud wheelbarrow. Secateurs and a handsaw must also be available to deal with any exposed roots that have to be cut.

Machines with a long reach may be used if they can work from outside RPAs or from protected areas within RPAs. They must not encroach onto unprotected soil in RPAs.

Debris to be removed from RPAs manually must be moved across existing hard surfacing or temporary ground protection in a way that prevents compaction of soil. Alternatively, it can be lifted out by machines provided this does not disturb RPAs.

Great care must be taken throughout these operations not to damage roots as set out in 1.7 above.

If appropriate, leaving below ground structures in place should be considered ~ their removal may cause excessive root disturbance.

3. INSTALLATION OF NEW SURFACING IN RPAs:

Basic principles:

New surfacing is potentially damaging to trees because it may require changes to existing ground levels, result in localized soil structure degradation and / or disrupt the efficient exchange of water and gases in and out of the soil. Mature and over mature trees are much more prone to suffer because of these changes than younger and maturing trees.

Adverse impact on trees can be reduced by minimizing the extent of these changes in RPAs. Generally, the most suitable surfacing will be relatively permeable to allow water and gas movement, load spreading to avoid localized compaction and require little or no excavation to limit direct damage.

The actual specification of the surfacing is an engineering issue that needs to be considered in the context of the bearing capacity of the soil, the intended loading, and the frequency of loading. The detail of product and specification are beyond the scope of this guidance and must be provided separately by the appropriate specialist.

Establishing the depth of excavation and surfacing gradient:

The precise location and depth of roots within the soil is unpredictable and will only be known when careful digging starts on site. Ideally, all new surfacing in RPAs should be no-dig, i.e., requiring no excavation whatsoever, but this is rarely possible on undulating surfaces. New surfacing normally requires an evenly graded sub-base layer, which can be made up to any high points with granular, permeable fills such as crushed stone or sharp sand. This sub-base must not be compacted as would happen in conventional surface installation. Some limited excavation is usually necessary to achieve this and need not be damaging to trees if carried out carefully and large roots are not cut.

Tree roots and grass roots rarely occupy the same soil volume at the top of the soil profile, so the removal of a turf layer up to 5cm is unlikely to be damaging to trees. It may be possible to dig to a greater depth depending on local conditions, but this would need to be assessed by an arboriculturist if excavation beyond 5cm is anticipated.

On undulating surfaces, finished gradients/levels must be planned with enough flexibility to allow on-site adjustment if excavation of any high points reveals large, unexpected roots near the surface. If the roots are less than 2.5cm in diameter, it would normally be acceptable to cut them, and the gradient formed with the preferred minimal excavation of up to 5cm. However, if roots over 2.5cm in diameter are exposed, cutting them may be too damaging and further excavation may not be possible. If that is the case, the surrounding levels must be adjusted to take account of these high points by filling with suitable material. If this is not practical and large roots have to be cut, the situation should be discussed with the supervising officer before a final decision is made.

Base and finishing layers:

Once the sub-base has been formed, the load spreading construction is installed on top without compaction. In principle, the load spreading formation will normally be cellular and filled with crushed stone although the detail may vary with different products. Suitable surface finishes include washed gravel, permeable tarmac or block paviours set on a sand base. However, for lightly loaded surfacing of limited widths (<3m) such as pedestrian paths, pre-formed concrete slabs may be appropriate if the sub-base preparation is as set out above. In some situations, limited width floating concrete rafts constructed directly on to the soil surface may be acceptable, but the design must not include any strip-dug supports.

Edge retention:

Conventional kerb edge retention set in concrete filled excavated trenches is likely to result in damage to roots and should be avoided. Effective edge retention in RPAs must be custom designed to avoid any significant excavation into existing soil levels. For most surfaces, the use of pre-formed edging secured by meta' pins or wooden pegs is normally an effective way of minimizing any adverse impact on trees from the retention structure.

Installing new surfacing on top of existing surfacing:

In some instances, surfacing can be retained and used as a base for new surfacing. Normally, this will not result in significant excavation that could expose roots so special precautions are not necessary. However, if large roots already protrude above the proposed sub-base level, then the precautions and procedures set out above must be observed.

4. INSTALLATION OF NEW STRUCTURES IN RPAs:

Basic principles:

New structures in RPAs are potentially damaging to trees because they may disturb the soil and disrupt the existing exchange of water and gases in and out of it. Mature and over-mature trees are much more prone to suffer because of these changes than young and maturing trees. Adverse impact on trees can be reduced by minimizing the extent of these changes in RPAs. This can be done by constructing the main structures above ground level on piled supports and redirecting water to where it is needed. The detailed design and specification of such structures is an engineering issue that should be informed and guided by tree expertise.

Small sheds and bin stores:

These light structures do not normally require substantial foundations and can have permeable bases. Ideally, their bases should be of a no-dig, load-spreading construction set directly on to the soil surface. They require a flat base and so an undulating site will need levelling to provide a suitable surface. Excavation of any high points by up to 5cm and filling depressions with permeable fill to provide a flat base will normally be acceptable provided no roots greater than 2.5cm in diameter need to be cut. If large roots are found, the preferred course of action would be to raise the base level of the structure by filling rather than cutting roots.

However, if this is not practical and large roots have to be cut, the situation should be discussed with the supervising officer before a final decision is made. Above the base, there will often be a protective covering fixed onto a frame that can rise directly from the base or be fixed to supports either banged into the ground or set in carefully dug holes. Provided the supports are well spaced, i.e., greater than 1 .5m apart, and of a relatively narrow diameter, i.e., not more than 15cm, it is unlikely they will cause any significant disturbance to RPAs.

Walls, gate piers, buildings, and bridges on new foundations:

Conventional strip foundations in RPAs for any significant structure may cause excessive root loss and are unlikely to be acceptable. However, disturbance can be significantly reduced by supporting the above ground part of the structures on small diameter piles and beams or cast floor slabs set above ground level.

The design should be sufficiently flexible to allow the piles to be moved if significant roots are encountered in the preferred locations. Before the actual installation of the new structure starts, all RPAs that may be affected should be covered with temporary ground protection as set out in BS 5837. Gaps in the ground protection should be left where it is expected to install the piles or dig the holes for gate piers. Pile locations should be initially hand dug to a depth of 75cm to establish if there are any significant roots over 2.5cm in diameter that could be damaged. If significant roots are found, then the pile location must be moved slightly, and a new exploratory hole dug. Once the piles have been installed, the lowest points of the supporting beams for the structure must be above the ground level between the piles and there should not be any further excavation.

The beams between the piles can be pre-cast and imported to the site ready to fix or can be cast in position using shuttering for the sides and a biodegradable void-former for the base. Gate piers generally require larger holes and have less flexibility for relocation if large roots are found. Localized loss of roots may be unavoidable so each situation should be assessed on its own merits by an appropriate supervising officer once the careful excavations have been completed. Any roots found should be dealt with as set out in 1.7 above. When installing any of these structures, the ground protection must remain in place until the construction is completed and there is no risk of damage to RPAs.

5. Walls on existing foundations:

Free-standing wall:

A free-standing wall on an existing foundation is unlikely to require any additional excavation and so its construction should have no adverse impact on RPAs if the appropriate protection is in place. However, replacing walls that retain the soil of RPAs normally requires some limited excavation back into the exposed soil face to provide a working space of at least 10—20cm behind the inside wall face. This should be done carefully and limited to no more than required to construct the new wall. Any roots found should be dealt with as set out in 1.7 above. Once the wall is completed, any voids behind it should be filled with good quality topsoil and firmed into place but not over compacted. Specific difficulties with large roots that emerge during the construction should be referred to the supervising officer.

Services:

For the purposes of this guidance, services are considered as structures. Excavation to upgrade existing services or install new services in RPAs may damage retained trees and should only be chosen as a last resort. If excavation emerges as the preferred option, the decision should be reviewed by the supervising officer before any work is carried out. If excavation is agreed, all digging should be done carefully and follow the guidance set out in 1.7 above.

6. SOFT LANDSCAPING IN RPAs:

Upgrading existing soft landscaping or replacing existing surfacing/structures with new soft landscaping:

For the purposes of this guidance, soft landscaping includes the re- profiling of existing soil levels and covering the soil surface with new plants or an organic covering (mulch). It does not include the installation of solid structures or compacted surfacing.

Soft landscaping activity after construction can be extremely damaging to trees. No significant excavation or cultivation, especially by rotovators, should occur within RPAs. Where new designs require levels to be increased to tie in with new structures or the removal of an existing structure has left a void below the surrounding ground level, good quality and relatively permeable topsoil should be used for the fill. It should be firmed into place but not over compacted in preparation for turfing or careful shrub planting. Ideally, all areas close to tree trunks should be kept at the original ground level and have a mulched finish rather than grass to reduce the risk of mowing damage.

BS 5837 Surveys

Arboricultural Impact Assessments

Arboricultural Method Statements

Site Supervision

Visual Tree Assessments

QTRA Assessments

Expert Witness Reports

L.O.L.E.R Thorough Equipment Inspections

Mortgage Reports

TPO applications and advice

