Arboricultural Impact Assessment

In accordance with BS5837:2012Trees in relation to design, demolition & construction – Recommendations

Date of Assessment

4th March 2026

Site

68 Oxford Rd
Dewsbury
WF13 4EH

Author
Carl Riva,
Dip Arb ABC L6

Client
Mr Idris Mitha

Arboricultural ASSOCIATION
Professional Member

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EXECUTIVE SUMMARY

Urban Tree Management has been instructed to provide arboricultural advice and guidance to a development proposal at, 68 Oxford Rd, Dewsbury WF13 4EH for the proposed new extension and modifications to existing dwelling to the application address.

A tree survey has been completed in accordance with the recommendations of BS5837 (2012) Trees in relation to design, demolition and construction, and a report prepared to assess the impact of the proposal on the existing tree stock.

The survey recorded a total of 14 individual trees, 6 tree groups, and 1 hedge within the assessment area.

- 6 individual trees were recorded as being of moderate quality, with a remaining useful contribution of at least 20 years (Category B).
- 1 hedge, 6 tree groups, and 8 individual trees were recorded as being of low quality, with a remaining useful contribution of at least 10 years (Category C).

The development proposal will result in the loss of four trees to enable the development to be completed, as these specimens (T015, T016, T017 and T018) have been recommended for removal due to their condition or structural limitations. In addition, one tree (T014) requires pruning back by 2.0 m to the boundary to prevent encroachment and maintain appropriate clearance.

The remaining trees will require protecting from harm during the development phase.

The retained trees will be protected from harm during the development. The protection measures include the use of tree protection fencing to be used as a barrier to exclude any activity within the protected zone or through the use of materials that will shield the ground from harmful processes such as compaction or contamination, and temporary compaction boards adjacent to any existing hard surfacing with the site and access to the site.

All demolition and construction processes in the construction exclusion zone (CEZ) will be achieved by arboricultural supervision, site investigations, pull back method of demolition of existing structures and soft landscaping and adopting a no-dig approach to construction.

The foundations will be constructed with conventional strip method, for all construction within close proximity to RPA's, excavations shall be lined and sealed to prevent any leaching of the concrete into the soil and causing desiccation of retained roots by concrete run off, this will reduce the impact on adjacent root protections areas and the surrounding soil.

Compensation for loss of four will be delivered through an appropriate replacement planting scheme.

The proposed construction will have no impact on biodiversity or landscape character.

INTRODUCTION

Written instruction was received from Mr Idris Mitha (at the Site') 4th March 2026 to undertake a tree survey to assist in the design and impact of proposed development on the site.

Site Description

(the Site') is a private home in Dewsbury. The site is located at postcode WF13 4EH. The Site consists of detached dwelling, with young to mature trees and shrubs surrounding the garden, surrounding area and adjacent properties.

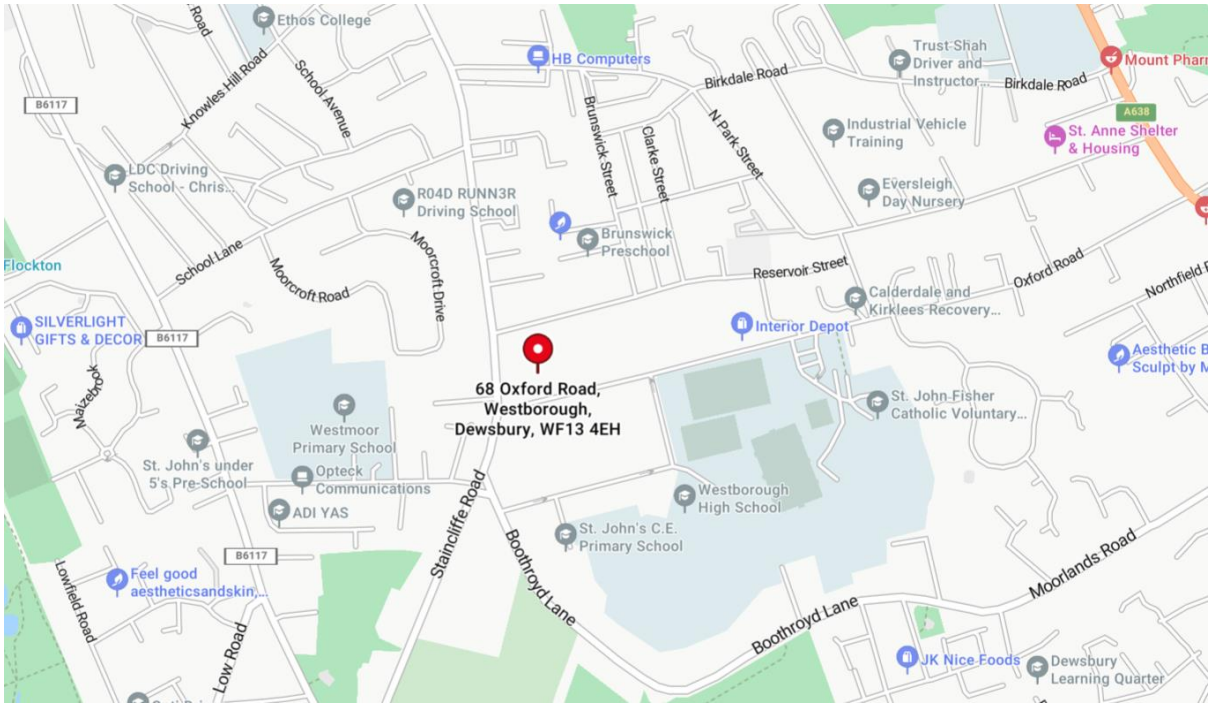


Figure 1: OS Map (Bing Maps) This content is for educational and informative purposes; so, parts of it are reproduced from BSI Global

Caveats and Limitations

While all reasonable efforts have been made to identify defects in the subject trees, the statements made in this report do not take into account the effects of extreme weather events, vandalism or accidents, or changes to the site that may affect trees that have taken place since the date of the survey.

While the author warranties that the survey has been undertaken in accordance with industry best practice recommendations and guidance, no warranty is provided in relation to changes to the site that occur after the date of the survey that may have an impact on the tree stock present at the time of the survey.

The comments and observations made within this report will cease to be valid either within two years of the date of the survey (unless specifically stated elsewhere within the report), or when site conditions change or any works to trees take place that have not been specified within this report, whichever is the sooner.

The location of all trees and groups detailed in this report have been these have been plotted using a handheld GPS Trimble. This is not as accurate as professional grade surveying equipment, and the locations are indicative only. Any such features have been marked on the plans and schedule.

This survey has been limited to identifying arboricultural features within the site. It therefore does not include any ecological, archaeological assessment or landscape appraisal of trees, groups, woodlands or hedges beyond the scope of BS5837: 2012 Trees in relation to design, demolition and construction (‘BS5837’).

Unless stated differently in captions, all photographs used in this report have been taken by the author at the time of the site visit.

We have not checked if there is any statutory protection on the trees because this can delay the production of the report. If any tree works are proposed before a planning consent is given, then the possible existence of any statutory protection must be checked with the LPA.

GENERAL ARBORICULTURAL PRINCIPLES

General Principles

Trees are dynamic living organisms which provide essential benefits to society and the wider environment. Any development with the potential to impact on trees must take into consideration the value of trees on Site, the impact of any proposed activity along with any potential future conflicts. Suitable measures to safeguard retained trees or mitigate the loss of trees to be removed will need to be fully considered and may be a condition of planning consent. Tree branches and roots frequently grow across Site boundaries and off-Site trees can pose a significant constraint and should be carefully considered when assessing the developable space within a Site.

Trees and Risk in the Context of Development

Tree owners/managers have a legal duty to prevent foreseeable harm. It is generally accepted that this duty can be fulfilled by undertaking proactive inspections of significant trees to identify obvious defects and by taking appropriate remedial action or gaining further advice as appropriate. Urban Tree Management can provide surveys and advice in relation to tree risk management if required. Further guidance is available from the National Tree Safety Group.

The tree survey carried out as the basis of this report is primarily for planning purposes, focusing on the quality and benefits of the trees, and is not specifically designed to assess the safety of trees on Site. However, when obvious issues have been identified recommendations have been included in the Tree Survey Schedule.

The Construction (Design and Management) Regulations (2015) states that developers and contractors have responsibilities for health and safety as a result of their actions. Should trees be left in an unstable or hazardous condition the Health and Safety Executive (HSE) could seek to prosecute those responsible along with the potential for further Civil claims for damages.

TREE SURVEY AND CONSTRAINTS

Tree Survey Methodology

I carried out and completed the tree survey on 4th March 2026

The survey area refers to areas surveyed within the Site and where trees have the potential to be affected by the development.

Observations were conducted from ground level, utilising the “Visual Tree Assessment” (VTA) system as outlined in The Body Language of Trees, A Handbook for Failure Analysis Research for Amenity Trees No.4 (Mattheck and Breloer, 1994) with the aid of binoculars.

General Data Capture

For reference, individual trees are identified with the letter T and associated number on the Tree Schedules and on a plan showing the extent of tree constraints. The stem diameter of the trees on Site was recorded using a rounded down diameter tape or a digital hypsometer, measured at 1.5m above ground level. Measurements were recorded in millimetres, rounded to the nearest 10mm. The height of the subject trees was measured to the nearest metre using a digital Haglof Laser Geo.

Maximum crown spread of the subject tree was measured from the edge of the trunk to the tips of the live lateral branches taken at four compass points (N-E-S-W) using a Leica Disto digital laser measure. Crown spread measurements were taken in metres.

Tree age was estimated from visual indicators (such as tree size and appearance of bark) which is provided as a provisional guide.

Groups of trees were identified with the letter G and number on the associated schedules and plans. Crown spread was assessed using topographical data to position the extents. Stem diameter of groups of trees was set as an average stem diameter of the trees within these individual groups and a maximum height of the tallest tree within the group.

Hedgerows were identified with the letter H and number on the associated schedules and plans. A 30m section of hedgerow was surveyed for each hedgerow, recording the number of species, average stem diameter, and the maximum height. Any individual trees present within the hedgerow were recorded as individual trees.

No woodlands were recorded on site.

If direct access to a tree was not possible, estimations from appropriate vantage points were taken. Any limitations or estimations are presented within the survey limitations section and noted in the associated schedules.

Categorisation

In compliance with Table 1 of BS5837 the trees surveyed have been categorised according to their arboricultural quality and value which is summarised in Table 1

Table 1 - Summary of BS5837 categorisation colours

Category	Colour	Description
A	Green	Trees of high quality with an estimated remaining life expectancy of at least 40 years
B	Blue	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
C	Grey	Trees of low quality with an estimated remaining life expectancy of at least 20 years
U	Red	Those trees 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

Root Protection Area

The Root Protection Areas (RPA) of the trees were calculated in accordance with Section 4.6.1 in BS5837. This is calculated from the measurement of the stem diameter as recorded in the tree schedule attached to this report and are plotted on a plan showing the extent of tree constraints (hereinafter referred to as the Tree Constraints Plan.

The RPA forms the initial Construction Exclusion Zone (CEZ) to protect the trees within and adjoining the Site and is plotted on the plan by grey horizontal lines. The shape and size of RPAs can be amended in accordance with Section 4.6.3 in BS: 5837:2012.

The default position of this proposal is that there should be no development should within the RPA of retained trees. However, where there is an overriding need for construction and associated activity with the RPA of trees arboricultural mitigation should take place to protect the trees.

Tree Constraints

A copy of the recorded data can be seen in the tree schedule attached to this report and plotted on the Tree constraint plan.

The above ground constraints posed by canopy spread are plotted as a continuous line around the tree, with the extent of the canopy spread hatched in the corresponding BS5837 retention category colour.

The below ground constraints posed by the Root Protection Area (RPA) have been plotted as a magenta line with the text RPA inscribed.

Assessment of Existing tree stock

A summary of the assessment on the quality of the trees can be seen in Table 2

	Category A	Category B	Category C	Category U	Total
Trees	None	6	8	None	14
Groups	None	None	6	None	6
Hedges	None	None	1	None	1
Total	0	6	15	0	21

Soils

I have not been supplied with any detailed site soil analysis or been engaged to undertake such investigations by my client. A site-specific soil assessment may inform decisions relating to the root protection area (RPA), tree protection, new planting design and foundation design to take account of retained, removed and new trees. As and when such information becomes available results should be forwarded to the project Arboricutural consultant and other relevant professionals involved in site layout, planning, and design (e.g., structural engineer, landscape architect).

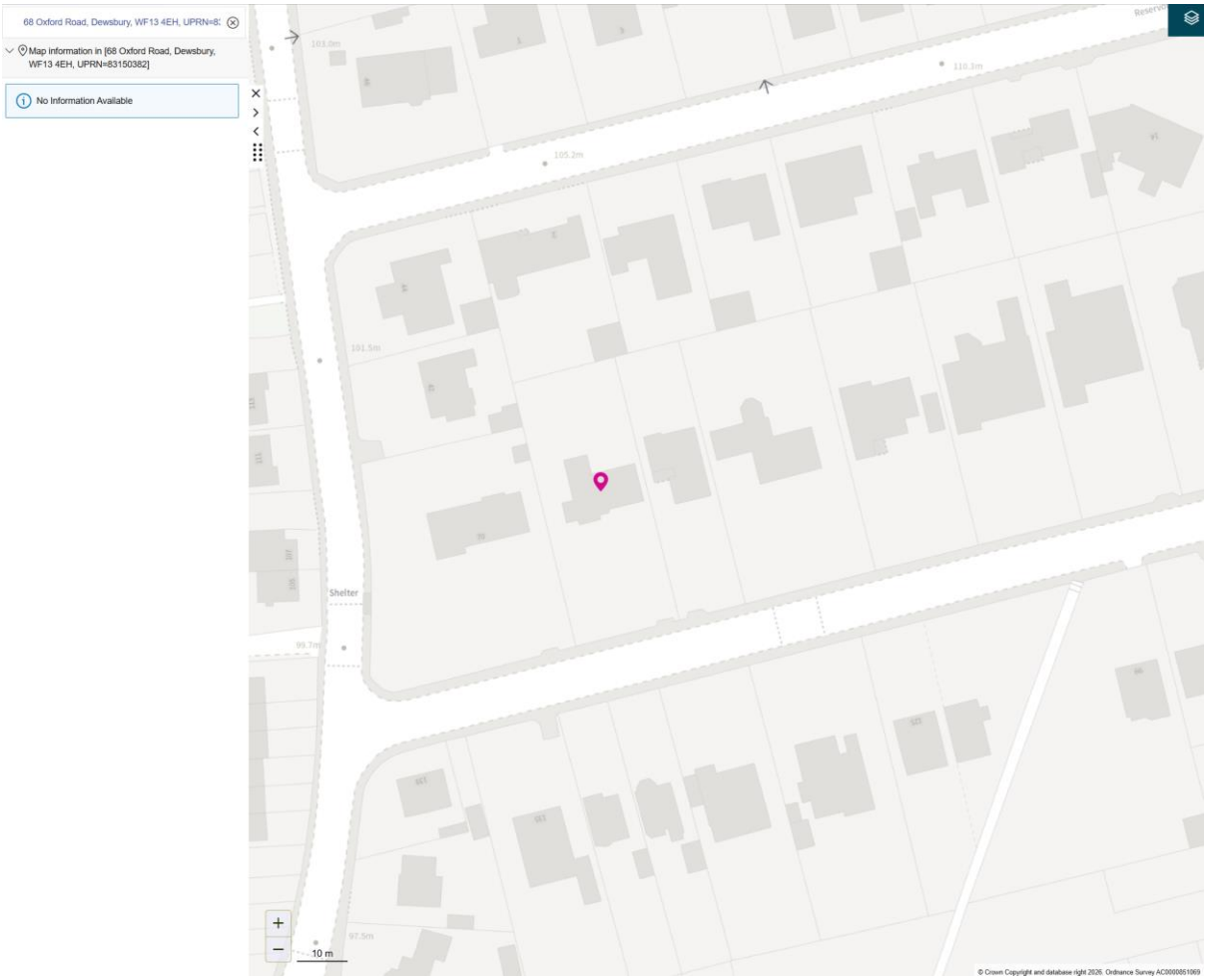
Statutory Considerations

The site is located within the boundary of Kirklees Council (CHC), the Local Planning Authority (LPA).

The LPA has a statutory obligation to ensure that provision is made for the protection of trees, through section 197 of the Town and Country Planning Act (1990).

The principal form of protection comes through trees being subject to a Tree Preservation Order or being located in a conservation area. A search has been undertaken on the (KC) website to determine the presence or otherwise of TPO or Conservation Areas.

The results of the search reveal that the Site is located within (WF13 4EH) on site are not subject to a TPO (see Fig 1 below).



https://mapping.kirklees.gov.uk/connect/analyst/mobile/#/main?mapcfg=Tree%20Preservation%20Orders%20(Public)&lang=en-gb

ARBORICULTURAL IMPACT ASSESSMENT

This impact assessment will set out the principal direct and indirect impacts of the proposals on the trees on Site and set out suitable mitigation measures for unavoidable tree removals and to allow for the successful retention of significant trees where appropriate.

Development can have an adverse impact on trees and other woody vegetation within a site, which can result in:

I. Immediate tree removal to facilitate the footprint of a new development.

II. Potential future tree loss through the early decline of trees due to soil compaction or damage

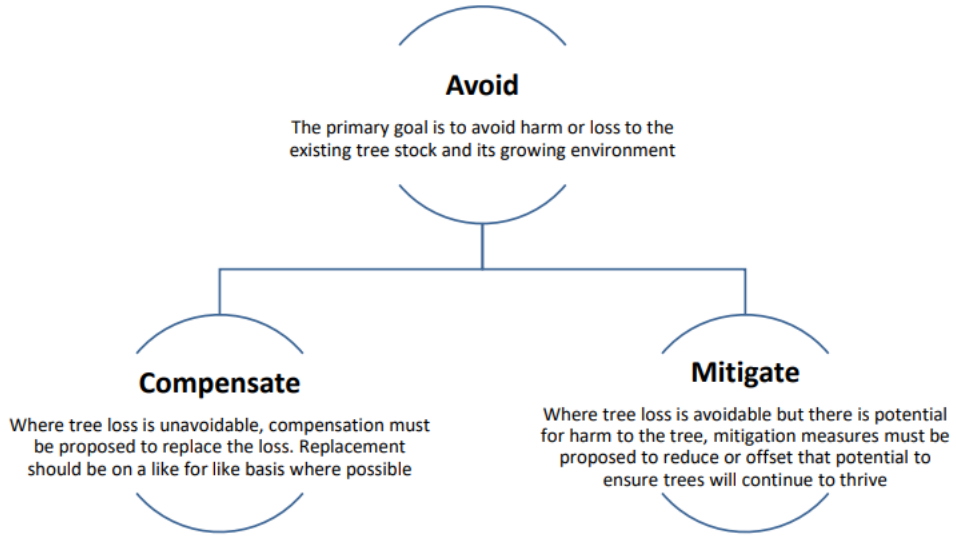
III. Root disturbance and damage within a tree's rooting area

IV. and iv. Canopy removal or damage due to plant movement.

Best practice guidance proposed by the arboricultural sector seeks to ensure that there is a harmonious relationship between trees and development that will ensure that both trees and structures can be retained in the long term.

Where practical, development should seek to work with the natural environment, and development schemes that might result in harm should follow a mitigation hierarchy to ensure harm is minimised.

To assist the planning decision makers, this scheme should use the following mitigation hierarchy to consider the influence that trees might have on site design while also continuing to make a positive contribution to the site and local character of the area, both during and post development:



The impact of any tree loss is assessed against a criterion in relation to the arboricultural significance of the loss, the detail of which is provided in Table 3. This table is not related to the quality categories provided in BS5837 but has a closer relationship to the sub-categories through assessing the impact that tree loss may have at the Site and its setting in the wider locality. This assessment is also useful in considering the impact of any potential loss against planning policy.

Table 3: Impact Assessment definitions

Scale of Impact	Definition
Major	Total loss or major/substantial alteration to key trees/features of the baseline (pre-development) conditions such that the post development character or composition will be fundamentally changed. This would generally apply to tree(s) that are of exceptional or high quality and condition, and their loss would be irreplaceable. This would also include trees that have been categorised as being Ancient or Veteran, trees are rare examples of their species and or trees that offer significant amenity value to the character and setting of the area.
Moderate	Loss or alteration to one or more key trees/features of the baseline conditions such that post development character or composition of the baseline will be materially changed. This would generally apply to tree(s) that are of good quality and condition and make a notable contribution to the setting or character of the locality (visual amenity). This may include trees that would be hard to replace but for which there could be some mitigation over a medium timeframe (20-40 years).
Minor	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character or composition of the baseline condition will be similar to the pre-development circumstances/situation. This would generally apply to tree(s) that are of low quality and condition and/or their loss would have low impact on the locality. These trees would be relatively easy to replace within a short timeframe (10-20 years).
Negligible	Very little change from baseline conditions with any change barely distinguishable. This would generally apply to tree(s) that are of low quality and condition, and/or their loss would barely be noticeable. Any replacement planting would offer an improvement to the setting of the site in a very short time frame (1-10 years)
No Change	There is no change to the baseline conditions to trees from the development proposal.

The impact can be assessed as being either negative, positive or neutral, each of which (for the purpose of this report) are defined as:

- Negative – a negative impact is one where the proposal will result in the loss or degradation of the range or quality of trees on a site, and which will negatively impact the local community.
- Positive – a positive impact is where the proposal will result in enhancements to the range or quality of trees on site (achieved through retention of existing trees and new planting), or an improvement(s) to the growing environment of trees that will result in improvements to the social and cultural setting of the site to the benefit of the local community.
- Neutral – there is no change to the baseline setting of the site in arboricultural terms.

Table 4: Summary of trees affected and protected by the proposal.

British Standard 5837 Category				
	Category A	Category B	Category C	Category U
Remove	None	T018	T015, T016, T017	None
Prune	None	None	T014	None
Protect using special precautions	None	T001, T002, T007, T009, T020	T011, T012, T013, T014, T019, G004, G005, G006, G008, G010, G021, H003	None
Post development considerations	None	None	None	None

T = Tree; G = Group

Note on types of protection**:** All retained trees will be protected during development by using fencing and ground protection, and only these requiring special precautions to limit the impact of encroachment are listed in Table 1.

Tree Loss

The proposed development, which includes a new extension and modifications to the existing structure, requires the removal of three Category C trees (T015, T016, T017) and one Category B tree (T018).

The removal of the Category B tree represents a moderate impact, as Category B trees are of generally good quality and contribute positively to the local character. Its loss will result in a discernible change to the baseline conditions; however, the impact is considered acceptable due to the tree's structural limitations and the constraints imposed by the footprint of the proposed extension. While Category B trees can be harder to replace, appropriate mitigation planting will allow the lost amenity to be recovered over a medium timeframe (20–40 years).

The removal of the Category C trees represents only a minor impact. These trees are of low quality and condition, with limited remaining contribution, and their loss will not materially alter the character of the locality. Category C trees are readily replaceable within a short timeframe (10–20 years), and their removal is necessary to facilitate the development footprint and ensure safe construction access.

Overall, the tree losses are justified by the spatial requirements of the proposed extension and associated works. Compensation planting will be secured to ensure that the long-term treescape and amenity value of the site are maintained and enhanced.

A landscape scheme will be prepared with ecological guidance to ensure that the development delivers a measurable net gain in biodiversity. Compensation planting will be secured at the replacement ratio required by the Local Planning Authority, ensuring that the long-term treescape, amenity value, and ecological function of the site are maintained and enhanced over time.

Tree Retention

All remaining trees, groups and the beech hedge located within or in close proximity to the proposed development area will be retained and protected throughout the construction process. These retained features contribute positively to the local street scene and provide a notable level of visual amenity, forming an important part of the site's existing green structure.

An Arboricultural Method Statement (AMS) accompanies this report and sets out the procedures required to ensure the successful protection of these retained trees. The general principles of tree protection are summarised below and will be fully adopted by the appointed contractor for the duration of the works.

The primary means of protection will be through the installation of BS5837-compliant protective fencing, supplemented by existing boundary fencing where appropriate. This fencing will create a secure barrier beyond which no construction access, storage of materials, excavation, or ground disturbance will occur. This protected area will form the Construction Exclusion Zone (CEZ).

The location and extent of the CEZ are shown on the Tree Protection Plan (TPP – Appendix D) prepared for this application. Within these zones, the soil structure must remain undisturbed to preserve root health. Where temporary access is required in proximity to retained trees, temporary ground protection (e.g., compaction boards) will be installed to prevent soil compaction and maintain suitable rooting conditions.

These combined measures will ensure that all retained trees, groups and hedges are safeguarded throughout the development and remain in a stable and healthy condition post-construction.

Demolition

The demolition of sections of the existing structure, along with the removal of hard surfaces and light-weight constructions within the Application Site, has the potential to impact upon several retained trees, particularly those positioned closest to the proposed extension works. These include T001, T002, T007, T009, T011, T012, T013, T014, T019 and T020, all of which have Root Protection Areas (RPAs) extending towards the working zone and access. Where demolition or construction activities are required within or immediately adjacent to these RPAs, specialist methods of work will be necessary. These sensitive areas are clearly identified on the Tree Protection Plan (TPP), and the required precautionary measures are set out within the accompanying Arboricultural Method Statement.

Arboricultural Supervision will be required to directly oversee all demolition and construction operations that occur within, or encroach upon, the RPAs of retained trees. This supervision will ensure that all protective measures are correctly implemented and that any unforeseen issues are addressed promptly and appropriately.

Demolition of existing structures will be undertaken using a ‘top-down, pull-back’ technique, working away from retained trees at all times. This approach minimises the risk of accidental impact, root disturbance, or mechanical damage to stems and branches. Where dust accumulation on retained trees is likely, remedial measures such as gentle hosing will be undertaken to prevent leaf surface blockage and physiological stress.

Where access is required in proximity to retained trees, temporary ground protection will be installed to prevent soil compaction and maintain suitable rooting conditions. Existing hard surfacing may also be utilised as part of the protective strategy, supplemented where necessary with compaction-resistant ground protection boards to ensure that no detrimental pressure is exerted on the underlying soil structure.

These combined measures will ensure that all retained trees remain protected and in a stable condition throughout the demolition and construction phases.

Development

Trees especially T014 have the potential for disturbance of the rooting environment through the construction of new extension and foundations.

- Retained trees their bases growing to the North, East, South and West are similar ground level for the proposed structure.
- Tree T014 third party tree is located approximately 200/300 mm lower than the proposed extension.
- Specific measures will be required to ensure that the ground is shielded throughout construction to prevent root severance, soil compaction, or soil contamination.
- The successful retention of all retained trees will be dependent upon measures put in place to minimise the impact of root severance for the construction of proposed extension.
- The RPA of retained extends into an area that will be subject to development activity for new foundations and structure.

Foundations for proposed extension

For the construction of foundations, a strip method will be used. In principle, this will require the excavations to be lined with an impermeable membrane, with similar precautions to contain spillage or seepage out to into adjacent soil.

- It is anticipated that adhering to this guidance will allow all trees to be retained without long term detrimental impact on tree health.
- Measures will be required to shield and protect the ground throughout demolition and construction to ensure that no damage occurs to the soil.

Damage to retained tree canopy

- The canopy of all the retained trees especially T014 and trees at the entrance of the site T001 & T002 is close to the development envelope and there is a requirement for any facilitation pruning as part of this project to T014 to prune back to boundary, however, if any further trees require any pruning of low crowns or branches, or tying back to create space during demolition and construction, contact the supervising arboriculturist and/ or permission from LPA will be required.

Hazardous Materials

All hazardous materials (including cement and petrochemical products) will need to be controlled according to COSHH regulations in order to ensure there is no detrimental impact on tree health, any mixing of hazardous materials is to take place outside the RPAs of all trees. Provision shall be made to ensure that the mixing area is contained so that no water runoff enters the RPA of any trees. It is anticipated that adhering to this guidance will allow all trees to be retained without long term detrimental impact on tree health.

Installation of drainage

There are no details as regards the presence or condition of any existing drainage runs and where new drainage runs will be located.

Where new drainage runs are required, they shall be located outside the RPAs of retained trees. If it is necessary to locate new drainage runs within the RPAs of retained trees, it is necessary that these works be undertaken with Arboricultural supervision. The methods of work will follow the recommendations in the National Joint Utilities Group (NJUG) guidance, in order to reduce the adverse impact to trees resulting from root damage and severance during installations; BS5837 (2012) recommends the NJUG guidance as a normative reference to be used in these circumstances.

Installation of services

There are no details as regards the presence or condition of any existing service runs and where new service runs will be located.

Where new service runs are required, they shall be located outside the RPAs of retained trees. If it is necessary to locate new service runs within the RPAs of retained trees, the same protocol as detailed for drainage runs will be followed and for the same reasons.

Future growth of retained tree.

The proposed development has considered possible future conflicts between occupants and retained trees. Any future pruning works which may become necessary to maintain a suitable separation between tree can be undertaken without detriment to the health or visual appearance of the trees concerned.

Seasonal nuisance issues can be expected to arise; provision should be made for leaf guards and grills to be installed on gutters with cleanable traps on down pipes factored into the design.

Daylight and sunlight

The proposed new development will be subject to an element of shading although shading by trees is not considered a significant issue in relation to these proposals. It is recognised that shade from retained trees contributes to reducing the degree of internal building temperatures as caused by direct sunlight on to building.

Landscaping operations

Landscaping operations will typically take place at the end of the construction period. These works will normally require the removal of protective fencing to facilitate access for works. There is a risk that plant, and machinery may damage soil structure where tree roots are growing.

However, these risks can be managed by maintaining good professional standards of work and working to a method statement. The principle of avoiding soil disturbance or changes in levels within the RPAs of retained trees should be followed unless arboricultural advice has been sought.

Principles of Tree Protection

All construction activities have the potential to cause harm to the retained trees on site. It is therefore necessary that measures are employed across the site to limit the potential for such harm and prevent any long-term negative impacts on the trees.

Arboricultural Method Statement within this report which provides generic details on what protective measures are required, how they will be implemented and what supervision is required to ensure that the measures remain in place and fit for purpose. It has been prepared to inform the planning and the construction/ development process.

The following principles for the protection of retained trees will be adopted across the site for the duration of the project:

- All retained trees will be protected by fencing that will form the CEZ.
- Where fencing cannot provide the necessary protection measures, alternative systems will be installed that will ensure retained trees are protected. This may include the use of either temporary or permanent ground protection.
- There will be no storage of materials, or access for construction workers or machinery within any CEZ. There will be no excavation within a CEZ. All utilities and underground services will be located outside the CEZ or tap into existing service routes.
- Any storage or mixing station located outside of a CEZ will be located in a place that minimises the risk of contaminated runoff entering the CEZ and damaging the rooting environment. This may be achieved by using a non-permeable membrane on the ground, surrounded by sandbags to contain any spillage.
- There will be no fires within a CEZ.
- There will be no use of herbicides within a CEZ.

CONCLUSION

The proposed development of a proposed new side extension and modifications to existing dwelling at 68 Oxford Rd, Dewsbury, WF13 4EH. Overall, the processes of construction are highly unlikely to have a detrimental effect upon the health of the retained trees assuming recommendations made in this report, tree protection plan and described in the Arboricutural method statement.

Issues to be addressed by the arboricultural method statement and tree protection plan.

- Communication methods with the contractor and the appointed arboriculturist
- Methods of Working close to trees
- Installation of tree protection fencing
- Installation of ground protection as appropriate
- Arboricultural supervision timeline of critical activities during demolition and construction

ABOUT THE AUTHOR

The tree survey and this report have been completed by Carl Riva, Owner of Urban Tree Management and principal arboricultural consultant to the company.

Carl has 15 years' experience in the arboricultural sector and has a Royal Forestry Society Certificate in Arboriculture, Level 6 Diploma in Arboriculture, Professional Member Arboricultural Association, LANTRA Professional Tree Inspection. Qualified and experienced to produce reports for trees in relation to design, demolition, and construction.

If you have any queries or wish to discuss further, please do not hesitate to call. Best Regards

0800 222 9529 - 07765858090

REFERENCES

- Town and Country Planning Act 1990 www.legislation.gov.uk/ukpga/1990/8/contents
- National Planning Policy Framework https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf
- BS 5837 (2012) Trees in relation to design, demolition, and construction – Recommendations, BSI www.shop.bsigroup.com/
- BS 8545 (2014) Trees: from nursery to independence in the landscape – Recommendations, www.shop.bsigroup.com/
- BS 3998 (2010) Tree work – Recommendations, BSI www.shop.bsigroup.com/
- Trees in the Townscape: A Guide for Decision Makers, published by the Trees & Design Action Group http://www.tdag.org.uk/
- Trees in Hard Landscapes: A Guide for Delivery, published by the Trees & Design Action Group www.tdag.org.uk/
- National Joint Utilities Group (2007) Volume 4, Issue 2: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees www.njug.org.uk/publications/

APPENDIX A - BS 5837 (2012) Cascade chart for tree quality assessment

Trees unsuitable for retention (See Note)		
Category and definition	**Criteria (including subcategories where appropriate**	**Identification on plan**
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 another 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; see **4.5.7**	**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 See Table 2 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	**Grey**

ROOT PROTECTION AREA (RPA):	**VETERAN OR ANCIENT TREE BUFFER (VTB/ATB)**	**ANCIENT WOODLAND BUFFER (FOR ASNW, PAWS OR ARW)**
These are normally represented as a circle centred on the base of each tree stem with a radius of 12 times stem diameter measured at 1.5m above ground level, but the shape of the RPA may be altered where site conditions dictate that there are sound reasons to do so.	In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone (in metres) around an ancient or veteran tree that should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's stem diameter.	In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, a larger buffer zone may be required.

SPECIAL IMPORTANCE:

Trees that are particularly notable as high value trees such as ancient trees/woodland, or veteran trees. Such trees may be regarded as the principal Arboricultural features of a site, and pose a significant constraint to potential development. An ancient tree is one that has passed beyond maturity and is very old compared with other trees of the same species. Very few trees reach the ancient life-stage.

Veteran trees are often very old, but not necessarily so; they may be regarded as 'survivors' that have developed some of the characteristic features of an ancient tree but have not necessarily lived as long. All ancient trees are veterans but not all veteran trees are ancient.

An ancient woodland is an area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland (ASNW), plantations on ancient woodland sites (PAWS) and ancient replanted woodland (ARW)

QUALITY CATEGORY:

Trees are classed as category U, A, B or C, based on criteria given in BS5837:2012; summary definitions as follows (see BS5837 for further details). Categories A, B and C are further characterised by the use of sub-categories, which attempt to identify what aspect of the tree is the main source of its perceived value:

1. Arboricultural qualities
2. landscape qualities, and
3. cultural, historic or ecological/conservation qualities.

Examples of these qualities for each of the three categories are given below, although these are indicative only. Note: This is NOT a health and safety classification; the classification does not take into account any requirement for remedial tree care or ongoing maintenance apart from that which may affect the trees' general suitability for retention.

ROOT PROTECTION AREA (RPA):

These are normally represented as a circle centred on the base of each tree stem with a radius of 12 times stem.
diameter measured at 1.5m above ground level, but the shape of the RPA may be altered where site conditions.
dictate that there are sound reasons to do so.

VETERAN OR ANCIENT TREE BUFFER (VTB/ATB)

In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone (in metres) around an ancient or veteran tree that should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's stem diameter.

ANCIENT WOODLAND BUFFER (FOR ASNW, PAWS OR ARW)

In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, a larger buffer zone may be required.

BS5837:2012 Tree Survey

Urban Tree Management

Client: Mr Idris Mitha
Project: 68 Oxford RdDewsbury WF13 4EH - BS5837
Survey Date: 04/03/2026
Surveyor: Carl Riva

Phone: 0800 222 9529

Tree and Tag No / Species	Hght (m)	Stems No	Stems Ø (mm)	Crown	Spread (m)	Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations / Survey Comment	Cat ERC
G004												
A Group	4.5	7	265 (Eq)	N	4.5	1	Y	A: 31.7	Fair	C: Fair	No action :: No action	C.2
- -				E	2.5	1		R: 3.17		S: Good	Third party owned Group of shrubs & leylandi	10 to 20 yrs
				S	6	1				B: Good		
				W	0.6	1						
G005												
A Group	4	4	100 (Eq)	N	5	0.6	Y	A: 4.5	Fair	C: Fair	No action :: No action	C.2
- -				E	2.5	0.6		R: 1.19		S: Good	Third party ownwd. Group of holly & shrubs	10 to 20 yrs
				S	4	0.6				B: Good		
				W	0.5	0.6						
G006												
A Group	2.8	9	135 (Eq)	N	4.5	0	Y	A: 8.2	Fair	C: Fair	No action :: No action	C.2
- -				E	0	0		R: 1.61		S: Good	Group of holly. Silver birch	10 to 20 yrs
				S	4	0				B: Good		
				W	0.4	0						
G008												
A Group	6	5	100 (Eq)	N	2	2	SM	A: 4.5	Fair	C: Fair	No action :: No action	C.2
- -				E	1	1		R: 1.19		S: Good	Group of leylandi. Beech	10 to 20 yrs
				S	2.5	1				B: Good		
				W	1.2	1.2						

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
G010											
A Group - -	6	10	142 (Eq)	N 0.6 E 3.5 S 0.6 W 3.5	0.2 0.3 0.3 0.3	Y	A: 9.2 R: 1.71	Fair	C: Fair S: Good B: Good	No action :: No action Group of holly, beech	C.2 10 to 20 yrs
G021											
A Group - -	6.5	6	306 (Eq)	N 3.5 E 1 S 3.5 W 0.6	1 1 1 1.2	SM	A: 42.4 R: 3.67	Fair	C: Fair S: Good B: Good	No action :: No action Group of holly, maple and shrubs.	C.2 10 to 20 yrs
H003											
A Group - -	2.8	10	316 (Eq)	N 0.6 E 6.5 S 0.7 W 6.5	0.5 0.5 0.2 0.5	SM	A: 45.2 R: 3.79	Fair	C: Fair S: Good B: Good	No action :: No action Beech hedge	C.2 10 to 20 yrs
T001											
Common Beech *Fagus sylvatica*	12.5	2	707 (Eq)	N 5 E 4.5 S 5 W 5	4 4.5 4 4.5	M	A: 226.2 R: 8.48	Fair	C: Good S: Fair B: Good	No action :: No action Condominate stem. Included bark. Minot deadwood	B.2 20 to 40 yrs
T002											
Common Beech *Fagus sylvatica*	12	1	475	N 4.5 E 3.5 S 4 W 4	4 4.5 4 4.5	M	A: 102.1 R: 5.7	Fair	C: Good S: Fair B: Good	No action :: No action Minor deadwood	B.2 20 to 40 yrs
T007											
Downy Japanese Maple *Acer japonicum*	3.5	2	205 (Eq)	N 2 E 1.5 S 2.2 W 1.3	2 2 2 2		A: 19 R: 2.45	Fair	C: Fair S: Fair B: Good	No action :: No action Condominate stem. Included bark. Minot deadwood	B.2 20 to 40 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T009											
Oriental Sweetgum *Liquidamber orientalis*	14	1	575	N 3.5 E 4 S 3 W 2.8	4 4.5 3.5 4	M	A: 149.6 R: 6.9	Good	C: Fair S: Good B: Good	No action :: No action Bark expansion carcks. Included fork.	**B.2** 20 to 40 yrs
T011											
Willow *Salix Spp.*	8.5	1	800	N 6 E 6 S 4 W 5.5	3 3 3 3	M	A: 289.6 R: 9.6	Fair	C: Fair S: Fair B: Good	No action :: No action Third party tree. Prevoulsy Reduced. Weake bracnh attachments.	**C.2** 10 to 20 yrs
T012											
Apple *Malus Spp.*	3.8	1	175	N 1 E 1 S 1.5 W 2.5	2 2 2 2	SM	A: 13.9 R: 2.1	Good	C: Fair S: Good B: Good	No action :: No action Third paryty owned	**C.2** 10 to 20 yrs
T013											
Unknown - -	8	1	350	N 2.5 E 1 S 1.3 W 2	5 2.5 3.5 3.5	SM	A: 55.4 R: 4.19	Fair	C: Fair S: Ivy B: Good	No action :: No action Third party tree. Limted insepction due to ivy	**C.2** 10 to 20 yrs
T014											
Willow *Salix Spp.*	6.5	2	233 (Eq)	N 3.5 E 3 S 3.5 W 2.8	3.5 3.5 2.5 3	SM	A: 24.6 R: 2.79	Fair	C: Fair S: Good B: Good	See Comment :: See Comment Prune back to boundary by 2.0. Ground level lower of owner side. Third party tree	**C.2** 10 to 20 yrs
T015											
Leyland Cypress 'Green Spire' *X Cupressocyparis leylandii 'Green Spire'*	1.5	1	75	N 0.6 E 0.5 S 0.4 W 0.6	0.6 0.6 0.6 0.6	Y	A: 2.5 R: 0.89	Fair	C: Good S: Good B: Good	Fell :: Fell and remove stump(s)	**C.2** 10 to 20 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
T016											
Common Ash *Fraxinus excelsior*	165	1		N 1.2 E 2 S 2 W 2	3.5 3.5 3 3	SM	A: 0 R: 0	Fair	C: Fair S: Good B: Good	Fell :: Fell and remove stump(s) Ash dieback level 1	C.2 10 to 20 yrs
T017											
Silver Birch *Betula pendula*	8.5	1	125	N 0.6 E 0.4 S 0.4 W 0.4	2.5 2 2 2	Y	A: 7.1 R: 1.5	Fair	C: Fair S: Fair B: Good	Fell :: Fell and remove stump(s) Poor taper. Suppressed crown.	C.2 10 to 20 yrs
T018											
Common Beech *Fagus sylvatica*	8.5	1	475	N 3.5 E 3 S 3 W 3.2	3 3.5 3 5	M	A: 102.1 R: 5.7	Fair	C: Good S: Good B: Good	Fell :: Fell and remove stump(s) Stub cut.	B.2 20 to 40 yrs
T019											
Sycamore *Acer pseudoplatanus*	8.5	3	237 (Eq)	N 1 E 2.2 S 2 W 1.5	3 3 2.5 3	SM	A: 25.5 R: 2.84	Fair	C: Fair S: Good B: Good	No action :: No action Suppressed crown. Multiple stems	C.2 10 to 20 yrs
T020											
Pine *Pinus Spp.*	9	1	400	N 4 E 4.2 S 4.8 W 2.5	3 3 3 3.5	M	A: 72.4 R: 4.8	Fair	C: Fair S: Fair B: Good	No action :: No action Leaning stem. Stub cuts.	B.2 20 to 40 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Report selection criteria.

Projects.

68 Oxford RdDewsbury WF13 4EH - BS5837

Date Range.

Any Date

Work types.

----> Fell :: Fell and remove stump(s)
----> No action :: No action
----> See Comment :: See Comment

Latest Survey.

All surveys for the selected trees.
---> Last survey for each selected tree.

Work Completed.

---> Work Completed
---> Work Not Completed

Number of trees in selected Project(s)	**21**
Number of trees in Report selection	**21**

Age Classifications:	N	Newly planted	EM	Early Mature	**Condition:**	C	Crown	**Stems:**	Ø	Diameter
	Y	Young	M	Mature		S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature		B	Basal area	**ERC:**		Estimated Remaining Contributio

Urban Tree Management

0800 222 9529

WWW.URBANTREEMANAGEMENT.CO.UK

Tree Constraint Plan

SCALE : 1 : 500 @ A3

DATE : 09/03/2026

N

MAP FILENAME :

68 Oxford Road, Dewsbury,WF13 4EH

Crown Spread

Root Protection Area

Shading Arc

Category 'A'

Category 'B'

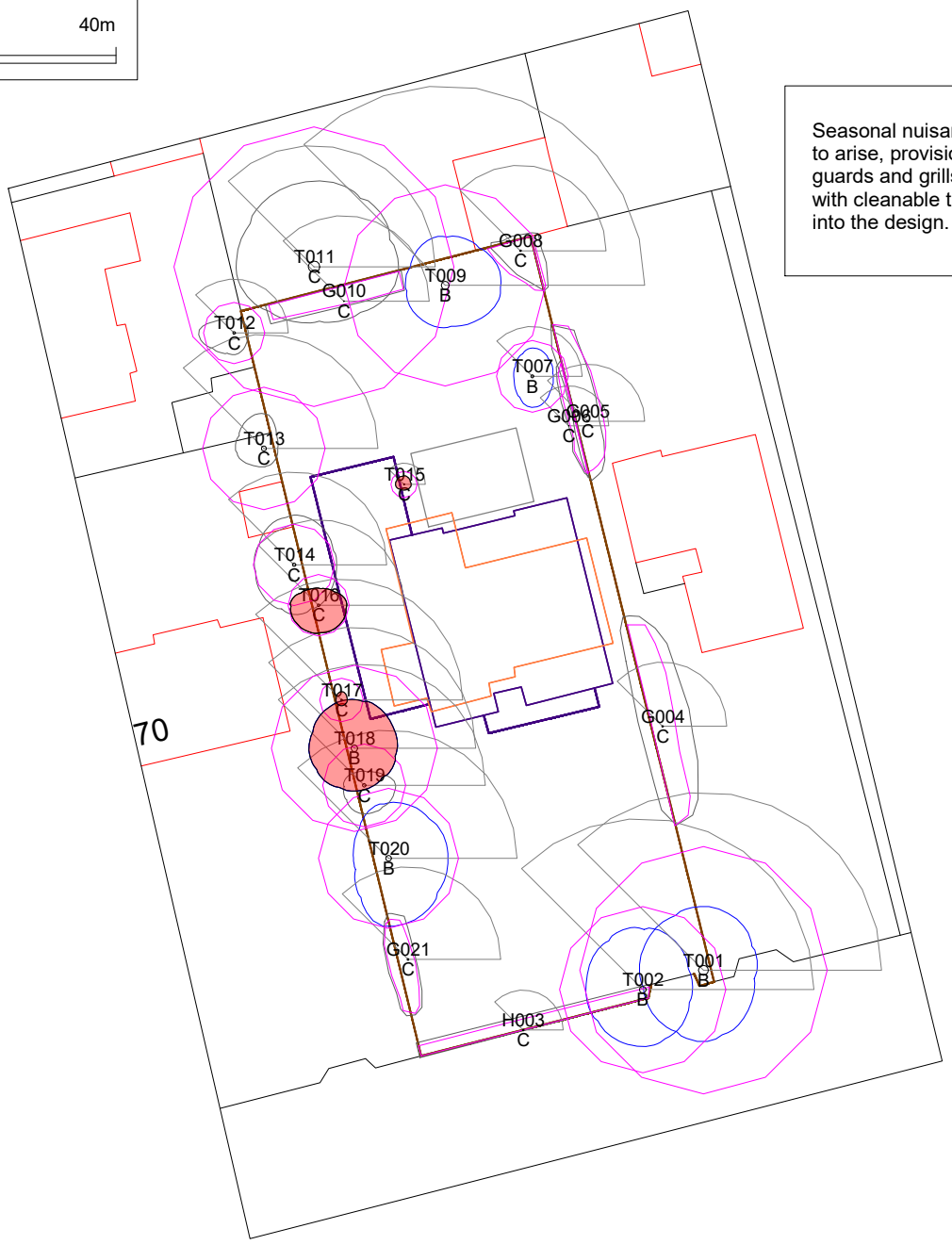
Category 'C'

Category 'U'

0 40m

There is insufficient information relating to below ground infrastructure available at present to comment as to whether or not their would-be adequate space for these to be installed outside of RPAs. If services do enter RPAs the use of hand digging as detailed in the National Joint Utilities Group publication 'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees' (NJUG 10, Volume 4, 2007) will be undertaken to minimise the impact on the tree roots.

Seasonal nuisance issues can be expected to arise, provision should be made for leaf guards and grills to be installed on gutters with cleanable traps on down pipes factored i into the design.



Key

- Tree To Be Removed
- Proposed Stucture
- Proposed Hard Landscaping
- Exsiting Structure
- Existing Wall & Fence

Urban Tree Management

0800 222 9529

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Tree Protection Plan

SCALE : 1 : 500 @ A3

DATE : 10/03/2026

N

MAP FILENAME :

68 Oxford Road, Dewsbury,WF13 4EH

Crown Spread

Root Protection Area

Shading Arc

Category 'A'

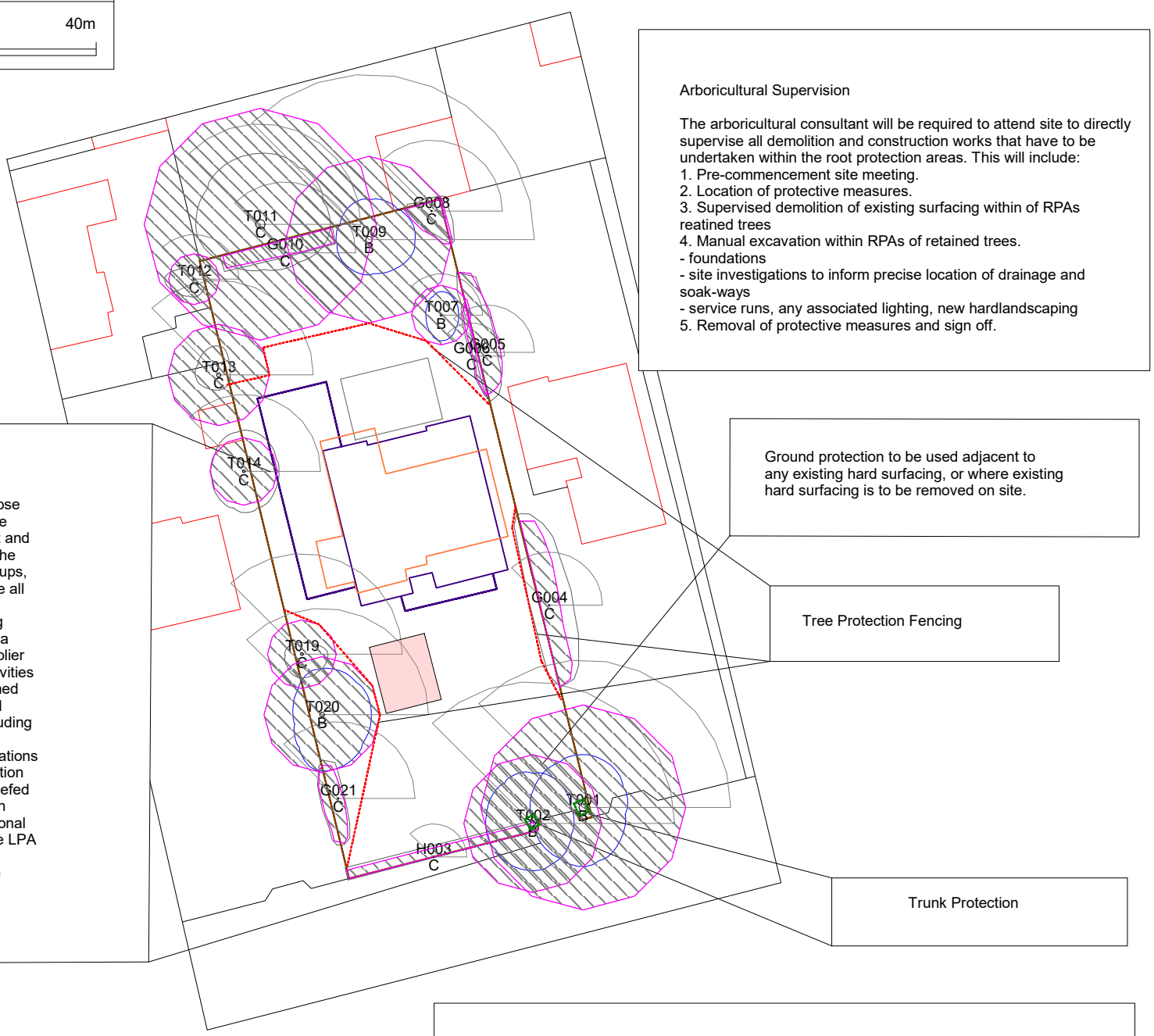
Category 'B'

Category 'C'

Category 'U'

0 40m

Construction Exclusion Zone
A construction exclusion zone (CEZ) is a designated area where there is to be no construction activity what-so-ever. Access to the area for construction personnel or machinery is strictly prohibited and there is no scope for materials or waste storage etc



Arboricultural Supervision

The arboricultural consultant will be required to attend site to directly supervise all demolition and construction works that have to be undertaken within the root protection areas. This will include:
1. Pre-commencement site meeting.
2. Location of protective measures.
3. Supervised demolition of existing surfacing within of RPAs reatined trees
4. Manual excavation within RPAs of retained trees.
- foundations
- site investigations to inform precise location of drainage and soak-ways
- service runs, any associated lighting, new hardlandscaping
5. Removal of protective measures and sign off.

General Canopy Protection
Since the canopies of retained trees may be in close proximity to areas of plant operation, the following restrictions will apply. All plant and machinery must be positioned outside the defined RPAs of retained trees and groups, and the appointed contractor will ensure all personnel are made aware of branch locations and the need to avoid causing damage. Prior to any lifting operations, a representative from the equipment supplier shall visit the site to confirm that all activities can be undertaken without risk to retained trees. A lifting plan will be prepared and submitted for approval in advance, including specific provisions to prevent potential canopy or stem damage. All lifting operations will be carried out under the close direction of a qualified banksman, who will be briefed on the requirement to avoid contact with stems and branches. Should any additional tree removal or pruning be required, the LPA Tree Officer must be contacted and the scope of works agreed in writing before proceeding

Ground protection to be used adjacent to any existing hard surfacing, or where existing hard surfacing is to be removed on site.

Tree Protection Fencing

Trunk Protection

Key

- Tree To Be Removed
- RPA Where ground protection must be installed
- Arboricultural Supervision
- Construction Exclusion Zone (CEZ)
- Proposed Stucture
- Proposed Hard Landscaping
- Exsiting Structure
- Existing Wall & Fence
- Tree Protection Fencing
- Trunk Protection

Prohibition

• Mechanical digging or scraping is not permitted within a defined root protection area or within areas cordoned off by protective barrier fencing.
• No access will be permitted within the protected areas.
• No materials, equipment or debris will be stored within any of the fenced areas, or against the fencing.
• Fires are not permitted within 10m of any vegetation.
• Leaning objects against or attaching of objects to a tree is not permitted.
• Machinery, plant and vehicles are not permitted to be washed down within 10m of vegetation. Chemicals and materials are not to be transported, stored, used or mixed within a root protection area or within areas cordoned off by protective barrier fencing.
• Cement silos, mixing site to be situated within a bunded area to prevent pillage/leaking of chemicals harmful to trees. These areas are to be sited well clear of protected trees.
• Refuelling of plant or machinery is prohibited within 10m of the construction exclusion zones. It is essential that allowance should be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.
• Where machinery is to be used within 5m of retained tree canopies a banks man will be required at all times whilst setting up, moving or operating within this distance of retained trees canopies.
• Storage of all caustic material and chemicals are to be situated well clear of protected areas and preferably on lower ground if slopes are present, or to be situated within a bo

1 PRELIMINARY ARBORICULTURAL METHOD STATEMENT

68 Oxford Rd, Dewsbury, WF13 4EH

In accordance with BS5837:2012Trees in relation to design, demolition & construction – Recommendations

Overview

1.1 This Preliminary Arboricultural Method Statement (AMS) provides best practice measures to be adopted protect retained trees during the development process. It has been prepared to inform the planning and the construction/development process.

1.2 The document also provides details of specific measures required to protect retained trees from potentially harmful activities such as the construction of hard surfaces within the RPA.

1.3 A copy of this report must be kept at each site and be permanently available for the duration of the development process. It can be:

- Included in the tender documents to identify and quantify the tree protection measures and management requirements.
- Used to plan the timing of site operations to minimise the impact to trees; and
- Referenced on site for practical guidance on how to protect trees.

1.4 A Tree Protection Plan (TPP) has been prepared to provide graphical illustration of the protection measures required.

Sequence of Activities

1.5 To ensure adequate protection of retained trees, the following activities should be adhered too:

- The Main Works Contractor (MWC) must be provided with a copy of this method statement and all associated attachment prior to the commencement of any site clearance, enabling or construction works.
- Undertake tree works and removals as detailed in this method statement.
- Erect tree protective fencing and install ground protection measures in accordance with attached plans.
- Brief all site operatives and sub-contractors on the requirements of tree protection measures and Construction Exclusion Zones across the site.
- Ensure site monitoring and report of the protection measures are undertaken in accordance with the Arboricultural Monitoring Programme

Supervision

1.6 A suitably competent and qualified arboriculturist will be appointed as the 'Project Arboriculturist; to provide advice to the site enabling and construction team and to supervise any works that have the potential to cause harm to retained trees.

1.7 Site inspections will be undertaken at key points in the development programme as well as at frequent intervals.

1.8 The Project Arboriculturist shall be the principle point of contract for the MWC on all matters relating to trees and shall liaise as required with the LPA tree officers.

1.9 An Arboricultural Monitoring Programme (AMP) has been prepared to support this method statement and is detailed in Table 1 below.

1.10 The full extents of site visits will be dependent on construction plans and details will be agreed during the pre-commencement meeting with the MWC.

Table 1 - Arboricultural Monitoring Programme

Details	Timing
Meet with the MWC to confirm extent of tree protection measures and agree any variations.	Pre-commencement
Site visit to check tree removals and pruning works have been undertaken Appropriately	During development
Site visit(s) to ensure Tree Protective Fencing have been installed correctly.	During development
Site visit(s) to supervise permanent ground protection installation within the RPAs of retained trees	During development
Site visit to address any snagging issues and confirm Tree Protective Fencing and temporary ground protection can be removed.	Post development

1.11 Any damage to TPF will be rectified as soon as practically possible and any machinery works ceased in the immediate vicinity until repairs are complete.

1.12 Following each site visit a File Note will be prepared and circulated to relevant project contacts and the LPA Tree Officer.

1.13 All tree protection measures will remain in place throughout the development phase.

1.14 The project arboriculturist will undertake site visits at key stages of the development process and a post-inspection report will be prepared after every site visit detailing observations and any recommendations for specific measures that may be required in the forthcoming period. A copy of this report will be sent to the LPA tree officer and circulated to the project team including the site manager for the main works contractor.

Responsibilities

1.15 It will be the responsibility of the MWC to ensure that the requirements included in this method statement are adhered to at all times and that the monitoring regime is adopted on site for the duration of the project.

1.16 The MWC will be responsible for contacting the retained project arboriculturist at any time issues are raised relating to trees on site. This includes but is not limited to:

- Additional tree pruning or removals.
- Amendments to or removal of tree protection measures.
- Access to Construction Exclusion Zones; and
- Potential impacts to retained trees (i.e. construction access, utility installation etc.) that have arisen since the preparation of this method statement.

1.17 The MWC will be responsible for ensuring any sub-contractors are suitably briefed on the necessary tree protection measures that are required on the site. This method statement and attached plans should be utilised in 'toolbox' talks.

1.18 If at any time pruning works or additional tree removals are required, permission must be sought from the relevant Local Planning Authority or Forestry Commission (as appropriate) before tree works commence. Any such approved works must be undertaken in accordance with BS3998:2010 Tree Work – Recommendations.

1.19 The MWC must also be aware of the need to comply with the Wildlife and Countryside Act (1981), Countryside Rights of Way Act (2000) and Conservation of Habitats and Species Regulations (2010) in relation to any additional tree works

Tree Removals

1.20 Trees for removal have been noted on the AIP with red hatching and a dashed red outline.

1.21 Great care should be taken during the tree removal process to ensure that retained trees are not adversely impacted. The following methodology should be adhered to at all times:

- Any machinery used during the tree removal process be sited outside the RPA of retained trees.
- The felling of trees will be undertaken to avoid damaging retained trees.
- Where the removal of stumps of felled trees is required, great care will be taken to ensure any retained trees in close proximity remain free from harm.

1.22 All works will be conducted by a suitably qualified arborist working in accordance with BS3998:2010 Tree Work – Recommendations.

Facilitation Tree Works

1.23 The trees requiring facilitation works to facilitate development will be carried out by a suitably qualified arborist working in accordance with BS3998:2010 Tree Work – Recommendations.

Protection of Retained Trees

1.24 Where practical all retained trees will be protected through the construction phase using barriers to limit the potential for harm from machinery, materials or personnel.

1.25 The primary form of protection is the use of fencing around the trees to prevent access within a protected buffer zone. This buffer zone is a Construction Exclusion Zone (CEZ) and there will be no access within it during the construction phase.

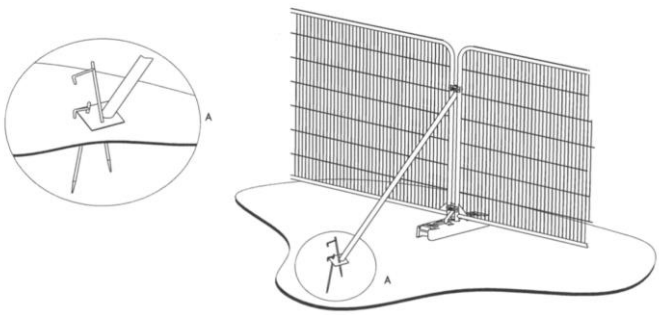
Tree Protection Fencing

1.26 Protective fencing will be erected around retained trees prior to the commencement of any site works including mobilisation of machinery and materials.

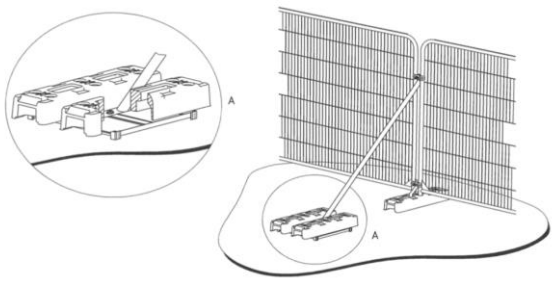
1.27 The location of the fencing has been marked on the TPP prepared for this AMS. This is shown as a black dashed line, and the CEZ has been highlighted as orange hatching behind the fencing.

1.28 The Tree Protective Fencing will require adjustment between Phase 1 and Phase 2 works. This will need to be done in liaison with the project arboriculturist.

1.29 The appropriate form of fencing for this project will be wire mesh panels that will be supported on the ground by a rubberised foot that will in turn be pinned to the ground using metal stakes driven a minimum of 500mm into the ground. An example of the fencing panel construction is provided in below.



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Fig 1. Tree protection fencing specification (extract from BS 5837: 2012)

1.30 Weather-proof notices shall be attached to any protective fencing located adjacent to retained trees displaying the words “Construction Exclusion Zone” and listing restrictions which apply. All personnel must be made aware of these restrictions.

Tree Protection Area

KEEP OUT

Do **not** move this fence

(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECT OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

An example of a suitable sign for the fencing is provided in Fig 2.

Protective trunk Wrapping

1.31 To be attached to the trunks of retained trees prior to the commencement of all works on site, and retained in place throughout construction. To comprise of a minimum of three wrappings of clean dry hessian around the trunk from ground level up to 2.3m high and held in place using sisal. Onto the hessian a minimum of three wraps of chestnut paling and is to be held in place by 2.50mm mild steel galvanized wire in three locations and fixed into place using fencing staples fixed into the chestnut paling.

Construction Exclusion Zone (CEZ)

1.32 The CEZ is the area identified by the Project Arboriculturist as the area to be protected during development from Site clearance and construction work through the use of barriers and/or ground protection to ensure the successful long-term retention of a tree. Fencing or ground protection shall not be taken down or relocated at any time without prior agreement and/or Site supervision as recommended by the Project Arboriculturist.

1.33 All areas excluded by protective tree fencing shall be treated as CEZs and the following restrictions shall apply:

- No construction activity can occur within these areas.
- No works on trees unless agreed by the Project Arboriculturist.
- No alterations of ground levels or conditions.
- No chemicals or cement washings.
- No excavation.
- No temporary structures.
- No storage of soil, rubble or other materials.
- No vehicles or machinery to be used or parked without appropriate ground protection measures as per BS5837 recommendations. This will require the use of a proprietary system of reinforced concrete slabs/steel road plates on a compressible layer, or side butting scaffold boards/ 18mm plywood sheets on a compressible layer. The type of ground protection used shall be appropriate for the potential loading applied.
- No fixtures (lighting, signs etc.) to be attached to trees.
- No fires within 10 metres of the canopies of any tree or hedgerow.

*Site huts, provided they are of the “Jack Leg” type, can be sited to act as ground protection for the duration of the construction.

Removal of Existing Surfaces

1.34 Any enabling works within the RPA of retained trees will be undertaken in accordance with the following methodology:

- Care must be taken to avoid physical contact with the canopies of trees during the enabling works. A banksman will be used where such conflicts could occur.
- If localised pruning is required, the LPA Tree Officer shall be contacted and the scope of works agreed in writing.
- All machinery used to undertake enabling works will be sited outside the RPAs of existing trees or working from on top of existing hard standing.

- Debris may be removed from the RPAs of retained trees by using machinery with a long reach or through pedestrian access. Care must be taken to avoid damage to the existing ground surface to ensure the rooting environment remains sustainable post demolition.
- The removal of existing hardstanding or foundations within the RPAs of retained trees will be undertaken using hand tools only. Appropriate tools for manually removing debris may include a pneumatic breaker, crowbar, sledgehammer, pick, mattock, shovel, trowel and fork.
- Severance of roots over 25mm diameter should be avoided unless advised by the retained Project Arboriculturist. Secateurs and a handsaw must be available to deal with any roots that are exposed. Where roots will remain exposed for any period of time the roots must be wrapped in hessian sacking for protection.

Temporary Ground Protection

1.35 New temporary ground protection should be capable of supporting any traffic entering or using the Site without being distorted or causing compaction of underlying soil. The ground protection might comprise one of the following:

- **For pedestrian movements only a single** thickness of scaffold boards placed either on top of a driven scaffold frame so as to form a suspended walkway or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip) laid onto a geotextile membrane.
- **For pedestrian-operated plant up to a gross weight of 2 t** proprietary inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane.
- **For wheeled or tracked construction traffic exceeding 2t gross weight**, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the potential loading to which it will be subjected.

General Canopy Protection

1.36 Since the canopies of retained trees may be in close proximity to areas of plant operation, the following restrictions will apply:

- All plant will be sited outside the defined RPAs of retained trees / groups, and the appointed contractor will ensure all relevant personnel shall be made aware of the location of branches and the need to avoid causing damage to them.
- Prior to the implementation of lifting operations, a representative from the equipment supply company shall visit the Site and ensure all operations can be completed without causing damage to retained trees. A lifting plan will be prepared and submitted for approval prior to all lifting operations. The lifting plan will make provision for the potential for damage of retained trees.

- All lifting operations will be completed under the close direction of a qualified banksman, who will be briefed by the appointed contractor as to the need to avoid damage the stems and branches of retained trees.

1.37 Should additionally tree removal or pruning be required the LPA Tree Officer shall be contacted and the scope of works agreed in writing.

Demolition

1.38 Any demolition works within the RPA of retained trees will be undertaken in accordance with the following methodology:

- Demolition works will be undertaken using a 'top down, pull back' technique. This will minimise the potential of physical harm to retained trees.
- Care must be taken to avoid physical contact with the canopies of offsite trees during the demolition works. A banksman will be used where such conflicts could occur.
- If localised pruning is required, the LPA Tree Officer shall be contacted, and the scope of works agreed in writing.
- All machinery used to undertake demolition works will be sited outside the RPAs of existing trees or working from on top of existing hard standing.
- Debris may be removed from the RPAs of retained trees by using machinery with a long reach or through pedestrian access. Care must be taken to avoid damage to the existing ground surface to ensure the rooting environment remains sustainable post demolition.
- The removal of existing hardstanding or foundations within the RPAs of retained trees will be undertaken using hand tools only. Appropriate tools for manually removing debris may include a pneumatic breaker, crowbar, sledgehammer, pick, mattock, shovel, trowel and fork.
- Severance of roots over 25mm diameter should be avoided unless advised by the retained Project Arboriculturist. Secateurs and a handsaw must be available to deal with any roots that are exposed. Where roots will remain exposed for any period of time the roots must be wrapped in hessian sacking for protection.

Supervised Excavation

1.39 Excavation within and adjacent to RPAs are to be undertaken under direct on-site arboricultural supervision. Excavation will consist of a mixture of mechanical and manual excavation. Initial excavation will be undertaken by hand under to a minimum of 200mm deep of any excavation, the soil is to be loosened with the use of a fork or pick and then cleared with the aid of an air-spade, air-vac or shovel.

1.40 There after excavation can be undertaken using an excavator with a suitably sized toothless grading bucket using a grading motion rather than digging and taking no more than 10 - 20mm deep swipes at any time, if any roots are discovered mechanical excavation will be stopped immediately and manual excavation will resume to expose the root.

1.41 All roots to be cut will be cleanly severed with the use of a hand saw or secateurs. The edge of the excavation closest to the retained trees will be covered over with damp hessian to prevent drying out, and where necessary be shuttered to prevent soil collapse or contamination by concrete. If appropriate soil beneath the depth 600mm may be sheet piled, tegular piled or individual piles. Any deeper excavations may be undertaken by a machine provided it works form outside of the RPA or has appropriate ground protection in place to move and work upon

Construction

1.42 Prior to the construction of the proposed development, a copy of the construction method statement should have been submitted and approved by the project arboriculturist and LPA tree officer, to ensure that there is no conflict with this method statement. All excavations and construction work within or immediately adjacent to RPAs or canopies of retained trees is to be undertaken under the direct on-site supervision of an arboriculturist.

Foundation design

1.43 Concrete foundations/slabs

- Prior to concrete being poured to form the foundations/slabs within or immediately adjacent to the RPAs of retained trees the excavation is to be lined and sealed to prevent any leaching of the concrete into the soil and causing desiccation of retained roots by concrete run off.

Hazardous Materials

1.44 Any mixing of cement-based materials is to take place outside the RPAs of all trees. Provision shall be made to ensure that the mixing area is contained so that no water runoff enters the RPA of any trees. All mixers and barrows shall be cleaned within this dedicated mixing area.

1.45 All other chemicals hazardous to tree health, including petrol and diesel, are to be stored in suitable containers as specified by the Control of Substances Hazardous to Health (COSHH) Regulations (HMSO, 2002: The Control of Substances Hazardous to Health Regulations 2002), and kept away from the RPAs.

Contractor compound, site huts and welfare units.

1.46 The contractor's compound, including all site huts, storage and welfare units, will be located outside the CEZ of retained trees.

Service installation overhead and underground

1.47 Where new services are required within the Root Protection Areas (RPAs) of retained trees these will be undertaken in accordance with the following methodology.

1.48 Should plans deviate when on-site works commence and require additional service installation with the RPAs of retained trees, the Project Arboriculturist must be consulted before being installed.

1.49 Should it not be possible to redesign new services outside the RPAs of retained trees then the installation of any services or ducting must be carried out following the National Joint Utilities Group 'Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.

1.50 Any such services which are required within the RPAs of retained trees must adhere to the following methodology:

General Guidance

- Any machinery used to remove existing hardstanding will work from on top of existing hardstanding or from temporary load-bearing matting.
- Any topsoil that is stripped will be reinstated once the project is complete.
- Any exposed roots will be wrapped in hessian to prevent desiccation. All hessian will be removed prior to backfilling with soil.
- Replaced soil will be compacted by footfall and the use of whacker plates or rollers are prohibited. The soil should be left slightly mounded to help with settlement.

Airspade

- The air spade will be used by an experienced operator, who is also a trained arboriculturist.
- The air spade should enable the flow of air to be controlled by a hand-trigger.
- The air spade compressor will be fitted with crack oil filters to prevent oil spillage onto the ground to prevent any contamination of the soil. Spill kits should be kept readily available.
- The air spade will be used in short bursts to loosen soil around major roots (>50mm diameter) and loosened soil will be removed using hand-tools only.
- A barrier will be erected around the extents of the trench to minimise soil being blown away from the excavation area.
- Hand-tools will be utilised to loosen soil around tree roots or areas that cannot be penetrated by the air spade. These tools may include spade, mattock, fork and trowel.
- Wherever possible tree roots will be retained. This includes fibrous roots that may be exposed during the excavation process.
- Root severance of any roots between 10-50mm diameter will only be undertaken in liaison with the project arboriculturist.

Hand-dig

- Appropriate tools for manually removing debris may include a crowbar, sledgehammer, pick, mattock, shovel, spade, trowel, fork and wheelbarrow.
- Wherever possible tree roots will be retained. This includes fibrous roots that may be exposed during the excavation process.

- Root severance of any roots between 10-50mm diameter will only be undertaken in liaison with the project arboriculturist.

Boundary fences

1.51 Proposed and or replacement boundary fence posts are to be located so that they will not damage or require the removal of roots important to the stability of any trees. This may require individual posts to be relocated which will increase or decrease the spacing between the posts (bay lengths).

1.52 All posts within or close proximity to retained trees are to be excavated manually, using handheld tools (spade, shovel, rabbiting spade, shove holer's / post hole digger), no mechanised equipment (handheld or plant mounted post borer) is to be used

Soft Landscaping

1.53 New tree and shrub planting is proposed in close proximity to existing trees. If new planting is required within the RPAs of retained trees, then the following methodology must be adhered too:

- Wherever possible tree roots will be retained. This includes fibrous roots that
- Wherever possible tree roots will be retained. This includes fibrous roots that
- Wherever possible existing levels will remain in situ. A De-Vegetation strip (<10mm depth) will be undertaken by machinery working from outside the RPAs of retained trees and under supervision of the project arboriculturist.
- It may be appropriate to utilise hand-tools in close proximity to the base of trees, or where surface roots are evident. Appropriate hand tools may include pick, mattock, shovel, trowel and fork.
- Severance of tree roots will be avoided unless advised by TFL.
- The use of scarifiers or cultivators within the RPAs is strictly prohibited.
- Introduction of topsoil within the RPAs of trees will be limited (maximum 50mm depth). This should be introduced via machinery working outside the RPAs and distributed by hand-tools only.

Post Development

1.54 No fencing or other protective measures will be moved, dismantled or taken off site until the Project arboriculturist has confirmed that all machinery has been removed from the site and any construction activity that could cause harm to retained trees has been completed.

1.55 The project arboriculturist will review the condition of the trees post-construction to check for signs of intolerance to the change in conditions, the effect of development works and any accidental damage.

1.56 This may result in additional remedial measures or tree works to rectify the harm caused.

1.57 A site inspection note will be provided to the MWC detailing any remedial treatments/tree works