IAIN TAVENDALE F.Arbor.A.

ARBORICULTURAL CONSULTANT

Arboricultural Impact Assessment

Site;

Proposed Residential Development;

St Lukes Site, East Bierley Marsh.

Client:

Planned Contracts.

High Bank Farm, Stoney Bank Road, Earby, Barnoldswick, Lancashire, BB18 6LD
Telephone/Fax: 01282 853333 Mobile: 07836 246062
Email: iain@iaintavendale.co.uk

Tree Survey and Methodology

A full tree survey of the site was prepared on the 13th February 2020 all in accordance with BS5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations.

A detailed topographical survey was also prepared from which all relevant tree survey information has been imported to produce the Site Masterplan BIERM-NJA-01-XX-DR-A-PL_00 Rev. P1 and Tree Constraints Plan.

The survey was undertaken from ground level. No excavations were carried out or soil or root samples taken. If a more detailed assessment / inspection of a particular item was deemed necessary, it has been noted in the survey schedule. No aerial inspections or invasive probings or drillings have been undertaken.

Retention values were evaluated following guidance within Table 1 of BS5837 – 'Cascade Chart for Tree Quality Assessment.' This specifies four main categories.

1. *CAT A – Trees of high quality with an estimated remaining life expectancy of at least 40 years whereby they could make a substantial long term contribution to the area.*
2. *CAT B – Trees of moderate quality with an estimated remaining life expectancy of at least 20 years that are still of sufficient quality to make a substantial contribution to the area.*
3. *CAT C – Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm. All items within this category could be retained but would not be expected to impose a significant constraint on development.*
4. *CAT U – Trees in such a condition that they cannot be realistically retained as living trees in the context of the current land use for longer than 10 years. They may however have existing or potential conservation value which it might be desirable to preserve.*

Management recommendations have been indicated where considered appropriate and necessary to promote tree health and viability and maintain an acceptable level of safety in respect of existing site conditions and the knowledge that some development is proposed.

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General Description of Site and Surroundings

The site and surroundings have been described in detail within other submissions.

In respect of arboricultural issues, trees exist within a linear group located off site to the north west, within a loose group on site to the eastern boundary, off site to the south east and in another small group adjacent to the site entrance to the south.

All trees are visible from public areas outside the site due to lack of obstructions on site although the offsite Horse Chestnut and Cypress etc. within G1 are only partially visible.

An inspection of the site and consideration of the submitted tree survey will indicate that the majority of trees are in the mature age category with only minimal ornamental / semi ornamental replanting having been implemented in recent times.

Soils within the area and / or the site have not been analysed however, the successful establishment of trees within the area indicate soils are probably within the neutral to acid range and not waterlogged. The size and growth rates of the general tree population also suggest that soils are reasonably fertile and the local micro climates relatively mild and / or sheltered.

Description of Proposed Development

All such issues have been fully addressed in associated submissions.

As previously stated the layout and relevant tree information are indicated on the Site Masterplan BIERM-NJA-01-XX-DR-A-PL_00 Rev. P1 and Tree Constraints Plan

Designation Relating to Trees

It is understood that no trees within the site are protected but that the items within the Memorial Gardens are included within a Kirklees Council Tree Preservation. As such no works may be undertaken to those trees without due notification to and consent from the Local Authority.

The potential effect of development on trees whether statutorily protected or not is a material consideration that is taken into account in dealing with planning applications.

Although some items are afforded statutory protection, such orders impose no duty on the owners of the trees and woodlands affected to carry out pruning or other maintenance, either to any particular standard or at all.

This must be a matter for the owners' discretion, subject to the duties laid upon him or her by the common law. If a local authority wishes to encourage such works to be

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carried out, it must do so by permission, through the offer of grants or possibly by the imposition of conditions on consents.

Current Situation

At present the trees identified within the curtilage of the Memorial Gardens appear to be in acceptable conditioned and are most probably managed as and when necessary to abate nuisance. A section of wall adjacent to the trees and possibly displaced by incremental root growth has recently been rebuilt indicating ongoing attention.

The various on-site trees have clearly not been managed to any degree in recent times and the failures and evident decline support such findings.

The off-site Horse Chestnut has been "managed" in that it has been clearly topped but, such operations are not desirable and have created ongoing issues that will require further management to retain a safe and controlled feature.

Implications of Development

1. Direct Loss of Trees.

To physically construct the proposed new dwellings & garages, create the access road, passing places, turning head etc., the following trees will require removal:

BS5837 CAT	TREE No's	TOTAL
Cat – A High Quality	None	0
Cat – B Moderate Quality	T5	1 tree.
Cat – C Low Quality	T8	1 tree.
Cat – U Poor Quality	T7 + G1	1 tree & 1 group.

The loss of the trees on the site frontage will have a visual impact upon the local environment when viewed from public areas outsider the site although they could reasonably be considered for removal regardless of development. The spruce to be removed within the site will have less of an impact on the visual amenity of the local environment.

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2. Indirect Loss of Trees

It is not considered that there will be any indirect loss of trees.

BS5837 CAT	TREE No's	TOTAL
Cat – A High Quality	None	0
Cat – B Moderate Quality	None	0
Cat – C Low Quality	None	0
Cat – U Poor Quality	None	0

No impacts will therefore be caused.

3. Pruning of Trees for Development.

There will be a requirement to reduce the canopy spread of T6 across the site to afford reasonable clearances to the proposed unit:

BS5837 CAT	TREE No's	TOTAL
Cat – A High Quality	None	0
Cat – B Moderate Quality	None	0
Cat – C Low Quality	T6	1 tree.
Cat – U Poor Quality	None	0

A minor impact to the visual amenity currently afforded to this tree will be caused by the pruning works. The tree has been incorrectly pruned in the past however, is clearly in conflict with its current environment and the minor pruning works would not be considered detrimental.

4. Indirect Impacts on Trees for Access During Construction.

For construction of Plot 4, access will be required up to the fence line to the east and within the possible / expected root protection area of T6. Whilst this tree has been damaged by inappropriate pruning and may be in conflict with its current environment, the expected root protection area should be protected.

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There is also restricted space to the approximate north west of Plot 5 to the Limes.

BS5837 CAT	TREE No's	TOTAL
Cat – A High Quality	None	0
Cat – B Moderate Quality	T1 – T4	4 trees.
Cat – C Low Quality	T6	1
Cat – U Poor Quality	None	0

Any potential harmful impacts can however be readily mitigated by utilising appropriate methodologies all of which – if required, can be readily conditioned and enforced by the Local Authority and implemented by the developer.

Discussion.

Any submitted Statement to identify the methodologies for the construction of a new access road, provision of footpaths and similar would be expected to follow guidance within BS5837:2012 Trees in relation to design, demolition and construction – Recommendations Section 6. et al in respect of ground protection and barriers.

Concerning ground protection adjacent to Plot 4;

6.2.3.3 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.

NOTE The ground protection might comprise one of the following:

a) 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;

b) 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;

c) for wheeled or tracked construction traffic exceeding 2 t 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 likely loading to which it will be subjected.

In this instance it is not expected that vehicular access will be required and as such ground protection as specified in a) would be considered adequate. If, however

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vehicular access was required for whatever reason, the protective surface specification could be readily upgraded.

In respect of restricted working space to the west of Plot 5. The protective barrier will be placed on the limit of the expected root protection area of the adjacent Limes with a very small encroachment into that of T2 for construction of the bin / cycle store. Such an intrusion is negligible and with all other soils contiguous with the root protection areas remaining open and/or undisturbed, it is not expected that any harm would be caused.

The scaffolding to the western elevation would be of reduced width but access would be acceptable and workable, with all materials being delivered from the front of the plot.

Effectively therefore, any potential harmful impacts can be effectively avoided.

By appropriately considering retained trees and providing the options in respect of construction, any tree damage/disturbance can be minimised providing benefit to the local environment and a moderately beneficial impact on rooting environments.

Indirect Development Impacts in General.

As indicated in the tree survey and proposed layout, some minor pruning and felling will be required to implement the development although the proposed operations are, with the exception of T5, to relatively poor quality material with limited potential.

Such actions could however be considered necessary, and reasonable regardless of development by being in accordance with good arboricultural and silvicultural practices and due to the proximity of third parties and public access.

All such works will have some impact on the visual amenity of the area when viewed from public areas outside the site. Replanting in mitigation is however proposed and indicated on the submitted layout and if necessary is open to discussion with the LPA.

The implementation of such management and suitable mitigation planting can have a moderate beneficial impact.

Construction Methodology / Arboricultural Method Statement.

It would be expected that the requirement for an Arboricultural Method Statement be conditioned to any approval for development within the site. Such a document as detailed in BS5837:2012 Trees in relation to design, demolition and construction - Recommendations would be appropriate to the proposals and would be expected to typically address the following issues:

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- Protection to all retained trees before any materials or machinery are brought onto the site and before any demolition, development, or stripping of soil commences.

- Removal of any existing structures and hard surfacing.

- Installation of temporary ground protection.

- Installation of new hard surfacing.

- Specialist foundations, installation techniques, floor levels and similar.

- Retaining structures if required.

- Storage compounds and temporary services.

- Auditable / audited system of arboricultural site monitoring, including a schedule of specific site events requiring input or supervision.

- Contact details for all relevant parties.

In respect of the provision of the Method Statement, in accordance with BS5837 Annex B Table B.1, once the feasibility and planning/design section is complete and Scheme Design Approvals are obtained from Clients and Regulatory bodies, the detailed/technical design stage should be implemented.

In arboricultural terms this will basically involve the preparation and submission of a detailed and comprehensive document to discharge the relevant conditions.

The provision of such a Method Statement will ensure that there are neutral / negligible impacts on the retained treescape.

Proximity of Trees to Structures.

The properties have been designed to adhere to guidance within BS5837:2012 in that they are located outside the root protection areas of trees to be retained. It is accepted that some access requirements during construction are within the root protection area of a retained tree but it has been demonstrated that adequate ground protection can be provided

Soils will be analysed and if necessary foundations designed to take into account the risks of indirect damage caused by trees and vegetation either existing or inserted at a later date.

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Space has also been permitted to allow future growth of retained trees although in most instances trees are in the mature age category and substantial increases in size / spread would not be expected.

The proposed buildings have been designed to take account of existing trees, their size and density and the effect that these will have on light availability. Gardens and sitting areas would also be expected to achieve direct sunlight for at least part of the day.

The relationship of dwellings to large trees can cause apprehension. The layout has considered such factors and the design has located the units within each plot so as to minimise conflicts. Such locations and juxtapositions will also avoid the need for frequent pruning.

The design creates acceptably spacious, open garden environments that can be appropriately landscaped to the householder's personal requirements and would be expected to support a wide range of plant material.

In respect of seasonal nuisances: leaf fall, fruit, honeydew or similar, parking areas, paths etc., have been located outside established canopies.

If it is considered that conflicts may arise these can be addressed in the detail design stage and the use of non-slip paving, provisions of leaf guards or grills on gutters and gullies, provision of access and means of maintenance or similar can all be incorporated. All such issues are fully in accordance with the guidelines and advice contained within BS5837 Section 5.3.

In consideration of the foregoing assessments it is considered that there will be neutral / negligible impacts caused to retained trees by the proximity of structures.

Services

The location of services into or out of the site would be expected to follow the proposed access road thereby avoiding retained trees and their expected root protection areas.

Should changes to service routes be required these will be fully assessed and if necessary any excavations will be undertaken manually or alternative techniques such as drilling or thrust boring utilised all as per guidance in BS5837:2012 or the NJUG publication Volume 4 – Guidelines for the Planning, Installation and Maintenance of utility Apparatus in Proximity to Trees – 2007.

There will therefore be neutral / negligible impact caused by the provision of services.

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Landscaping / New Planting

Some tree loss will take place as a result of the development and access requirements.

New tree planting and landscaping will be implemented all as indicated on the proposed layout and it would be expected that appropriate conditions will be attached to any approval. These would normally incorporate both management of any existing vegetation and the new planting, all to the benefit of the new development.

It would be expected that in accordance with normal conditions a five-year replacement requirement will be included for any items that fail to thrive.

All such operations will diversify the landscape, introduce a much needed new age category mix and promote wildlife by the production of flowers and fruits.

The implementation of new / replacement planting will provide a moderate beneficial impact to the environment.

Post Construction

Should development proceed, any new / retained trees will be managed as part of the approved scheme to create acceptable levels of safety. Such actions will also promote tree health and viability and will maximise the potential of the treescape.

By the site becoming formalised by the creation of individual garden areas it would be expected that a more detailed management regime will be established than that which currently exists which again, would be considered to be of overall benefit to the treescape.

Some items may be lost in the future due for example to age, suppression or proposed management as items would within any urban environment but, it would be expected that all such operations would be agreed or consented by the Local Planning Authority and replanting encouraged or conditioned.

It is reasonable to conclude therefore that as a result of the proposed development there would be no appreciable post development pressure to undertake either inappropriate or undesirable tree works to the detriment of the visual amenity currently afforded from public areas outside the site.

It is therefore considered that any post development pressures would have a negligible to moderately beneficial impact.

Conclusions

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From the foregoing information it can be reasonably concluded that some trees are required to be removed for access and construction works although the proposed replanting will mitigate such removals.

Various items in proximity to the proposed construction have been identified as being at risk from indirect impacts but, it has been comprehensively indicated that with appropriate methodologies, site management and modern materials all such risks can be avoided and an acceptable juxtaposition achieved.

All operations can be appropriately controlled by the implementation of a detailed Arboricultural Method Statement conditioned to an approval.

The design and layout of the dwellings has considered all arboricultural issues and will permit the construction to proceed without conflict with retained trees. The juxtaposition of structures to trees will also ensure there is good sunlight availability, the need for regular pruning regimes will be avoided, spacious and attractive garden environments can be formed and seasonal nuisances minimised.

All services can be connected and / or installed without impacting upon retained trees or if necessary, installed using accepted techniques that avoid damage or disturbance to rooting environments.

It would be expected that a landscaping scheme will be conditioned should approval be forthcoming necessitating management of existing features and the introduction of the proposed new material, the implementation of which will improve diversity, age category mixes and visual amenity.

Post construction impacts have been considered which indicate that by creating a formal environment with greater levels of activity and usage the treescape will be positively managed resulting in improved health and viability to the overall treescape.

It is reasonable to conclude therefore that in respect of arboricultural issues should the proposed development proceed there is likely to be a moderately beneficial impact to the future viability of the treescape.

Iain Tavendale F.Arbor.A

March 2020.

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