Our Ref: 05215.AIA.07.10.2019

Arboricultural Impact Assessment Report

Relating to development proposal at

Harlequins Shopping Centre, Exeter.

Client:

Curlew Alternative Property LP

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1 Summary

The application is for the re-development of a commercial site	The proposal is for the erection of two blocks of accommodation it's associated infrastructure and amenity areas.
KEY features have been retained & identified for management	This report considers the direct and indirect effects of the proposed development in relation to the existing trees; evaluates the magnitude and significance of arboricultural impacts and makes recommendations for control measures applicable throughout the construction stages of the project.
KEY trees have been identified for retention	The site consists of a group of moderate quality semi-mature trees and shrubs located within a bed that surrounds the existing car park.
The effects of tree loss are moderate in the short term	It is proposed four B category trees within the construction footprint of the re-configured entrance are removed. The trees are of poor individual quality with a limited viability. Their benefit is as a group (hence the B category) due to the combined canopy cover. However, they all have damaged stems due to car / vehicle damage limiting their viability. Therefore, any negative impact is of a short timescale, limiting its magnitude.
The visual impacts on amenity are short term	The trees to be removed is visible from within a short distance of the site, due to the presence of surrounding buildings and the topography. The trees are not visible in the wider townscape. The retained trees will soften the loss of TG1 due to screening value. Therefore, the visual impact is of a low magnitude.
The overall arboricultural impacts are minor and reversible	New planting is proposed resulting in a significant net gain in the quantity and quality of the tree cover, resulting in a long-term improvement to the site and locality.
The proposal accords with planning policy	The proposal accords with locally adopted policy and national policy and guidance.

Arboricultural Impact Assessment Report

Harlequins Shopping Centre, Exeter.

2 Introduction

Instruction

I have been instructed by Curlew Alternative Property LP (Client) to provide an arboricultural impact assessment, professional opinion and advice in relation to the proposed development.

This report includes evaluation of the direct and indirect effects of the proposed development and the resulting impacts on trees and local amenity.

Scope

Details of the report author, a general disclaimer and the limitations of this report are included as *Appendix 1*.

Accompanying Documents

This report must be read in conjunction with the following plan(s) and document(s); also instructed by the Client and/or produced as part of the design stage process:

Document/Drawing:	*Name/Ref:*	*Produced by:*
Tree Survey	05215.TreeSurvey.15.01.2019	Aspect Tree Consultancy
Tree Constraints Plan	05215.TCP.15.01.2019	Aspect Tree Consultancy
Tree Protection Plan	05215.TPP.01.10.2019	Aspect Tree Consultancy
Arboricultural method Statement	05215.AMS.TPP.02.10.2019	Aspect Tree Consultancy
Arboricultural method Statement	05215.AMS1.02.10.2019	Aspect Tree Consultancy
Layout	17161 L 94 01 C	LHC

Table 1 - Supporting plan & documents

3 Relevant Background Information

Statutory Designations

The presence of Tree Preservation Orders (TPOs) and/or Conservation Area status has been checked with the Local Planning Authority.

There are no TPOs covering trees on or directly adjacent to the site.

The site does fall within the Exeter City Conservation Area.

4 Baseline information and data collection

Brief site overview

The site is located to the north of Paul Street within the city of Exeter and is currently known as the Harlequins Shopping Centre.

The general layout and juxtaposition of the existing site features are shown on the following aerial image.

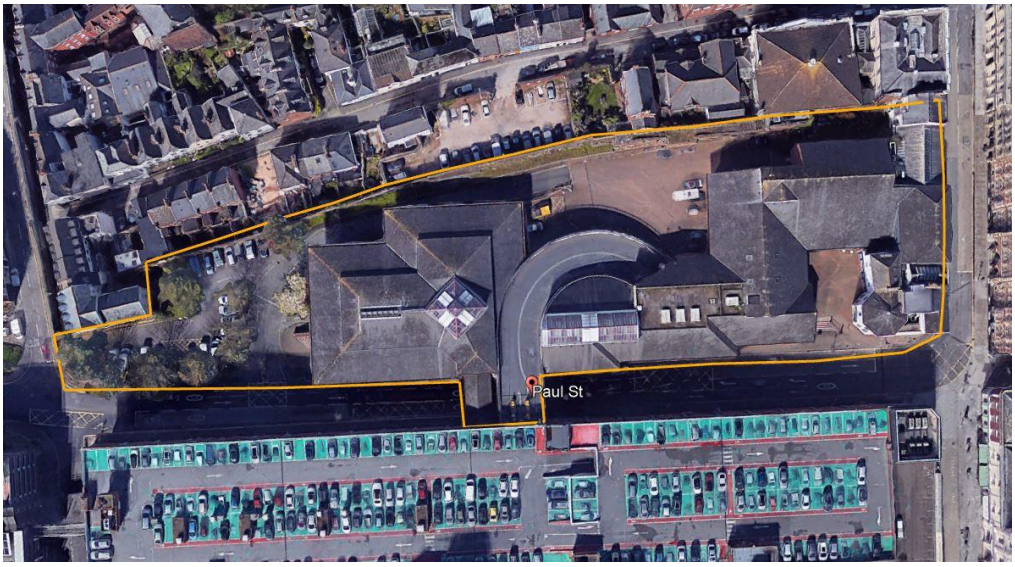


Image 1: Aerial site photo – Trees are located to the west of the proposed development.

The site is currently a shopping Centre located within the centre of Exeter City with access from Paul Street and Queen Street. The trees are located around the existing outside tarmac car park and the existing covered car park.

Site survey

I undertook the site visit and tree survey assessment on the 15 January 2019.

The survey methodology and the tree quality assessment criteria are described in the accompanying Tree Survey document (see *2.3*); which includes the survey data schedule.

Key trees & features

The car park trees consist of a single cherry- to be retained and norway maple- four of which are to be removed to facilitate the construction of the hard and soft landscaping proposals.

The quality of the trees is low to moderate and they are not a primary constraint to development on this site.

5 Proposed Development

The proposal will entail the demolition of existing Harlequins Shopping Centre and pedestrian bridge over Paul Street. Making good of the façade of the Guildhall Centre, following removal of the pedestrian bridge. Refurbishment of the upper floors of 21-22 Queen Street to provide co-living accommodation. Erection of two blocks accommodating up to 300 co-living bedrooms and associated amenity areas, a hotel with up to 120 bedrooms and associated space including bar and restaurant. In addition, a car park with up to 40 spaces, an interactive display space for the interpretation of the heritage of the site and surroundings, enhancement of the urban realm on the adjacent highways and on-site landscaping.

6 Arboricultural Impact Assessment

Terms & Definitions

When describing impacts on arboricultural features; reference is made to the following parameters, as appropriate or relevant to the specific issue:

1. **Positive** or **negative**
2. **Magnitude:** Refers to the 'size' or 'amount' of an impact, determined on a quantitative basis where possible.
3. **Duration:** The time for which the impact is expected to last prior to recovery or replacement of the resource of feature, (defined in relation to the feature - rather than human time frames). The duration of an activity may differ from the duration of the resulting impact caused by the activity. For example, if short-term construction activities cause soil compaction around mature trees, there may be longer-term implications for tree health.
4. **Reversibility:** An irreversible (permanent) impact is one from which recovery is not possible within a reasonable timescale or for which there is no reasonable chance of action being taken to reverse it. A reversible (temporary) impact is one from which spontaneous recovery is possible or for which effective mitigation, is both possible and an enforceable commitment has been made.
5. **Timing and frequency:** Some changes may only cause an impact if they happen to coincide with the critical life-stages or seasons (for example, the bird nesting season). This may be avoided by careful scheduling of the relevant activities.
6. **Compensation:** Measures taken to make up for the loss of, or permanent damage to, arboricultural resources through the provision of replacements.
7. **Enhancement:** A new benefit - unrelated to any negative impact.
8. **Impact:** The way in which an arboricultural resource is affected by the project.
9. **Mitigation:** Measures taken to avoid or reduce negative impacts.

Individual trees, hedgerows, groups, woodland and other vegetative features have been assessed in relation to the submitted layout. Issues identified are evaluated in the following sub-sections.

Tree Removal & Retention

Trees which make a positive contribution to the layout have been retained wherever possible. Trees to be removed are shown on the accompanying Tree Protection Plan (TPP) with a dashed canopy outline and included on the following table:

Tree Ref:	*Species/Description of feature:*	*BS5837 category*	*Reason for removal & Impact:*
T1	Cherry	C	Removal to facilitate layout – low value. Low impact of limited magnitude
TG2	Norway Maple x 4	B	Removal to facilitate hard and soft landscaping layout – low value. Low impact of limited magnitude

Table 2 - Trees to be removed

The trees are all of a limited quality with a short life expectancy due to their condition. The trees are of insufficient quality to be a constraint to development.

The trees are of poor individual quality with a limited viability. Their benefit is as a group (hence the B category) due to the combined canopy cover. However, they all have damaged stems due to car / vehicle damage limiting their viability. Therefore, any impact is of a short timescale, limiting the magnitude.

Impact of proposed development on amenity value

The vegetation to be removed is visible from within a short distance of the site, due to the presence of surrounding buildings and the topography. The trees are not visible in the wider landscape. The retained trees will soften the loss of TG1. Therefore, the visual impact is of a low magnitude.

Scrub shrub vegetation will also be removed to facilitate development – this vegetation is of limited value and of insufficient quality to be a constraint to development.

There will be a short term temporary, localised negative impact due to the removal of trees required to develop the site. This impact is to be limited by the planting and establishment of replacement trees in equally publicly visible locations so that the mid-long term impact is neutral.

Retained trees - General minor impacts

There are a number of impacts of no discernible significance which are not discussed in detail in this report. These relatively minor issues are adequately mitigated through standard clause recommendations for construction stage tree protection measures, as indicated on the accompanying TPP.

Retained Trees - Key issue(s)

The key issues are:

- Ground level disturbance during the operation to create the walkway through TG2.
- Removal of the existing tarmac from the car park.

The above issues are individually evaluated in the following sub-sections.

Key Impact 1

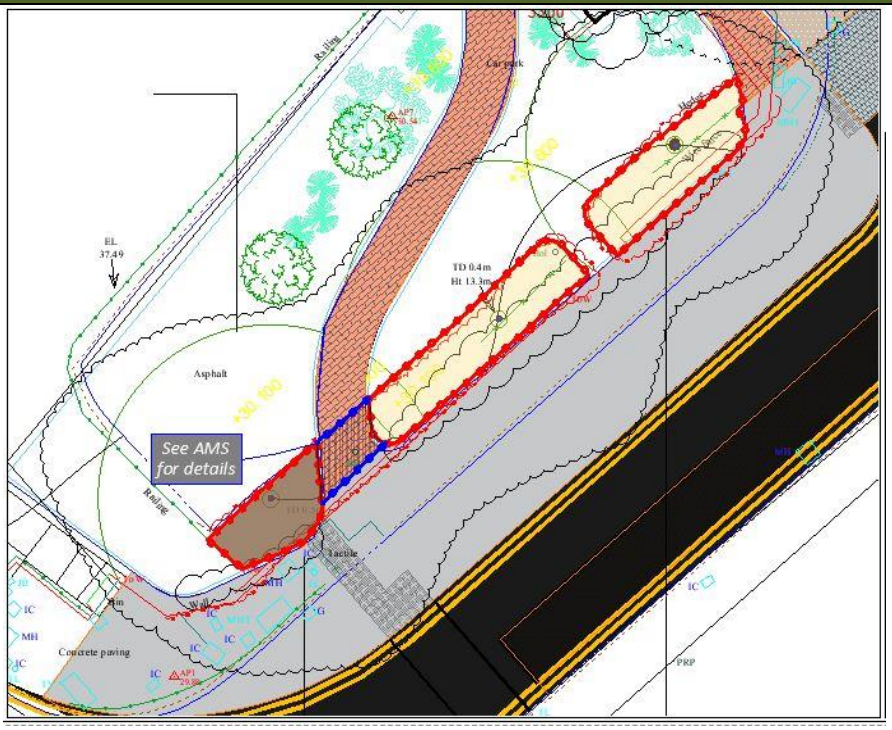
Layout Impact Plan:

Description, magnitude and extent of IMPACT(s):
The proposal will remove the tarmac surface within the existing car park and to create a walkway through the bed that TG2 are in - there will be a minor negative impact for a short duration. In the long term this is a positive impact on the retained tree stock – the trees will be given a larger soil volume which will be conductive with root formation and rainfall penetration. This will aid the trees long-term growth.
Mitigation recommended to reduce IMPACT(s):
• Site monitoring during the operation to remove the existing surface by the project arboriculturalist. • Detailed Arboricultural method statement highlighting the methodology in which the works will take place.

Table 3 – Key Impact 1

7 Mitigation Strategy

Tree Protection

No access to the RPA of any retained tree will be permitted before or during construction activity, unless detailed in an approved *Arboricultural Method Statement* or otherwise agreed in advance with the LPA following advice from the appointed specialist.

BS5837 recommends that retained trees (and areas suitable for new planting) are incorporated into CONSTRUCTION EXCLUSION ZONES (CEZs) and suitably protected throughout the development process.

The CEZs are clearly marked on the accompanying TREE PROTECTION PLAN and general details (heads of terms) for an accompanying *Arboricultural Method Statement* are included in the appendices of this report.

Compensatory Planting

The proposed layout has been designed to allow for replacement planting of the trees lost to the development, this includes a mix of specimen tree planting and enhancement of poor-quality vegetation.

Where new tree planting is planned it is imperative that consideration is given to future management and maintenance. It is recommended that a minimum five-year plan is constructed and submitted with the new landscape proposals.

New planting should be in accordance with the National House Building Council Standards NHBC 4.2 'Building near Trees' – 2006.

8 Trees & Planning Policy

Trees are a material consideration throughout the planning process and therefore the arboricultural information presented in this report and accompanying plans has been aligned with the objectives of the National Planning Policy Framework (NPPF) and the general tree-related policies and development objectives of the Local Planning Authority (LPA).

Key - LPA planning policies

The following ECC Planning policies are relevant to this report.

DG1- (c) fully integrate landscape design into the proposal and ensure that schemes are integrated into the existing landscape of the city including its three-dimensional shape, natural features and ecology;

Exeter City Council Local Plan: Landscape

Exeter City Council SPD landscape section 13.13: Development should be designed to ensure trees flourish and mature. All design elements (including buildings, roads, services, above and below ground security equipment, changes in levels and construction of hard landscape) should be arranged to ensure a good spatial relationship between development and trees to be retained and planted. In addition to avoiding damage to trees during construction, sufficient space must be provided beyond the crown spreads of trees to take account of any

future growth and allow their safe, long term retention while avoiding undue future pressure for felling or excessive pruning.

The proposed development accords with the relevant sections of the above LPA policies and guidance.

9 Conclusions

The proposal is for the demolition of existing Harlequins Shopping Centre and pedestrian bridge over Paul Street. Making good of the façade of the Guildhall Centre, following removal of the pedestrian bridge. Refurbishment of the upper floors of 21-22 Queen Street to provide co-living accommodation. Erection of two blocks accommodating up to 300 co-living bedrooms and associated amenity areas, a hotel with up to 120 bedrooms and associated space including bar and restaurant. In addition, a car park with up to 40 spaces, an interactive display space for the interpretation of the heritage of the site and surroundings, enhancement of the urban realm on the adjacent highways and on-site landscaping.

Minor vegetation will be removed to facilitate development with a low impact and a low order of magnitude for a short duration.

New planting is proposed resulting in a significant net gain in the quality and quantity of the tree cover. This will result in a positive long-term impact.

The proposal accords with locally adopted policy and national policies.

10 Recommendations

The tree protection measures discussed in this report and shown on the accompanying Tree Protection Plan should be implemented.

The appropriate use of well worded planning condition(s) are considered a key element of successful tree retention during development and construction.

It is important that the tree protection measures are clearly communicated to, and understood by, the entire construction team prior to commencement of any site works – this process should involve the Local Planning Authority so as to ensure any planning conditions are not breached. This is most effectively managed by monitoring the development on a regular basis, checking tree protection measures in relation to the Tree Protection Plan & Arboricultural Method Statement(s) and reporting to the LPA on a monthly basis.

It is recommended that development is carried out in the following order:

a) Remedial tree works undertaken.
b) Tree protection measures installed.
c) Initial site clearance, demolition and ground works.
d) Development of site.
e) Removal of tree protection measures.

All items above to be undertaken in accordance with LPA approved arboricultural method statements.

Appendices:

A1.1 Disclaimer

The statements made in this Report do not take account of extremes of climate, vandalism or accident, whether physical, chemical or fire. Aspect Tree Consultancy cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this Report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the Report are carried out to, or affecting, the Subject Tree(s), whichever is sooner.

A1.2 Limitations

The survey and report are concerned with the arboricultural aspects of the site only. This report is primarily concerned with the condition of existing trees and the application of current guidance for their retention.

No documented information has been provided regarding any site-specific history of ground disturbance, root damage or severance, changes in soil levels, previous utility installations or any changes in site conditions.

Trees are large dynamic organisms whose health and condition can change rapidly, therefore due to the changing nature of trees and other site considerations, this report and any recommendations made are only valid for the 12-month period following the site survey.

Subsidence Risk Assessment: Any discussion of soil characteristics is only presented where this may have a direct effect on tree growth. This report does not seek to address the specific area of subsidence risk assessment.

Foundation Design: The design and construction of foundations should be informed by appropriate soil sampling and laboratory testing in accordance with NHBC Chapter 4.2. This report does not specifically relate to risks associated with subsidence, heave or other forms of disturbance associated with tree root growth or tree removal.

Third Party Liability: The limit of Aspect Tree Consultancy indemnity over any matter arising out of this report extends only to the instructing Client. Aspect Tree Consultancy cannot be held liable for any third-party claim that arises following this report. The content and format of this Report are for the exclusive use of the Client. It may not be sold, lent, hired out or divulged to any third party not directly involved in the subject matter without the written permission of Aspect Tree Consultancy Ltd.

A1.3 Author

J.Greig

NCHArb, Tech.Arbor.A, I am a professional tree specialist. I am a technical Member of the Arboricultural Association. I have skills and experience directly relating to the management of trees through the planning, development and construction processes such that I am a suitably qualified and experienced competent person as defined by BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations [BS5837].

A2.1 National Planning Policy Framework NPPF

Paragraph 11. Plans and decisions should apply a presumption in favour of sustainable development.

15. Conserving and enhancing the natural environment
Paragraph 170 (relevant parts only). Planning policies and decisions should contribute to and enhance the natural and local environment by:
a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

Habitats and biodiversity:
175. When determining planning applications, local planning authorities should apply the following principles:
a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
c) development resulting in the loss or deterioration of irreplaceable habitats (**such as ancient woodland and ancient or veteran trees**) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

A2.2 LPA Planning Policy

The following policies are considered relevant to this report:

Exeter City Local Supplementary Planning Document:

ECC Local Plan

Landscape

Landscape works should aim to enhance the setting of both the proposed development and the surrounding area. Carefully considered hard landscape works and new planting allied to the conservation of important existing natural features (examples of these would include trees, significant shrubs and hedgerows, rivers, streams and associated land) enhances the character and appearance of new development and promotes local distinctiveness.

13.12 The developer will be expected to show all ground features, including ground levels, on an accurate land survey. Where there are trees on or adjoining the site, a detailed tree survey, including crown spreads, will be required.

13.13 Development should be designed to ensure trees flourish and mature. All design elements (including buildings, roads, services, above and below ground security equipment, changes in levels and construction of hard landscape) should be arranged to ensure a good spatial relationship between development and trees to be retained and planted. In addition to avoiding damage to trees during construction, sufficient space must be provided beyond the crown spreads of trees to take account of any future growth and allow their safe, long term retention while avoiding undue future pressure for felling or excessive pruning.

DG1: DEVELOPMENT SHOULD:

(c) Fully integrate landscape design into the proposal and ensure that schemes are integrated into the existing landscape of the city including its

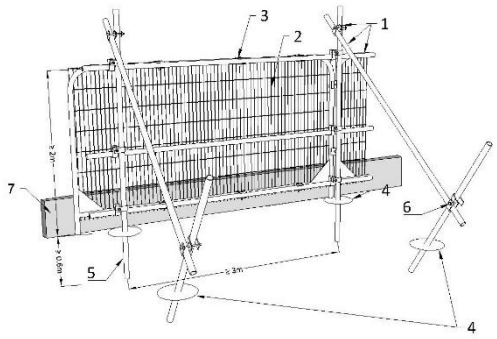
three-dimensional shape, natural features and ecology;

Ensure protection measures before and during the development process and appropriate management and protection thereafter; and take opportunities for new planting consistent with landscape, wildlife and historic interests.

A3.1 Tree Protection Measures

Retained trees should be protected by barriers and/or ground protection before any materials are brought onto site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a Construction Exclusion Zone (CEZ). Where, due to site constraints, construction activity cannot be fully or permanently excluded in this manner from all or part of a tree's RPA, appropriate ground protection should be installed.

A3.2 Default Tree Protective Fence (TPF) – Type1:

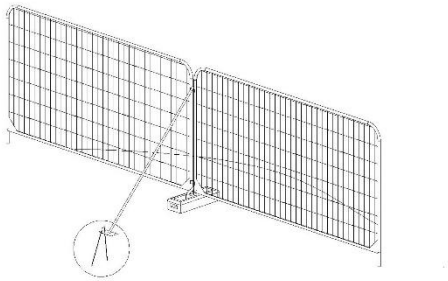


Key

1 Standard scaffold poles
2 Heavy gauge 2m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6m)
6 Standard scaffold clamps
7 Toe board 600mm to prevent soil running through fence (In timber or fabric)

A3.3 Default TPF – Type2a:

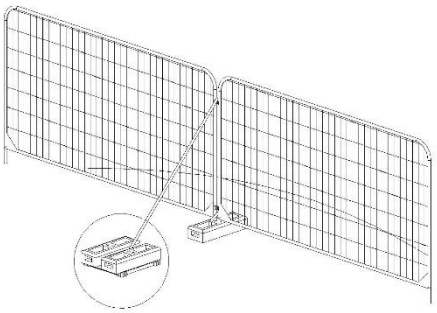
Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins

A3.4 Default TPF – Type2b:

Examples of above-ground stabilizing systems



b) Stabilizer strut mounted on block tray

A3.7 Example Warning Sign for TPF:

The final construction stage **Tree Protection Plan** shall be accompanied by a detailed **Arboricultural Method Statement** which will include details necessary to ensure the protection of trees throughout the demolition and construction stages of the proposed development.

A3.8 Tree Protection Plan (TPP)

The final TPP shall include details covering the following site-specific items:

1) Site Construction Access.
2) All hard surfacing within RPAs.
3) Construction Exclusion Zones.
4) Precise location of TREE PROTECTION FENCING - dimensioned – including temporary fencing & set back positions.
5) Barriers & Ground protection details – dimensioned.
6) Special protection measures (see AMS A4.2)
7) Location of utilities routes.
8) Areas for drainage / attenuation.
9) Working space for cranes, plant, scaffolding and access during works.
10) Position of site huts & welfare facilities.
11) Contractor car-parking.
12) Materials storage areas.
13) Build sequence/phasing of construction works.

A3.9 Arboricultural Method Statement (AMS)

The final AMS will be prepared and agreed with the LPA prior to start. The AMS may cover the following:

1) Pre-start Meeting.
2) Contact details for key personnel.
3) Site Monitoring Schedule.
4) Detailed Tree Work Schedule & Pruning Specification.
5) Final details of all operations within RPAs.
6) Utilities: methods of installation near trees.
7) Emergency Procedures.

A4.1 General / Standard AMS information

Pre-commencement site meeting: Prior to the commencement of the development, site clearance or ground-works a site meeting shall be arranged and held between the Site Manager, the Arboriculturist, and the Tree Protective Fence contractor.

Any defective tree protection measures will be reported to the site manager immediately and made good in the same day.

The site manager is responsible for informing the LPA or an appointed arboricultural specialist of any damage to or breaches of the Tree Protection Measures immediately.

Construction Exclusion Zone – CEZ: The CEZs are to be afforded protection at all times and will be protected by robust FENCING and/or GROUND PROTECTION as detailed. No works will be undertaken within any CEZ that causes compaction to the soil or severance of tree roots.

Tree Protective Fences (TPF): Protective fencing will be erected in accordance with the TPP prior to the commencement of any site works i.e. before any materials or heavy machinery is brought on site. The fencing may only be removed following completion of all construction works or with the formal agreement of the LPA. The location of the TPF will be as accurate as possible to the approved TPP. Any change to the position or construction of the fencing must be approved by the Arboriculturist and subsequently agreed by the LPA. No vehicles will drive or be parked within the CEZ. No materials will be stored within the CEZ.

Warning Notices will be affixed to every third panel or at 12m centres and will be made of all-weather signs.

After installation of the TPF the CEZ must be considered sacrosanct and off limits for any access or construction activity without the formal consent of the LPA or otherwise detailed on the TPP.

On-site environmental good practice guidelines:

Storage and use of Liquids and Hazardous Materials.

Liquids (fuel etc.) should be stored as far away from CEZ areas as is reasonably practicable. Spill kits and drip trays should be provided and maintained in close proximity to where liquids are stored, dispensed and used. Materials should be stored in accordance with manufacturer's Safety Data Sheets.

Drip trays or absorbent mats should be placed under filling points during the transfer/dispensing of liquids e.g. during the refuelling of plant to avoid any form of soil contamination in or immediately adjacent to CEZs or area for new landscape planting.

Responsibilities:

It is the responsibility of the Building Contract Manager (TBC) to ensure that the planning conditions attached to planning consent are adhered to at all times.

The Building Contract Manager will be responsible for contacting the LPA at any time issues are raised related to the trees on site. If at any time pruning works are required permission must be sought from the Local Planning Authority first and then carried out in accordance with BS 3998 2010.

The Building Contract Manager will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes.

Protective fences will remain in position until completion of ALL construction works on the site.

The fencing and signs must be maintained in position at all times and checked on a regular basis by an on-site person designated that responsibility.

Emergency Departures & Incident Reporting:

The contractor shall contact an appointed arboricultural specialist or the LPA Tree Officer if any breaches of the CEZ and tree protection measures occur.

An action plan to incorporate mitigation measures where necessary will be agreed and effectively implemented.

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

Arboricultural Site Monitoring: Monitoring will be undertaken at a frequency agreed with the construction site manager during the initial pre-commencement site meeting.

The arboriculturist shall be present during the following **Key Stages:**

1) Pre-start meeting & initial positioning of the TPF & ground protection measures.
2) Minimum bi-monthly monitoring visit by specialist.
3) All operations near trees (as detailed in AMS) are supervised.

A4.2 Detailed specific AMS required

Where the accompanying TPP shows specific AMS areas outline details covering the identified issues are included on the plan.

Accompanying plans produced as part of this report are referenced to and/or attached as the following pages:

Plan Title:	Plan Ref:	Size:
Layout	05215 TPP 2.10.19 Sheets 1 & 2	***A1***

Important Notes:
Digital plans may be issued as separate documents.
Reduced scale/size plan(s) may have been bound into hard paper copies of this report e.g. at paper size A3.
All plans should be viewed in full colour.