



L I Z A R D

Landscape Design and Ecology

LILLEY ARCHITECTURE

59 SANDY POINT ROAD, HAYLING ISLAND, HAMPSHIRE

Arboricultural Impact Assessment and Method Statement

Tree Retention and Protection

Planning Issue

Prepared by	TT
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1.0 Introduction

- 1.1 The proposed site is located to the north of the Sandy Point Road and to the west of Bosmere Road within the urban landscape of south-eastern part of the Hayling Island. The site comprises an existing house building and garage with adjacent residential garden. The surrounding area is largely urban with *Chichester Harbour – SSSI (Site of Special Scientific Interest)* located approximately 200mm south east from the site. The western boundary of the existing property is lined with a mature deciduous line of trees and the shrub, while boundary hedge is edging the eastern aspect of the site. Southern boundary includes overgrown hedge with semi-mature trees. The ornamental shrub areas are located to the front and the rear of the existing building.
- 1.2 The development proposals consist of the demolition of the existing buildings and the construction of the new house building with an adjacent car park to its frontage.
- 1.3 The development proposals have been designed in order to minimise impacts on the existing trees and only a limited amount of the vegetation would be affected. A section of the boundary shrub would require removal in order to accommodate proposed development building.
- 1.4 The existing trees within the site boundary have been surveyed in detail for condition and are recorded within the attached report: *LLD1201-ARB-SCH01-00-Existing Tree Schedule*, and identified on the following drawings; *LLD1201-ARB-D01-00-Tree Constraints Plan* and *LLD1201-ARB-D02-00-Tree Retention & Protection Plan*. The Tree Retention and Protection Plan illustrates the impact of the proposed development upon the existing trees and setting out where vegetation is proposed to be removed and specifically measures for tree and root protection wherever existing trees and vegetation are proposed to be retained and protected.
- 1.5 Following the proposed removal of existing vegetation from the site in accordance with the drawing *Tree Retention & Protection Plan* and accompanying *Existing Tree Schedule*, there is some existing vegetation within the vicinity of the development proposals that would remain and would be directly impacted upon by the development proposals. The existing retained trees and vegetation are to be protected in accordance with the guidance contained within *BS 5837: 2012 – ‘Trees in Relation to Design, Demolition and Construction – Recommendations’*.
- 1.6 The status, impact, and protective measures upon the existing trees and vegetation within the site affected by the development proposals are subject to the protective measures and construction method statement detailed in the following Arboricultural Method Statement.

2.0 Arboricultural Impact Assessment

- 2.1 The development proposals comprise the demolition of the existing building and garage and construction of the new house building with new hardstanding car park area and soft landscape areas.
- 2.2 The proposals would affect some of the existing vegetation on site; a section of the shrub line and small section of hedge would require removal in order to accommodate proposed development; and other vegetation and trees would require detailed protection to enable their retention within the proposed scheme. All existing trees to be retained shall be protected in accordance with *BS 5837: 2012 – ‘Trees in Relation to Design, Demolition and Construction – Recommendations’*.

- 2.3 The following trees would require removal / tree surgery from the site due to their condition:
- T01 – *Acer pseudoplatanus*; Category U; western boundary;
 - T04 – *Acer pseudoplatanus*; Category U; western boundary;
 - T05 – *Acer pseudoplatanus*; Category U; western boundary;
 - T06 – *Acer pseudoplatanus*; Category U; western boundary;
 - T10 – *Acer pseudoplatanus*; Category U; western boundary;
 - T14 – *Acer pseudoplatanus*; Category U; western boundary;
 - T15 – *Acer pseudoplatanus*; Category U; western boundary;
 - T26 – *Prunus cerasifera* 'Nigra'; Category C; removal of infected stem;
 - T28 – *Sorbus aria*; Category U; street tree adjacent to southern boundary.
- 2.4 The trees proposed for removal are Category U trees, unsuitable for retention. The loss of these trees is recommended to be mitigated through the planting of suitable trees within the site boundary.
- 2.5 The following vegetation would require removal from the site in order to accommodate the development proposal:
- SH16 – Mixed Species Shrub Line; Category C; western boundary; Partial Retain / Remove
 - H18 – Mixed Species Hedgerow; Category C; southern boundary; Partial Retain / Remove
 - SH30 – Ornamental Shrub; Category C; front and the rear of the existing building
- 2.6 The proposed car park area and area of hard standing to the east of the proposed building would encroach into the RPA of trees and hedges which are proposed for retention. In order to prevent damage to any roots within this area, and to provide continued water and nutrient exchange within the soil, sections of the hardstanding areas within the RPAs of existing trees to be retained shall be constructed using a 'no-dig' construction method in accordance with BS 5837: 2012 – 'Trees in Relation to Design, Demolition and Construction – Recommendations'. This construction shall be installed above existing ground levels and utilise a cellular confinement layer to prevent compaction of the soil beneath, and a geo-membrane layer to prevent pollutants from reaching the soil. The new hard surface would be of a permeable construction to enable water and nutrients to reach the soil below.
- T17 – *Quercus robur*, Category C; along the southern edge of the proposed car park;
 - H18 – Mixed Species Hedgerow; Category C; along the southern edge of the proposed car park; along the southern edge of the proposed car park;
 - T19 – *Ilex aquifolium*; along the southern edge of the proposed car park;
 - H20 – Mixed Species Hedge; Category C; along the section of the eastern boundary of the site and adjacent to the proposed building.
- 3.0 Stages of Work / Programme**
- 3.1 The site development proposals shall involve the following site operations that could impact upon the existing tree / vegetation cover;
- Contractor movements; site access and operations; storage and compound;
 - Removal of existing vegetation not for retention;
 - Demolition of the existing buildings and structures;
 - Construction of proposed hardstanding section;
 - Construction of new residential building, hard landscape areas; and ground work operations;
 - Implementation of services and utilities.

4.0 Arboricultural Method Statement

Contractor Movements; Site Access and Operations; Storage and Compound Areas

- 4.1 The contractor site compound shall be located outside of the defined tree root protection areas as indicated on drawing; *Tree Retention & Protection Plan*.
- 4.2 The contractor's site compound shall be located so as to not incur damage or injury to the tree root systems or canopy of any existing trees or vegetation within or adjacent to the site, in accordance with *BS5837: 2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. All operations associated with the usage of the compound area shall be undertaken with due care and attention to negate damage of the surrounding environment.
- 4.3 Pre-construction access to the site area shall be made at all times via the existing entrance from the Sandy Point Road. Pre-construction vehicular movement to facilitate the removal of existing vegetation shall be limited to the minimum requirement in order to fulfil the vegetation removal works and no vehicular access shall be permitted over unmade ground within the defined tree root protection area of existing trees to be retained and protected. Once the tree removal has been completed the tree protective fencing works proposed shall be put in place. During construction proposed access is via existing entrance from the Sandy Point Road to the south of the site. Vehicular movements during the construction period shall be limited to the areas of existing hard ground and newly protected ground only.
- 4.4 All site clearance / demolition works shall be undertaken once the tree protective fencing measures have been put in place in order to protect existing tree canopies and tree root protection areas from vehicle movements and material storage.
- 4.5 All site operations and construction procedures for the duration of the construction period shall seek to protect the existing site vegetation and tree root protection areas in accordance with *BS 5837: 2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'*.
- ##### ***Removal of Existing Vegetation***
- 4.6 All existing trees and vegetation designated for removal are to be removed in accordance with the Tree Protection and Retention Drawing *Tree Retention & Protection Plan*. All tree work and removal shall be carried out in accordance with *BS5837: 2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'* and *BS3998: 2010 – 'Tree Work: Recommendations'*. Trees designated for removal and felling shall be clearly marked on site with white paint. Prior to the removal and felling of trees, the required work and tree positions shall be agreed on site with the Landscape Architect / Arboricultural Consultant. Trees shall be felled, and tree surgery works undertaken prior to the erection of the Tree Protective Fencing. Care should be taken during the tree removal process to avoid any damage to any trees which are designated to be retained and protected.
- 4.7 Stumps shall be removed and cut away so that the top of the tree stump shall be at least 450 mm below the final topsoil level in order that the site can be reinstalled in accordance with the existing site levels. Stumps are to be treated with an approved herbicide to be agreed with the Landscape Architect / Arboricultural Consultant. Where the depth is greater than 450 mm the areas shall be backfilled with topsoil to the required level.

- 4.8 The removal of shrub or scrub material within the tree root protection area of any tree to be retained shall employ a manual removal method; the use of hand tools shall be used in order to maintain the ground surface of the tree root protection area, and reduce any damage to existing tree roots within the protected tree root zone. Adjacent trees shall not be utilised as anchors or levers to facilitate the removal of adjacent vegetation.

Tree and Vegetation Management

- 4.9 For tree and vegetation retention and removal proposals refer to the attached *Existing Tree Schedule and Schedule of Tree Works* report. For tree and vegetation management proposals refer to the tree surgery works and management prescriptions contained within *Existing Tree Schedule and Schedule of Tree Works*.

Ongoing Inspection and Maintenance of Existing Vegetation

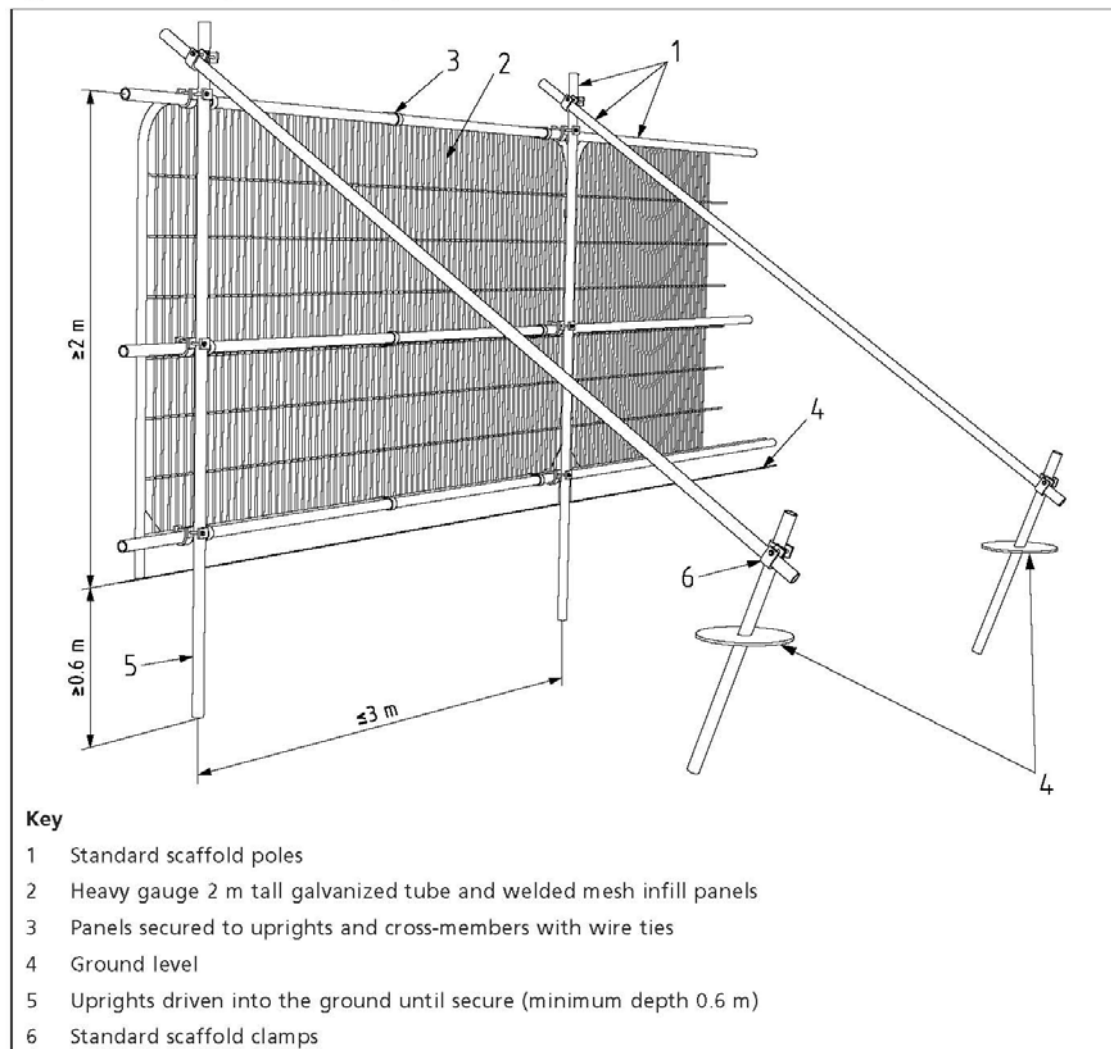
- 4.10 All retained vegetation on the site shall require ongoing regular inspection (*annual inspection recommended*) and any remedial works undertaken as required to maintain trees in a safe and healthy state.

Protection and Retention of Existing Vegetation

- 4.11 The contractor shall exercise extreme care when performing operations beneath the canopy of existing mature trees and vegetation and within the specified tree root protection areas designated for protection and avoid at all times damage to the roots, trunk and branches of existing trees proposed to be retained.
- 4.12 All excavations, cultivation, and grading beneath the canopy of existing mature trees and within the specified tree root protection areas of the existing trees and vegetation shall be carried out using hand tools, taking care not to damage or disturb any existing tree roots.
- 4.13 All trees to be retained on site shall be protected with fencing erected around the area of mature vegetation in accordance with *BS5837: 2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. The fencing shall be installed, protected, and maintained during the main works by the contractor who shall be responsible for protecting any area beneath the canopy of the existing trees and within the specified tree root protection areas.
- 4.14 The installed protective fencing shall be 2.0 metres height 'Heras' Welded Wire Mesh Fencing secured to a scaffolding framework, set into the existing ground, and positioned to the outside edge of the existing tree root protection area. The fencing should be strained, and fixed to fences, walls, knee rails where possible to provide a complete protected area (*Refer to Figure No. 2 and Figure No. 3 below; © British Standards Institute 2012*). All tree protection to be in accordance with *BS 5837: 2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'* set out as specified within *Drawing Tree Retention & Protection Plan*.
- 4.15 Day-glo ribbons shall be maintained during the main works by the contractor attached to the top of the fencing to ensure that the fencing is clearly visible during the works. The tree protection fencing shall display all-weather notices stating '*Construction Exclusion Zone – NO ACCESS*'.

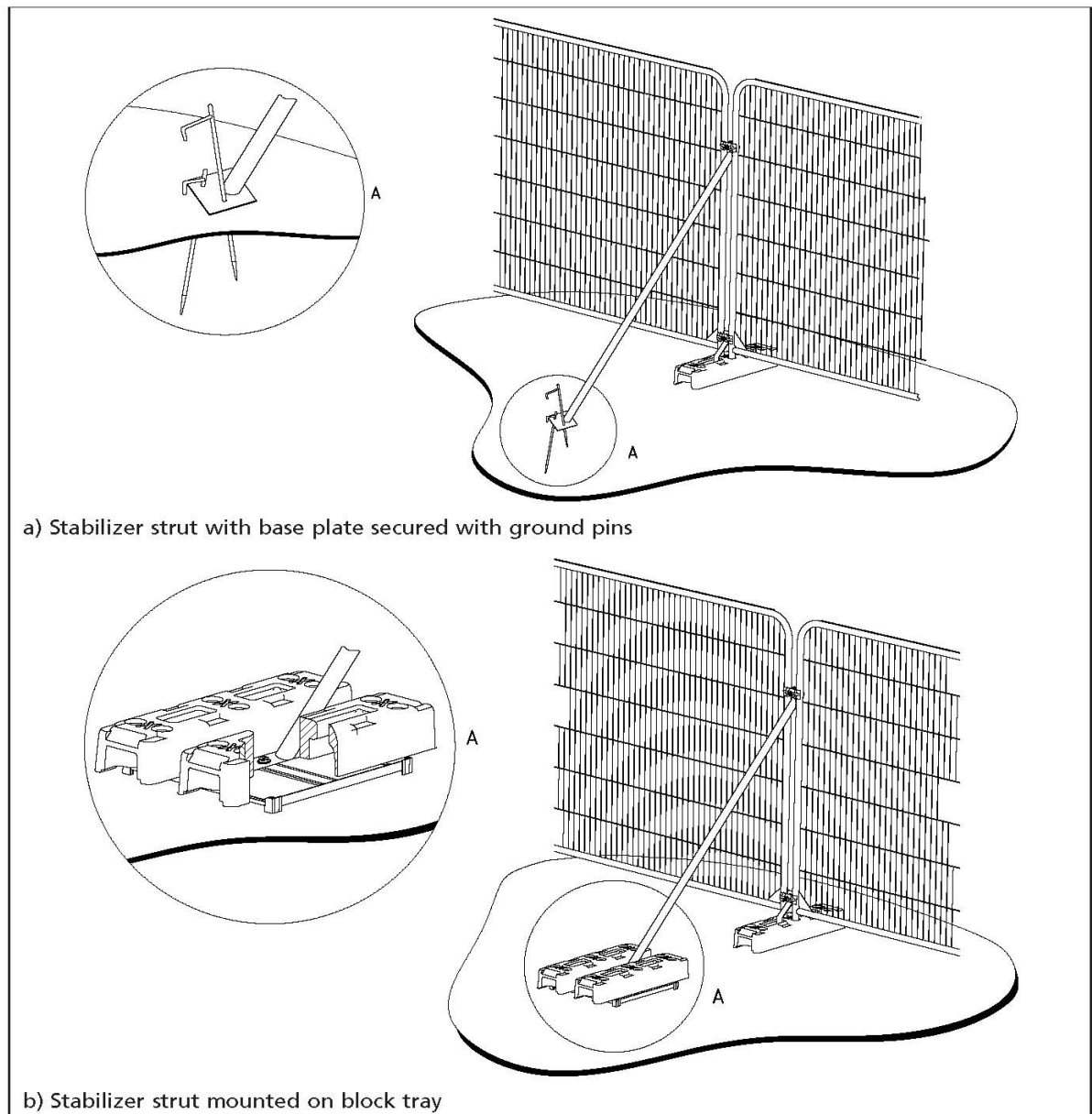
- 4.16 All such fencing shall be maintained for the full contract period. All necessary excavations, earthworks, and cultivation beneath the canopy spread of any existing tree; shrub or hedge shall be undertaken by hand. No commencement of construction operations may occur prior to the inspection of the installed tree and ground protection by the Landscape Architect / Arboricultural Consultant. Repositioning of the protective fencing during the course of the contract as the contract works progress shall need prior agreement with the Landscape Architect / Arboricultural Consultant.
- 4.17 Within the protected area the following activities must not take place;
- *No vehicles are to be used in the fenced off areas;*
 - *No materials are to be stockpiled or stored;*
 - *No chemicals are to be stored;*
 - *No excavation or increase in the soil level shall occur;*
 - *No fires shall be lit on site.*

Figure 2 Default specification for protective barrier



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Figure 3 Examples of above-ground stabilizing systems



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- 4.18 At the end of the contract period, the contractor shall remove the tree protective fencing from the site. All retained vegetation shall be healthy and thriving at the handover date.

Ground Protection; Tree Protection Zone – No-Dig Construction Area – Proposed Car Park and Hard standing Areas

- 4.19 Where new hard surfacing to create the carpark and main footpath is required within the RPAs of existing trees to be retained, a 'no-dig' construction method shall be employed in order to avoid damage to existing tree roots and localised compaction of subsoil within the tree root protection areas of existing trees. There shall be no lowering of ground levels and excavation of ground within the RPAs of existing trees.

- 4.20 Existing surfacing materials where possible shall be left undisturbed and retained during the construction period for as long as possible in order to protect the tree root protection area of the existing trees to be retained; existing surface hard landscape materials and sub-base layers only shall be removed carefully by hand within the existing tree root protection areas and shall be the minimum required for the construction.
- 4.21 A ground stabilising mesh (*'TDP SN20 GeoGrid' or equal and approved*), shall be rolled out over the existing ground level and evenly covered with a No Fines - Open Graded Aggregate (*in accordance with Highways Agency Specification; Clause 805 (Type 3) or equal and approved*). Prior to installation, all hollows within the existing surface are to be filled and no high points of existing undisturbed / unmade ground shall be skimmed.
- 4.22 The granular fill within the hardstanding areas shall be incorporated within a 3 dimensional GeoCell (*Terram Geocell 22/20 or equal and approved*) and shall ensure a minimum supportive construction depth of 200mm to be suitable for frequent and construction vehicle usage. A geo-textile filter membrane is to be laid over the granular fill construction (*Geotextile filter membrane to be TDP 115 Non-woven Geotextile Fabric or equal and approved*).
- 4.23 A permeable paving system and construction method shall be installed over the prepared sub-base layers. A sub-base layer of crushed aggregate (*to BS EN13242; range size; 4 – 14 mm*) is to be laid level and compacted above the Geotextile filter membrane to a depth of 25mm. A layer of permeable tarmacadam, resin-bound gravel or permeable blockwork (*as appropriate to the location*) shall then be installed above the bedding layer.
- 4.24 Phasing of the construction works should be considered to minimise the requirement for ground protection and avoid vehicular movements over unmade ground.
- 4.25 Existing service runs should always be used wherever possible. Where the proposed routing of services impinges upon the root protection area of any existing tree to be retained, the routing shall be undertaken in accordance with a manual excavation method; to be carefully hand dug and routed most directly to and from the exterior of the tree root protection area radius. Services are to be routed together wherever possible to create the minimum impact upon the tree roots of the existing trees to be retained. Trench excavation across the tree root protection area radius beside an existing tree shall be avoided, whereby tree roots will become severed. The trenchless installation would be recommended within root protection areas.
- 4.26 **Heras – Anti-climb Smart Weld Panel Fencing**
Supplier: Safe Site Facilities; or equal and approved;
Address; Old Selden Farm, Selden Lane, Patching, West Sussex, BN13 3UL
Tel: 0845 463 5421; Email: info@safesitefacilities.co.uk;
Web: www.safesitefacilities.co.uk;
Specifications; Galvanised anti-climb mesh; 2.0m height x 3.5m width; 13.8kg weight.

5.0 Arboricultural Method Statement – Notes; General

- 5.1 The principles and recommendations of *BS5837: 2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'* shall be adhered to where possible in order to prevent damage or undue stress upon the existing trees, soils and roots potentially impacted upon by the development proposals.
- 5.2 Destruction of soil structures through soil compaction, excavation or contamination shall be avoided at all times within the tree root protection areas. Physical damage to existing trees to be retained; roots, stems, branches shall be prevented wherever possible.
- 5.3 All tree protection measures are to be carried out, on site and within the development proposals, in accordance with the relevant approved drawings accompanying this method statement.
- 5.4 Arboricultural Supervision shall be required at the following stages of work;
- *Installation of tree protection measures;*
 - *Method statement briefing for site staff;*
 - *Supervision of the 'no-dig' construction of the proposed car parking area and garage within tree root protection areas;*
 - *Removal of tree protection measures.*
- 5.5 The loss through development of existing trees may occasionally be unavoidable. Wherever existing trees are removed to accommodate development, contingency should be made for relocation of removed trees if possible or the replanting of young trees with suitable species for the site location where relocation of existing trees is not viable.
- 5.6 The phasing of works might be appropriate in order to implement the proposed development. Where the construction operations impact upon existing trees to be retained the trees shall be fully protected where possible in accordance with *BS 5837: 2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'* for the duration of the construction period. The phased retraction of construction operations may allow for tree protection measures to be withdrawn / re-sited. The re-alignment or withdrawal of any Tree Protection Measure shall only be permitted with the agreement of the Project Arboricultural Consultant / Local Planning Authority.

6.0 Contact Details

Landscape Consultant

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