



LIZARD

Landscape Design and Ecology

MR A CARTER

**THE LAURELS, DAPPERS LANE, ANGMERING,
WEST SUSSEX**

**Arboricultural Impact Assessment and Method
Statement**

Tree Retention and Protection

Planning Issue

Prepared by	LB
Checked by	GS
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**THE LAURELS, DAPPERS LANE, ANGMERING, WEST SUSSEX
RESIDENTIAL DEVELOPMENT PROPOSALS –
ARBORICULTURAL METHOD STATEMENT
Planning Issue - Rev 01; 10.05.18**

1.0 INTRODUCTION

- 1.1 Lizard Landscape Design and Ecology has been commissioned by Mr A Carter to undertake a detailed tree survey and arboricultural impact assessment of the land proposed for development at The Laurels, Dappers Lane, Angmering, West Sussex (Grid Reference: TQ 073 048 – hereafter referred to as 'the site').
- 1.2 The site is a rectangular plot, perpendicular to the east of Dappers Lane. The site comprises a detached dwelling, with associated access paths and driveway, garage and a number of outbuildings; large mature gardens; a field of grass and ruderal plants, with scattered trees; and a small area of plantation woodland. The boundaries are lined with deciduous and coniferous treelines; hedges; brick walls; and post and wire fences. The site is approximately 0.8 hectares (*ha*) in size and is approximately 18.8 metres (*m*) above sea level. The site is located to the north-eastern edge of the village of Angmering. Soils on site are described as *freely draining, slightly acid loamy soils*.
- 1.3 The surrounding landscape is of mixed use. The site is located to the north-eastern edge of the village of Angmering; the surroundings were historically used for plant nurseries and light industrial use. The land-use is currently changing to largely residential use as the village of Angmering expands. Angmering is surrounded to the east and west largely by arable land and patches of woodland; it is connected to more continuous coastal development at its southern extent. The A27 dual carriageway is 720.0 m to the north. The nearest woodland is 374.0 m to the north of the site; this is designated as Deciduous Woodland forming *Poling Furzefield*. The nearest patch of Ancient Woodland is Groom's Copse (7.5 Ha), situated 437.0 m to the north-east; Ancient Woodland is generally more extensive to the north and east.
- 1.4 The current proposals are for the retention of the dwelling and surrounding garden. To the east and the south of the site, the outbuildings would be removed and a small residential estate of 7 no. detached dwellings, and 2 no. semi-detached dwellings constructed. The dwellings would be accompanied by a hard surface access drive (*utilising the existing route of a track running through the site*) and parking areas. Soft landscape gardens would also be created.
- 1.5 The vegetation present within the site consists largely of overgrown ornamental shrubs; dense scrub; coniferous and deciduous treelines; ornamental trees; single- and mixed-species hedges; and an area of young plantation woodland. The site is bounded to the east and south by ornamental shrubs; native hedge; and trees; to the west by overgrown shrub borders and trees, and to the north by coniferous and deciduous treelines; fences; and brick walls.
- 1.6 Areas of ornamental shrubs; ornamental trees; self-seeded trees and scrub; and sections of hedge within the site would require removal to accommodate the construction of the proposed site access. A number of small, ornamental trees; and approximately 50% of the plantation woodland trees would require removal to accommodate the construction of the dwellings. The majority of the boundary vegetation would be retained and reinforced; however, a line of large Leyland cypress trees to the northern boundary are proposed to be removed, and replaced with a native, evergreen yew treeline of a more appropriate scale to the site.

- 1.7 All other trees and shrubs would be retained and protected through the proposals and throughout the construction phase in accordance with the guidance contained within *BS 5837: 2012 – ‘Trees in Relation to Design, Demolition and Construction – Recommendations’*.
- 1.8 The existing trees within and surrounding the proposal boundary have been surveyed in detail for condition and are recorded within the attached report; *LLD1392-ARB-SCH-001_ETS – Existing Tree Schedule and Schedule of Tree Works*; and identified on the following drawings; *LLD1392-ARB-DWG-001_TCP – Tree Constraints Plan* and *LLD1392-ARB-DWG-002_TRPP – Tree Retention and 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.
- 1.9 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 current proposals are for the retention of the dwelling and surrounding garden. To the east and the south of the site, the outbuildings would be removed and a small residential estate of 7 no. detached dwellings, and 2 no. semi-detached dwellings constructed. The dwellings would be accompanied by a hard surface access drive (*utilising the existing route of a track running through the site*) and parking areas. Soft landscape gardens would also be created.
- 2.2 The vegetation present within the site consists largely of overgrown ornamental shrubs; dense scrub; coniferous and deciduous treelines; ornamental trees; single- and mixed-species hedges; and an area of young plantation woodland. The site is bounded to the east and south by ornamental shrubs; native hedge; and trees; to the west by overgrown shrub borders and trees, and to the north by coniferous and deciduous treelines; fences; and brick walls.
- 2.3 Areas of ornamental shrubs; ornamental trees; self-seeded trees and scrub; and sections of hedge within the site would require removal to accommodate the construction of the proposed site access. A number of small, ornamental trees; and approximately 50% of the plantation woodland trees would require removal to accommodate the construction of the dwellings. The majority of the boundary vegetation would be retained and reinforced; however, a line of large Leyland cypress trees to the northern boundary are proposed to be removed, and replaced with a native, evergreen yew treeline of a more appropriate scale to the site.

- 2.4 The following trees; treelines; tree groups; hedges; and shrubs would require removal, either due to poor condition or to accommodate the construction of the proposed dwellings and hard landscape areas:
- TG 03 – Mixed Plantation Woodland; Category C; Removal of approximately 50% of trees to accommodate proposed dwellings;
 - TG 06 – *Corylus avellana*; *Salix* sp.; Category C; Removal of 8 no. trees to accommodate proposed dwelling;
 - T 08 – *Quercus suber*; Category C; Removal to accommodate proposed dwelling;
 - T 09 – *Picea* sp; Category U; Removal due to poor condition;
 - T 10 – *Fraxinus excelsior*; Category C; Removal to accommodate proposed parking area;
 - T 11 – *Tilia* sp.; Category C; Removal to accommodate proposed parking area;
 - TG 12 – *Pinus sylvestris*; Category C; Removal of 8 no. trees to accommodate proposed dwelling;
 - H 16 – Mixed Species Hedge; Category C; Removal to accommodate proposed access drive;
 - TG 17 – Mixed Evergreen Ornamental Trees; Category C; Removal of group to accommodate proposed dwellings and access drive;
 - TL 19 – *Cupressus x leylandii*; Category B; Removal to accommodate proposed dwelling; and to allow planting of more appropriately-sized vegetation;
 - TG 22 – Mixed Deciduous Tree Group; Category C; Removal to accommodate proposed dwelling;
 - TL 25 – Mixed Species Treeline; Category C; Removal to accommodate proposed access drive;
 - H 26 – Mixed Species Hedge; Category C; Partial removal (eastern 50%) to accommodate proposed dwelling;
 - H 27 – *Taxus baccata*; Category C; Removal of southern sections to accommodate proposed access drive;
 - H 28 – Ornamental Hedge; Category C; Removal of southern sectionsto accommodate proposed access drive;
 - H 30 – Ornamental Hedge; Category C; Removal to accommodate proposed access drive;
 - H 31 – *Prunus laurocerasus*; Category C; Removal to accommodate proposed access drive;
 - TG 32 – *Fraxinus excelsior*; Category C; Removal to accommodate proposed access drive;
 - T 33 – *Pinus* sp.; Category C; Removal to accommodate proposed access drive;
 - TL 34 – *Cupressus* sp.; Category U; Removal due to poor condition;
 - TG 35 – *Fraxinus excelsior*; Category C; Removal of 4 no. trees to accommodate proposed access drive and parking area;
 - H 36 – *Prunus laurocerasus*; Category C; Removal to accommodate proposed parking area;
 - SH 37 – Ornamental Shrubs; Category C; Removal of approximately 10% to north to accommodate proposed access drive;
 - T 38 – *Prunus* sp.; Category C; Removal to accommodate proposed dwelling;
- 2.6 The Leyland cypress treeline along the northern boundary is a large, dominant feature of the site. The trees offer ‘moderate’ overall value, but little true arboricultural value or screening to the site itself and are oversized for the site. The trees are also very close to buildings in the adjacent property. The treeline’s removal would allow the planting of a native, evergreen yew treeline in its place.

- 2.7 Yew is much slower growing than cypress and can back-bud on old wood, and therefore would be easier to maintain as a dense screen. Yew is also a native species, which could provide higher ecological value and an overall benefit to the site.
- 2.8 A relatively large quantity of trees, hedges and shrubs are proposed for removal through the development proposals. The majority of this vegetation is ornamental in value, providing low-level screening within the site only, and it does not provide significant screening outside of the site. The proposals have been designed to retain existing trees and shrubs where possible; a large number of trees and shrubs would be retained within rear gardens; in particular a high proportion of the plantation woodland trees to the east of the site. The plantation woodland is yet to reach a significant size, and those trees nearer the boundaries would be retained to provide screening and wildlife habitat as they mature.
- 2.9 The removal of vegetation within the site would be compensated through the planting of new trees, hedges and shrubs to the site boundaries and between the proposed dwellings. Boundary vegetation should aim to be interconnected and formed of native species where possible. The existing hedges with trees to the eastern and southern boundaries should also be extended and further reinforced to provide useful screening and wildlife features.
- 2.10 Crown reductions are proposed to reduce overhang of ornamental shrubs and a small number of trees into the site and allow construction access. In particular, a large Monterey Cypress at the site entrance requires crown-reduction and crown-lifting to enable safe construction access. The tree surgery works are not considered to be excessive or deleterious to the vitality of the trees. The proposals are unlikely to create the requirement for further removal of trees in the future; however, the proposals may slightly increase the requirement for further tree surgery works, notably crown-reductions as younger trees mature; the ongoing maintenance would likely be of some benefit to the trees which might otherwise suffer as a result of competition and shading. All tree work shall be undertaken by an approved and qualified Tree Surgeon in accordance with *BS3998: 2010 – 'Tree Work: Recommendations'*.
- 2.11 The following trees would require tree surgery works to allow construction access without risk of harm to trees:
- *TL 01 – Populus sp.; Category B; Crown-reduction of up to 2.6 m to the south to accommodate proposed dwelling;*
 - *TG06 - Corylus avellana; Salix sp.; Category C; Crown-reduction of up to 0.6 m to the northern aspect, or the southern 2 no. trees to accommodate proposed dwelling;*
 - *T 21 – Cupressus sp.; Category C; Crown-reduction of up to 1.3 m to the south-east to accommodate proposed dwelling;*
 - *T 24 – Eucalyptus sp.; Category C; Crown-reduction of up to 1.7 m to the north to accommodate proposed access drive;*
 - *SH 37 – Ornamental Shrubs; Category C; Pruning-back to northern aspect of southern section by up to 1.2 m to accommodate proposed dwelling;*
 - *T 41 – Cupressus macrocarpa; Category B; Crown-reduction of up to 4.2 m to the south, and crown-lift to 4.0 m height to accommodate proposed highway access;*
- 2.12 *Tree Protective Fencing* constructed in accordance with *BS 5837: 2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'* would be installed around all retained tree RPAs and canopies to ensure no harm befalls trees from site construction access or other construction activities such as materials storage.

RESIDENTIAL DEVELOPMENT PROPOSALS

THE LAURELS, DAPPERS LANE, ANGMERING, WEST SUSSEX

ARBORICULTURAL METHOD STATEMENT

LLD1392-ARB-REP-001-AIA – 10.05.18.Rev01.PlanningIssue

- 2.13 The creation of the proposed access drive would encroach heavily into the RPA of the moderate-value Monterey Cypress to the site entrance; much of the ground here is already laid to hard surface for the existing access track at this point; the further encroachment outside of this area is not considered to be excessive and is unlikely to significantly harm the tree, provided an appropriate 'no-dig' construction method is employed. A visitor parking area to the south-east of the site encroaches into the RPA of a low-value hedge with trees; the hedge with trees should be retained as a boundary feature and allowed to grow further. A 'no-dig' construction method is also recommended here to prevent harm to the vegetation and allow space for the roots to expand as the trees get larger.
- 2.14 Several structures and buildings located within the RPAs of trees proposed for retention would require demolition. In this situation, demolition contractors must take extreme care and utilise a 'top-down, pull-back' method, whereby the structures are removed level-by-level onto the existing hard surfaces and away from trees, to minimise the risk of harm. Any sub-surface foundations should be removed manually or left in-situ if sufficiently deep.
- 2.15 Replacement planting to compensate for loss of trees and shrubs should be detailed within the development scheme's final landscape proposals and should be suited to the region and the location, providing ecological value particularly for birds and invertebrates. Species might include (*for example*): pedunculate oak (*Quercus robur*); beech (*Fagus sylvatica*); field maple (*Acer campestre*); wild privet (*Ligustrum vulgare*); common hawthorn (*Crataegus monogyna*); rowan (*Sorbus aucuparia*); whitebeam (*Sorbus aria*); wild service tree (*Sorbus torminalis*); cherries (*Prunus spp.*); Willows (*Salix spp.*); hazel (*Corylus avellana*); elder (*Sambucus nigra*); silver birch (*Betula pendula*); yew (*Taxus baccata*) holly (*Ilex aquifolium*).

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 trees and shrubs not for retention;
 - Demolition of existing hard surfaces and structures;
 - Construction of proposed new dwellings and hard surfaces;
 - Construction of proposed site access;
 - 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; LLD1392-ARB-DWG-002-TRPP – Tree Retention and 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 BS 5837: 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 so as 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 access point and main entrance from Dappers Lane to the west of the site. Pre-construction vehicular movement to facilitate the tree surgery works shall be limited to the minimum requirement in order to fulfil the tree surgery 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.
- 4.4 Once the tree removal and tree surgery works have been completed the tree protective fencing works proposed shall be put in place. During construction proposed access is via the existing access point and main entrance from Dappers Lane to the west of the site. Vehicular movements during the construction period shall be limited to the areas of existing hard ground and newly protected ground only.
- 4.5 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.
- 4.6 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

- 4.7 Trees proposed for removal are detailed within this *Arboricultural Impact Assessment and Method Statement (LLD1392-ARB-REP-001_AIA)*; the *Existing Tree Schedule and Schedule of Tree Works (LLD1392-ARB-SCH-001_ETS)*; and the *Tree Retention and Protection Plan (LLD1392-ARB-DWG-002_TRPP)*. All tree work shall be carried out in accordance with *BS 5837: 2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'* and *BS3998: 2010 – 'Tree Work: Recommendations'*. Tree surgery works shall be undertaken prior to the erection of the Tree Protective Fencing. Care should be taken during the tree surgery process to avoid any damage to any trees which are designated to be retained and protected.
- 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 Surgery

- 4.9 Tree surgery measures and works have been identified as necessary within the attached *LLD1392-ARB-SCH-001_ETS – Existing Tree Schedule and Schedule of Tree Works*. Any significant defects found in the trees during the course of the scheduled work shall be reported to the Landscape Architect / Arboricultural Consultant. Any arising tree work shall be undertaken by an approved and qualified Tree Surgeon in accordance with *BS3998: 2010 – 'Tree Work: Recommendations'*. Care should be taken to avoid damage to neighbouring trees to be retained. Branches in confined spaces shall be removed and taken down in sections. All arisings shall be transported and disposed of away from site to the contractor's tip. All tree surgery work is detailed within the attached *LLD1392-ARB-SCH-001_ETS – Existing Tree Schedule and Schedule of Tree Works* report.

Tree and Vegetation Management

- 4.10 For tree and vegetation retention and removal proposals refer to this *Arboricultural Impact Assessment and Method Statement*; the attached *LLD1392-ARB-SCH-001_ETS – Existing Tree Schedule and Schedule of Tree Works*, and the *LLD1392-ARB-DWG-002_TRPP – Tree Retention and Protection Plan*. For tree and vegetation management proposals refer to the tree surgery works, and management prescriptions contained within *LLD1392-ARB-SCH-001_ETS – Existing Tree Schedule and Schedule of Tree Works* and displayed on the *LLD1392-ARB-DWG-002_TRPP – Tree Retention and Protection Plan*.

Ongoing Inspection and Maintenance of Existing Vegetation

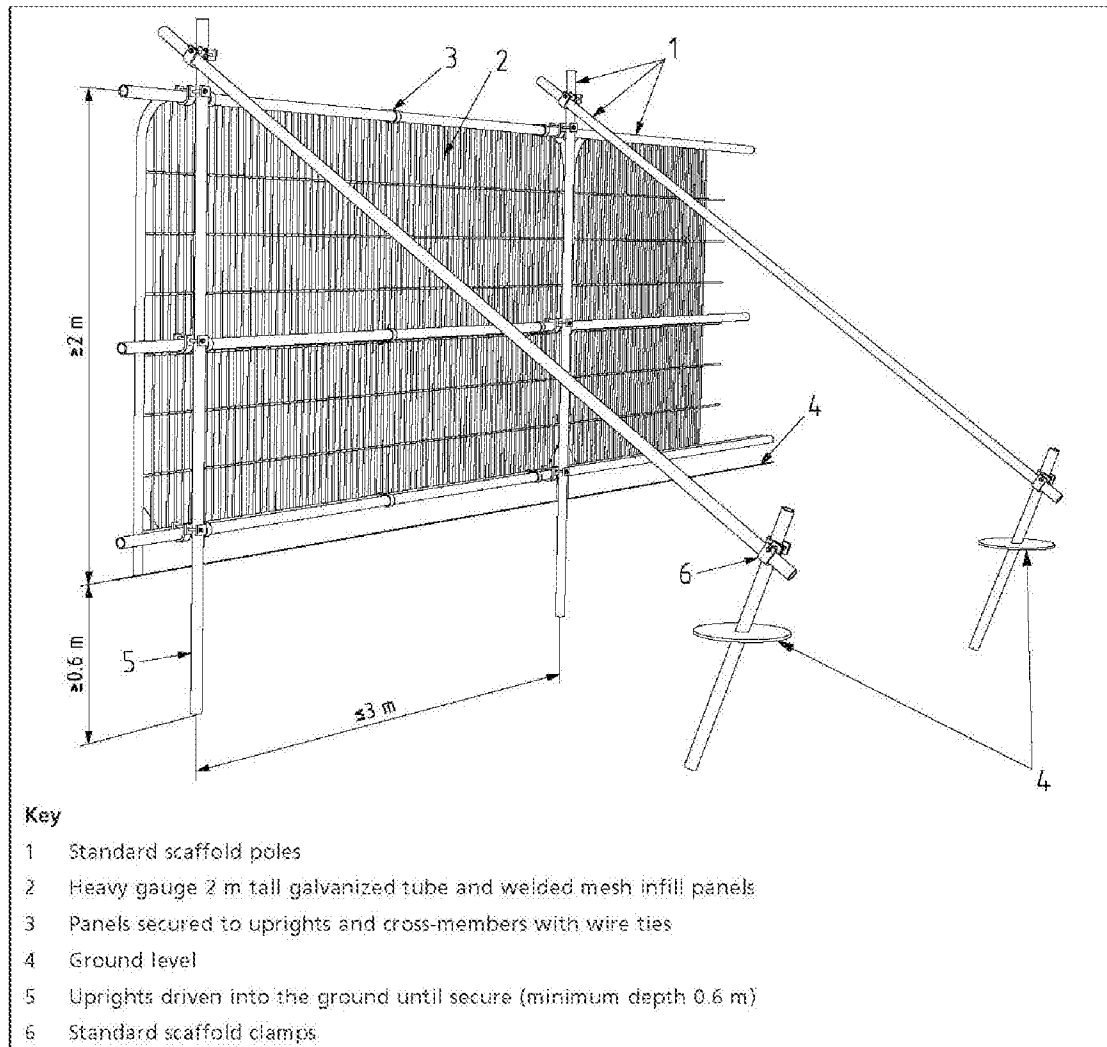
- 4.11 All retained vegetation on the site shall require ongoing regular inspection at a level deemed appropriate by the property owner. Any remedial works shall be undertaken as required to maintain trees in a safe and healthy state.

Protection and Retention of Existing Vegetation

- 4.12 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.
- 4.13 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.
- 4.14 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.
- 4.15 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 and 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 *LLD1392-ARB-DWG-002_TRPP – Tree Retention and Protection Plan*.
- 4.16 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'.
- 4.17 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.

- 4.18 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.*
- 4.19 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.

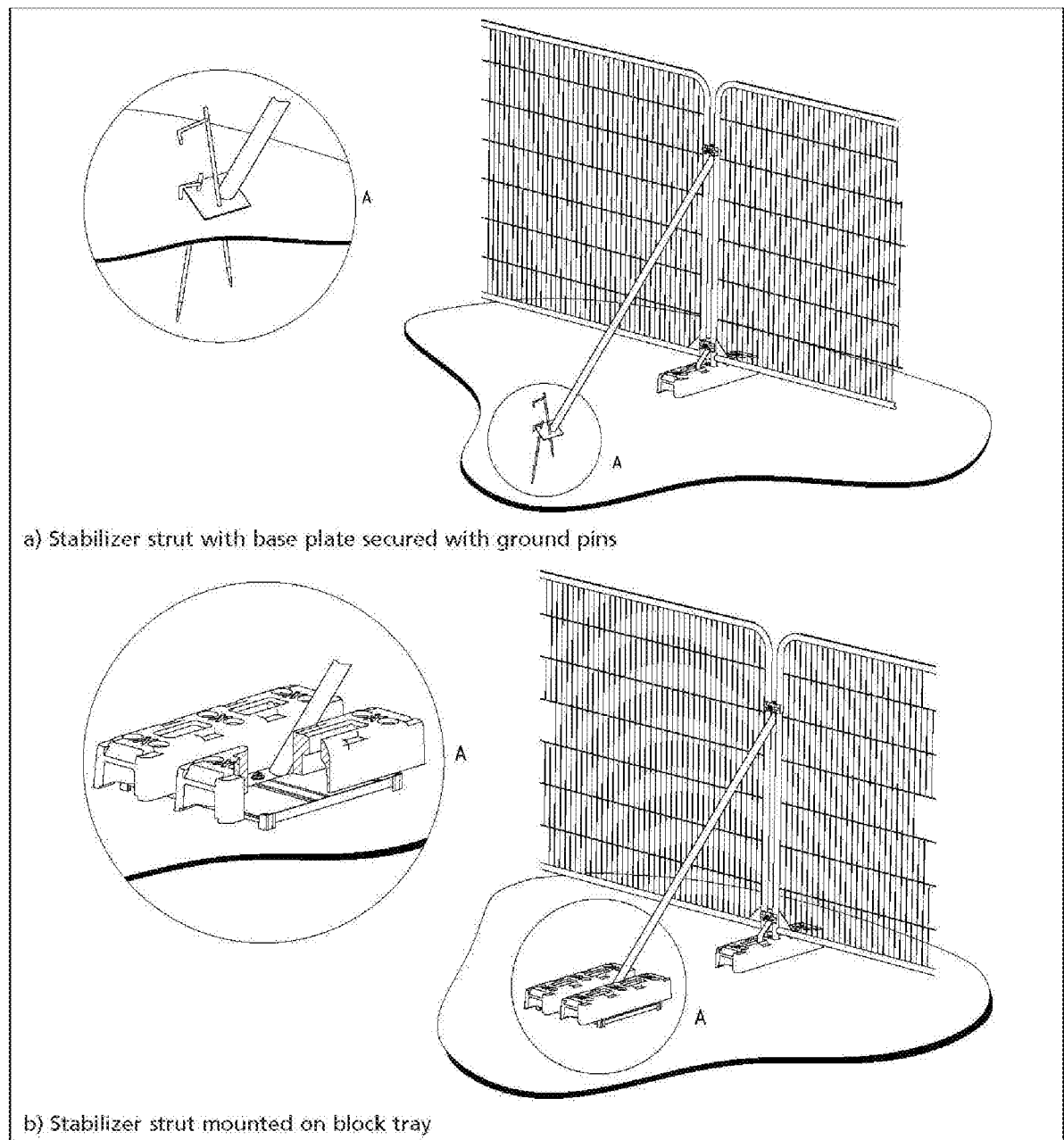
Figure 2 Default specification for protective barrier



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(Care should be taken to avoid damage to unseen tree roots and underground services; a secondary fencing support system may be implemented to accommodate these as outlined in Figure No. 3 below).

Figure 3 Examples of above-ground stabilizing systems



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Tree Protection Measures – Operation Zone During Construction and No-Dig Construction

- 4.20 While construction work is commencing on the proposed hard surfaces within tree RPAs, the existing levels of unmade ground within the RPA of existing trees are to be protected with an appropriate ground protection system for the duration of the construction period in accordance with *BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. 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 (*150 mm depth of woodchip*), laid onto a geotextile membrane would be appropriate. No vehicular movements are to be made over unmade ground within the RPAs of existing trees. Any piling rig necessary for installation of foundation piles shall be used from an appropriate piling mat outside of tree RPAs.
- 4.21 Where new hard surfaces are proposed within the RPAs of trees to be retained to create the access drive and visitor parking area, 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.
- 4.22 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 RPAs of the existing trees to be retained; existing surface materials only shall be removed carefully by hand within the existing tree root protection areas and shall be the minimum required for the construction. Existing hard surfaces and sub-base within RPAs can be removed with care to allow the tying-in of levels with the existing highway level.
- 4.23 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.
- 4.24 The granular fill within the main footpath area 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 200 mm to be suitable for frequent 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*).
- 4.25 A permeable surface layer and construction method shall be installed over the prepared sub-base layers. A bedding 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 25 mm. A layer of resin-bonded gravel shall then be installed above the bedding layer. Edge restraints shall also be of appropriate 'no-dig' construction, for example using pinned timber edging or railway sleepers.
- 4.26 New hard surface construction within tree RPAs shall be of the minimum practical depth, to minimise harm to existing tree roots.

4.27 **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 Phasing of the construction works should be considered to minimise the requirement for ground protection and avoid vehicular movements over unmade ground.
- 5.5 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 trenched and 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. Where services are to cross the edge of an existing tree root protection area, they should be routed through existing tree roots, via a hand dug ducting sleeve, avoiding damage to existing tree roots within the root protection zone.
- 5.6 Arboricultural Supervision shall be required at the following stages of work;
- *Installation of tree protection measures;*
 - *Method statement briefing for site staff;*
 - *Supervision of demolition of existing structures within tree RPAs;*
 - *Supervision of 'no-dig construction' of new hard surfaces within tree RPAs;*
 - *Removal of tree protection measures.*

- 5.7 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. Replacement planting should be detailed within the development scheme's final landscape proposals and should be suited to the region and the school location – this might include (*for example*) pedunculate oak (*Quercus robur*); beech (*Fagus sylvatica*); field maple (*Acer campestre*); wild privet (*Ligustrum vulgare*); common hawthorn (*Crataegus monogyna*); rowan (*Sorbus aucuparia*); whitebeam (*Sorbus aria*); wild service tree (*Sorbus torminalis*); cherries (*Prunus spp.*); Willows (*Salix spp.*); hazel (*Corylus avellana*); elder (*Sambucus nigra*); silver birch (*Betula pendula*); yew (*Taxus baccata*) holly (*Ilex aquifolium*).
- 5.8 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

Arboricultural Consultant

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01903 216033; lizard.landscape@btconnect.com