THE TREE COMPANY

Willow Works, Unit 9,
Inwood Business Park,
Whitton Road,
Hounslow,
Middlesex,
TW3 3EB

Arboricultural (Tree Protection) Method Statement

Address: **Hampton Pre-Prep School,
Wensleydale Road,
Hampton**

**Site Surveyed and report prepared by: Peter Holloway
BSc (Hons) FArborA CEnv**

Date: 24th January 2023

Report Prepared for Hampton School

Table of Contents

1. Instruction:

1.1 Ms Verity Moria instructed me on behalf of Hampton School. My brief is to prepare an Arboricultural (Tree Protection) Method Statement for a project to demolish some existing prefabricated buildings and construct a new hall and extend the rear of the existing buildings. I prepared an Arboricultural Impact Assessment for this project in November 2022 and because this informs the tree protection decisions the impact appraisal is included within this document.

2. Documents

2.1 I was supplied with the following documents.

a) A Site Location Plan 1829/A-001, 25 July 2022.
b) Existing Block Plan 1829/A-002, 25 July 2022.
c) Existing Site Survey Plan 1829/A-003, 3 August 2022
d) Proposed Block Plan 1829/A-011, 16 August 2022.
e) Proposed Site Plan 1829/A-012, 16 August 2022.
f) Existing Ground Floor 1829/A100, 25 July 2022.
g) Existing First Floor 1829/A-101, 25 July 2022.
h) Proposed Ground Floor 1829/A-110A, 16 August 2022.
i) Proposed First Floor 1829/A-111, 16 August 2022.
j) Proposed Roof Plan 1829/A-112, 16 August 2022.
k) Existing Elevations 1829/A-151, 25 July 2022.
l) Existing Elevations 1829/A-152, 25 July 2022.
m) Proposed Elevations 1829/A-160, 15 August 2022
n) Proposed Elevations 1829/A-161, 15 August 2022.
o) Site Section A, 1829/A-200, 16 August 2022
p) Site Section B, 1829/A-201, 16 August 2022
q) Delivery & Installation Access Requirements Portakabin Module Delivery Information, dated June 2020

3. Scope of The Report

3.1 The tree survey was carried out in accordance with BS5837:2012 and the survey details are provided in Appendix 1 and the tree locations are marked on the plans in Appendix 2 and 3.

4. Tree & Wildlife Protection

4.1 The site is not within a conservation area according to Richmond Council's website. I do not know if any trees are included in Tree Preservation Orders. The status of tree protection and the appropriate procedures must be followed before pruning or removing any trees.

4.2 The Wildlife and Countryside Act 1981(as amended), the Conservation (natural habitats etc.) Regulations 1994, and the Countryside and Rights of Way Act 2000 provide protection for many species of animal that live in trees. This includes birds and bats. If any tree works affect protected species, then this could be a criminal offence. The absence of any protected species should be confirmed before undertaking any tree works.

5. Site visit and tree survey

5.1 I visited the site on Thursday 20th October 2022.

5.2 The site is a school made from two residential buildings with a tarmacadam playground to the rear, and a garden area on the frontage.

5.3 The tree survey included seven trees, two hedge sections, five areas of shrub planting. There were six tree stumps within the hedges. All the trees were offsite near the boundary with the site.

5.4 The quality of the trees and groups are summarised in Table 2 below.

Tree Quality				
Quality Category	**A (High)**	**B (Moderate)**	**C (Low)**	**U (Unclassified)**
Tree No.	Nil	T01, T02, T04	T03, T05, T06, T07	Nil
Total	**0**	**3**	**4**	**0**

5.5 The root protection areas (RPAs) on my plans are 12-sided polygons. I have not adjusted these for obstructions to root growth on the plans at this stage but in essence the whole of the front garden area is considered a root protection area for this project.

6. Arboricultural Impact Appraisal

6.1 The existing site plan with tree constraints is shown in Appendix 2. The proposal entails demolishing the existing sheds and a prefabricated classroom in the playground at the rear.

6.2 The proposed site plan and tree constraints is attached in Appendix 3. The rear of the existing school building appears to be extended and a new school hall constructed in the playground. The hall is a prefabricated modular structure, and the sections will be transported into the site by crane.

6.3 The proposal will not require any trees to be removed.

6.4 None of the trees are directly affected by the footprint of the new buildings except for a new storage shed near T03. The storage shed is located on the existing playground in the same location as an existing wooden climbing frame and so the risk of damage to T03 is minimal and can be controlled with simple tree protection precautions.

6.5 The foliage, branches, and root protection areas of tree numbers T01, T02, T05, T06 and T07 overhang the site but none of them are directly affected by the proposed structures. However, these trees could be affected to provide working space and material storage, but this can be controlled by fencing and ground protection in the site.

6.6 I understand that a crane may be used to transport prefabricated structures into the rear playground. The crane will be positioned in the front garden as outlined in Appendix 4. I expect the vehicle carrying the prefabricated sections will be parked in the road. Therefore, there is a risk of damage to the crowns of T01, T02, T06 and T07, particularly T01 and T02 because they are larger. The risk of damage can be controlled by planning the crane operations and the location of the delivery vehicles so that the loads and crane structure are kept clear of trees. The crane operator will avoid any contact with parts of trees in his lift plan because this could overload the crane, notwithstanding any damage to the trees. Some minor pruning to T01 and T02 may be necessary to provide space for the modular sections to be lifted at kerbside.

6.7 The front garden area includes part of the RPA of T01 and T02. Sometimes these RPA would be adjusted considering that the garden area is a preferable rooting environment to the ground beneath the road. Therefore, the front garden area should be treated as a root protection area and so the front garden area will need to be provided with ground protection to prevent compaction, contamination and root damage and fencing to protect retained plants.

6.8 The outline proposed module delivery information (Appendix 9) will require part of the hedge to be removed and some of the shrubs, including the raised concrete seating area near T01.

6.9 The module delivery plan describes using cross-lain portable aluminium tracking panels laid onto the garden to provide a surface for crane operations. An access route is provided just north of T01 from the road to the site using non-slip steel plates. It would be prudent to provide some physical protection of the trunk of T01 to protect it during vehicle movements.

6.10 It is likely that the Local Planning Authority could apply conditions for tree protection and landscaping when the application is approved.

7. Summary of Arboricultural Impact

7.1 The proposal will not require the removal of any trees.

7.2 There is a minimal and controllable impact on the root protections areas of the Sycamore tree (T03).

7.3 The foliage and branches of tree numbers T01, T02, T05, T06 and T07 will need to be protected during crane set-up and crane operations.

7.4 The trunk of T01 will need protection from vehicle and crane movements using a physical barrier that is not fixed to the tree.

7.5 The soft landscaped garden at the front of the site will require some shrubs, part of the hedges and the concrete seating area removed. The working area will need ground protection to prevent compaction, ground contamination and root damage and some fencing to protect retained shrubs and hedges.

8. Appendix 1 Tree Survey Data

Table 1	Hampton School, Wensleydale Road, Hampton																Date: 20th October 2022		
Tree Number	Tree Name (species)		Estimated dimensions	Height (m)	Stem Diameter (mm)	Number of Stems	Root Protection Area		Crown constraints			Crown radius				Age class	Observations		Remaining contribution years	Tree Category
	Common	Botanical					Radius, m	Area m2	Crown height m	Lowest branch m	Direction lowest branch	North (m)	South (m)	East (m)	West (m)		Summary of Physiological condition	Structural Condition & General comments		
T01	London Plane	Platanus x hispanica	No	19	770	1	9.2	268	7	5	CB	6	6	7	6	Mature	Good	Highway tree. Originally pollarded 5m. More recently crown reduced regularly.	20 to 40	B1,2
T02	London Plane	Platanus x hispanica	No	19	760	1	9.1	261	6	5	CB	6.5	6	7	4	Mature	Good	Highway tree. Originally pollarded 5m. Stem inclined SE.	20 to 40	B1,2
T03	Sycamore	Acer pseudoplatanus	Yes	10	150,200	2	3.0	28	2.5	2.2	E	3	3.5	3	3.5	Young	Fair	Offsite. Twin stem. Crown invaded with climbing rose.	20 to 40	C1
T04	Monkey Puzzle Tree	Araucaria araucana	Yes	7	400	1	4.8	72	3	5	AR	4	4	4	4	Semi-mature	Good	Offsite.	>40	B1
T05	Prunus 'Kanzan'	Prunus Kanzan'	Yes	5	120	1	1.4	7	1.5	2	E	2	3	3	2	Young	Good	Offsite. Overhangs site by 1m (approx)	20 to 40	C1
T06	Common Holly	Ilex aquifolium	No	4	70,110,110	3	2.0	13	0.5	1.5	AR	1.5	1	2	1.5	Young	Good	Three separate stems from ground level plus one young Holm oak. Holly topiaried.	20 to 40	C1
T07	Bay	Laurus nobilis	No	4	80	10	3.0	29	0	MS	MS	1	1	2	2	Young	Good	Offsite. Multistemmed. Topiary crown.	20 to 40	C1
H8	Privet Hedge	Ligustrum ovalifolium	Yes	1.6	15	10	0.6	1	0	MS	MS	0.5	0.5	0.5	0.5	Young	Good	Multistemmed privet hedge regularly trimmed.	NA	NA
H9	Privet Hedge	Ligustrum ovalifolium	Yes	1.6	15	10	0.6	1	0	MS	MS	0.5	0.5	0.5	0.5	Young	Good	Multistemmed privet hedge regularly trimmed.	NA	NA
ST10	Stump	Prunus sp.	Yes	0	300	1	3.6	41		NA	NA					Mature	Poor	Stump.	0	NA
ST11	Stump	Prunus sp.	Yes	0	300	1	3.6	41		NA	NA					Mature	Poor	Stump.	0	NA
ST12	Stump	Prunus sp.	Yes	0	300	1	3.6	41		NA	NA					Mature	Poor	Stump.	0	NA
ST13	Stump	Crataegus sp.	Yes	0	200	1	2.4	18		NA	NA					Mature	Poor	Stump.	0	NA
ST14	Stump	Crataegus sp.	Yes	0	200	1	2.4	18		NA	NA					Mature	Poor	Stump.	0	NA
ST15	Stump	Crataegus sp.	Yes	0.7	200	1	2.4	18		NA	NA					Mature	Poor	Stump.	0	NA
SH16	Shrubs	See Observations																Eleagnus sp., Euonymus sp., Ceanothus sp., Hypericum sp., Ribes sp., Griselina sp., Choisya ternata 'Sundance', Pittosporum tenuifolium, Taxus baccata.	NA	NA
SH17	Shrubs	See Observations																Choisya ternata 'Sundance' and a variegated shrub	NA	NA
SH18	Shrubs	See Observations																Phormium sp., Hypericum sp., Berberis sp. and herbaceous plants.	NA	NA
SH19	Shrubs	See Observations																Phormium sp., Photinia sp., Fuschia sp., and Sophora davidii (?).	NA	NA
SH20	Shrubs	See Observations																Hibiscus sp., Fuschia sp., Photinia sp., Hebe sp., Escalonia sp.	NA	NA

9. Appendix 2 Existing Site Plan with Tree Constraints

The Tree Company (London) Ltd

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Whitton Road, Hounslow, TW3 2EB

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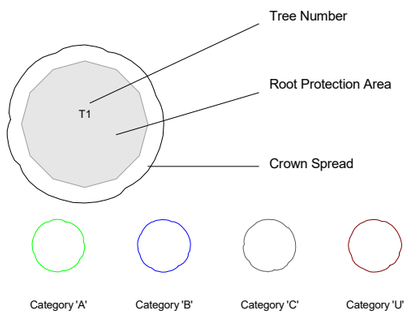
Existing SIte Plan with Tree Constraints

SCALE : 1 : 200 @ A3	DATE : 26/10/2022	N
MAP FILENAME : Hampton School TCP		

Map data supplied by the Architect, Squires and Brown Ltd.



0 15m

PLAYGROUND

KINDERGARTEN

T07 C

T06 C

ST12

T01 B

H8

ST11

ST10

SH18

SH17

ST13

SH19

ST14

H9

SH20

ST15

T02 B

SH16

T03 C

T05 C

T04 B

10. Appendix 3 Proposed Site Plan with Tree Constraints

The Tree Company (London) Ltd

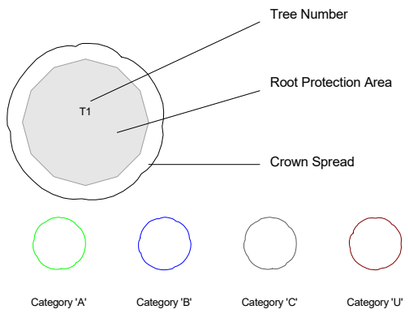
Willow works, Unit 9, Inwood Business Park,
Whitton Road, Hounslow, TW3 2EB

enquiries@thetreecompany.co.uk

Proposed Site Plan with Tree Constraints

SCALE :	DATE :	N
1 : 200 @ A3	17/01/2023	
MAP FILENAME : Hampton School AIA		

Map data supplied by the Architect, Squires and Brown Ltd.



0 15m

HALL

PLAYGROUND

WENSLEYDALE ROAD

T07 C
T06 C
ST12
T01 B
H8
ST11
ST10
SH18
SH17
ST13
SH19
ST14
H9
SH20
T02 B
ST15
SH16
T03 C
T05 C
T04 B

11. Appendix 4 - Outline Site Layout and Access Plan by Portakabin.

12. Appendix 5 – Tree Protection Method Statement

A5.1 The Roles and Responsibilities for Tree Protection on this site are described below. Tree protection details are reviewed as part of the site supervision procedure to ensure that tree protection is practical and that construction methods do not compromise tree protection.

Arboriculturist
Peter Holloway of Rootcause Ltd
To provide a watching brief over the works on site when there is a risk of damage to any tree or woody plant. To provide an advisory role to the Contractor of how works are to be carried out, and the preparation of the agreed methodology with the Contractor. To complete site visit reports for the client after each visit which will be forwarded to the relevant Tree Officer/Department.

Contractor
Not appointed yet.
To manage the works on site as per the agreed tree protection methodology. The contractor is responsible for all operatives on site and how the works are to be executed. The contractor must endeavour to comply with all aspects of the methodology when working on or near trees.

The construction contractor will incorporate a section in their site induction about site constraints and procedures for tree protection in relation to site access and working near trees.

A5.2 **Tree Work**

A5.2.1 Some trees and shrubs will need to be removed as detailed in A.5.2.2 and as indicated in any planning decision. The crown of T06 and T07 should be pruned to the boundary fence as fencing cannot be placed on the footway and the crowns are between 1.4-3m high where they overhang the site and fencing could restrict vehicle access. This will prevent damage to the canopy and the pruned parts of the canopy will regrow.

A5.2.2 Approval of the Arboricultural Method Statement should include consent to Prune T06 and T07 unless the Local Planning Authority require a separate tree works application. Any further tree pruning will require Local Authority Consent other than work included in the statutory exemptions (e.g., Removing dead branches). Any pruning without permission or any physical damage to trees could result in a prosecution.

A5.2.3 The tree work and shrub removals proposed is summarised in the following Table.

Tree No	Species	Proposed Work
T01	London Plane	Prune southern quadrant of the crown by up to 1.5m to clear vehicle unloading area by approximately 1m (If necessary).
T02	London Plane	Prune northern quadrant of the crown by up to 1.5m to clear vehicle unloading area by approximately 1m (If necessary).
T06	Holly	Offsite tree. Prune back to boundary fence.
T07	Bay	Offsite tree. Prune back to boundary fence.
H8	Privet	Remove section as indicated on Tree Protection Plan
H9	Privet	Remove section as indicated on Tree Protection Plan
ST12	Hawthorn	Remove stump
ST13	Hawthorn	Remove stump
ST14	Hawthorn	Remove stump
SH16	Shrubs	Remove part of shrub bed.
SH17	Shrubs	Remove shrubs
SH18	Shrubs	Remove part of shrub bed.

Table 2 – Proposed Tree Work

A5.3 Provision of information for all site operatives

A5.3.1 A copy of the arboricultural method statement will be provided to site managers and key staff.

A5.4 Erection of protective fencing and ground protection

A5.4.1 Tree Protective fencing will be erected where indicated in the tree protection plan. Tree protective fencing normally will consist of 2m tall by 3m long weldmesh panels fixed to a scaffold framework or stakes so they cannot be easily moved or breached. Braces for protective fences must not be fixed to any part of a tree. Fence Protection for retained shrubs need only be 1.5m tall.

A5.4.2 The fencing to protect the trunk of T01 will need to be a box structure to 4m high designed so that it does not touch and is not connected to the trunk. The structure must resist impact and damage to the trunk from vehicle and crane movements. The box may be scaffold or timber as appropriate if it satisfies the design criteria.

A5.4.3.1 Ground protection will be used where shown on the Tree Protection Plan. The purpose of ground protection is to prevent compaction or contamination of the soil ground in which the roots are growing or may grow into.

A5.4.3.2 The existing hard surfaces act as ground protection for people, vehicles, and materials storage.

A5.4.3.3 The proposed ground protection for crane operations is shown in the Tree Protection Plan (Appendix 6 and 7). This will consist of the following. There is a schematic plan of the cross section of the ground protection in Appendix 8.

a) The ground will be levelled by removing above ground obstructions including tree stumps, shrubs, and the raised concrete platform. These should be removed to just below final ground level so that any existing roots near to them are not damaged.
b) The ground surface will be covered with a geotextile membrane to prevent mixing of sand used for levelling with the soil.
c) The geotextile membrane will be covered in washed sharp sand to create a level surface for the ground protection sheets.

d) Ground protection for the garden area use 3mx2.5m aluminium tracking panels, half panels (1.5x2.5m) and quarter panels (0.75x2.5) as described in Appendix 9 and the brochure in Appendix 10. These will be laid in a double layer to give a capacity estimated to exceed 15 Tonnes per axle.

e) The access way from the road is already covered in hard standing and paving but to provide additional capacity for access the road access way will be covered with washed sharp sound to attain suitable levels and covered with non-slip steel road plates.

A5.5 Construction

A5.5.1 Construction will use Modular pre-constructed modular structures nominally 10m long by 3.4m wide and 3.2m high. These units are delivered on lorries and unloaded at roadside with a crane that lifts them over the existing building into position in the rear playground.

A5.5.2 The approximate distance between the canopies of T1 and T2 is 8m at kerbside and 12m in the centre of the road. The modular buildings will need to be reorientated to lift between the trees or moved nearer the centre of the road (under the tree canopies) before lifting. The lowest part of the crown is 6-7m above the road. The estimated height of each delivered unit on a 1.2m high flatbed lorry is 4.4-4.6m so the deliveries should be 1.5-2m clear of the lower canopy branches.

A.5.5.3 The lorry unloading area does not need to be kerbside as they could unload nearer the centre of the road. If the modular units cannot be reorientated or unloaded nearer the centre of the road the trees will need to be pruned to provide lifting space. The pruning would need to be a crown reduction of 1.5 m on a segment above the kerb south of T1 and north of T2. Tree pruning could only be carried out by the Local Highways authority and/or with their permission. This amount of pruning will not have a significant impact on the appearance of the trees. The method of estimating the shape of a tree crown in BS5837 is simplistic an only accurate to 0.5-1.0m. I am more likely to overestimate the crown radius, anticipating growth, so the amount of pruning I anticipate could be an overestimate.

A.5.5.4 No materials should be stored within the Root Protection Area (RPA) of retained trees unless ground protection is used. Materials can also create a source of combustible material where an accidental fire could destroy the tree. Where it is necessary to use space beneath retained trees for storage additional precautions are required. Where possible combustible materials should be kept at least 10m from the crown of retained trees in case of accident. If not practical, suitable fire-fighting equipment must be kept on the worksite while work is in progress.

A5.5.5 Many building materials are harmful to trees. Cement, cement washings, wastewater, diesel fuel and even clean water in excess can kill or seriously damage trees. Any runoff or spillages must be controlled so that they do not contaminate the ground within RPAs of retained trees or landscape areas.

A5.5.6 The only excavations anticipated are for the foundations of the modular building. This would not affect any RPAs.

A5.5.7 Trenches for services (electricity, gas, water etc.) can damage tree roots. No new services are anticipated within the RPAs of trees. If new services become necessary within the RPAs of retained trees, the excavations and changes in ground level required, must be carried out considering that roots may be present. It will be necessary to undertake excavations by hand and all roots of 25mm diameter or larger must be retained.

A5.5.7 Any excavations within the RPAs of retained trees must be carried out by manual methods. A methodology for manual excavations is included in A5.8.

A5.6 **Site Supervision**

A5.6.1 The Local Tree Officer or a Planning Enforcement Officer could visit the site at any time to check that the planning conditions, including this method statement are being followed.

A5.6.2 Independent arboricultural supervision is likely to be a condition of planning permission to ensure that the trees are not damaged or at risk during the works. An example of the site supervision record is attached in Appendix 8. This record would be completed by the arboriculturist after each supervision visit and provided to The Project Manager and copied to the local tree officer if required by the planning condition.

A5.6.3 **Estimated Site Supervision Schedule (This will be adjusted when the Construction Programme is available).**

Arboricultural Site Supervision – estimated schedule			
Stage		**Estimated date**	**Reason**
Prestart	Pre-start Meeting & Review of Tree Protection required with key site staff	19th July 2023	To make sure that protection requirements are understood and practical. See meeting Agenda in Appendix 6.
Demolition of existing structures and construction of modular building	Tree Protection installed	24th July 2023	Ensure tree protection installed correctly.
	Demolition of existing structures	24th July 2023	Low Risk to trees. No supervision necessary
	Foundation excavation & construction	1st August 2023	Low Risk to trees. No supervision necessary
	Modular building construction	From 7th August 2023	Weekly site inspection to check tree protection and trees.
	Storage Building near T03 constructed	21st August	Site inspection to check tree protection and trees.
	Internal Construction & fittings	From 21st August 2023	Low Risk to trees. No supervision necessary
	Tree Protection dismantled	From 21st August 2023	To ensure no tree damage occurs and inspect site.
Landscaping	Restore Landscaping in front garden	October 2023	To ensure no methodologies risk damaging roots or soil compaction.

A5.7 **Soft Landscaping**

A5.7.1 Any soft landscaping within the RPAs of trees should avoid significant increases or decreases in ground levels (no more than 50mm) and excavations should be carried out in a way that ensures roots and rooting space are retained.

A.5.7.2 Any machinery used in landscaping should avoid root damage or soil compaction. The use of herbicides must be avoided where they could affect retained trees and shrubs.

A5.8 **Method for Hand Excavations within Root Protection Areas**.

The purpose of the excavation is to establish the presence/absence of significant roots within the RPA's of retained trees when any excavations are necessary within Root Protection Areas so these roots can be retained without damage.

Method:

a) Excavation within hard landscaping will need to be carried out using concrete breakers and excavators. Hand excavation is not practical.

b) Machine excavations should be planned and supervised to protect and preserve roots within the excavations, prevent compaction of soil or granular materials.

c) Where excavations occur in soil or soft landscape excavations will use hand tools like forks, spades, and shovels. An 'Air Spade' could be used in particular cases, but the depth of some excavations is limited with these tools. Any other power tools must not be used.

d) The depth of excavation will the same as the depth of the structure proposed.

e) During excavations, any roots less than 25mm diameter can be cut cleanly to the sides of the excavation with a pair of secateurs or handsaw.

f) Tree roots 25mm in diameter or greater will be left in situ and protected from damage during the work.

g) Tree roots could be up to 1.5m below ground level. Therefore, it is important to avoid compaction, contamination of the soil within, below or in the sides of any excavations.

h) If excavations are close to retained roots the roots need to be protected with cut sections of plastic pipe, or similar materials, to prevent physical damage. Roots to be retained which are exposed for longer than an hour will be covered with Hessian to prevent damage from high (above 25 °C) or low temperatures (under 5 °C) and sun scorch (depending on the ambient weather conditions). At high Temperatures roots and their coverings will need to be kept moist.

13. Appendix 6 Tree Protection Plan

The Tree Company (London) Ltd

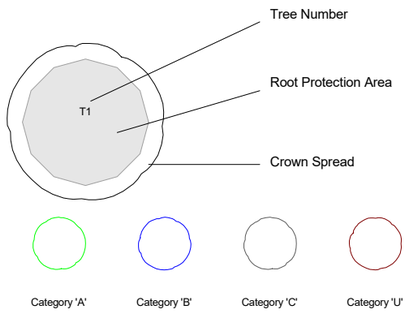
Willow works, Unit 9, Inwood Business Park,
Whitton Road, Hounslow, TW3 2EB
enquiries@thetreecompany.co.uk

Tree Protection Plan

SCALE :	DATE :	N
1 : 200 @ A3	24/01/2023	
MAP FILENAME : Treeco/Hampton SchoolAMS		

Map data supplied by the Architect, Squires and Brown Ltd.

- Existing Hard Standing (Ground Protection)
- Ground Protection Crane Operations
- Ground Protection for Crane Access
- Shrubs removed
- Paved platform removed
- Unloading Area/Crane for lifting panels
- Hand Operations - No Machinery
- Protective Fencing
- Site hoarding/fencing



0 15m

HALL

PLAYGROUND

WENSLEYDALE ROAD

T01 B
T02 B
T03 C
T04 B
T05 C
T06 C
T07 C

ST10 ST11 ST12 ST13 ST14 ST15

H8 H9

SH16 SH17 SH18 SH19 SH20

14. Appendix 7 Detail of Protection in Front Garden

The Tree Company (London) Ltd

Willow works, Unit 9, Inwood Business Park,
Whitton Road, Hounslow, TW3 2EB

enquiries@thetreecompany.co.uk

Tree Protection Plan
Front Garden Detail

SCALE :	DATE :
1 : 150 @ A3	24/01/2023

MAP FILENAME :
Treeco/Hampton SchoolAMS

Map data supplied by the Architect, Squires and Brown Ltd.

N

T06
C

T07
C

ST12

T01
B

H8

ST11

ST10

SH18

WENSLEYDALE ROAD

SH17

ST13

SH19

ST14

H9

SH20

ST15

T02
B

SH16

- Existing Hard Standing (Ground Protection)
- Ground Protection Crane Operations
- Ground Protection for Crane Access
- Shrubs removed
- Paved platform removed
- Unloading Area/Crane for lifting panels
- Protective Fencing
- Site hoarding/fencing

Crown Spread

Root Protection Area

Category 'A' Category 'B' Category 'C' Category 'U'

0 15m

15. Appendix 8 Tree Protection Monitoring Record

THE TREE COMPANY

Tree Protection Monitoring Record

Reason for visit	**Stage/Planned/Unplanned/Emergency**		
Site:		**Site Manager:**	
Site visit by:		**Client:**	
Date of visit:		**Time of visit:**	

Tree Protection Element	**Comments/Action**	Rating*
Site Access routes		
Location of Site Accommodation/ Car Parking etc		
Tree Protective Fencing		
Ground Protection		
Planned Construction Exclusion Zone		
Site Storage		
Soil contamination		
Excavations/ level changes		
Tree Condition		
Plant used on site		
Landscaping		
General Observations		
Document Review Required		
Signed:	Overall Site Rating	

*Rating: P is inadequate, F is adequate as specified, G is above specification

16. Appendix 8 Schematic Ground Protection Cross Section

The Tree Company (London) Ltd

enquiries@thetreecompany.co.uk

Schematic Ground Protection for Garden Area

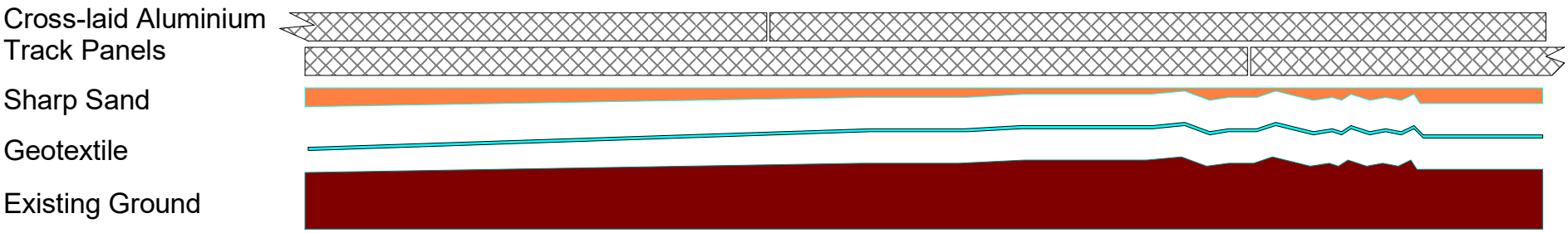
SCALE : **1 : 20** @ A4

DATE :

MAP FILENAME : **Treeco/2022**

N

- Ground surface
- Sand layer for levelling
- Geotextile
- Aluminium Tracking Panels



17. Appendix 9 Module Delivery Information

Delivery & Installation Access Requirements

Hampton Pre School - London - June 2020

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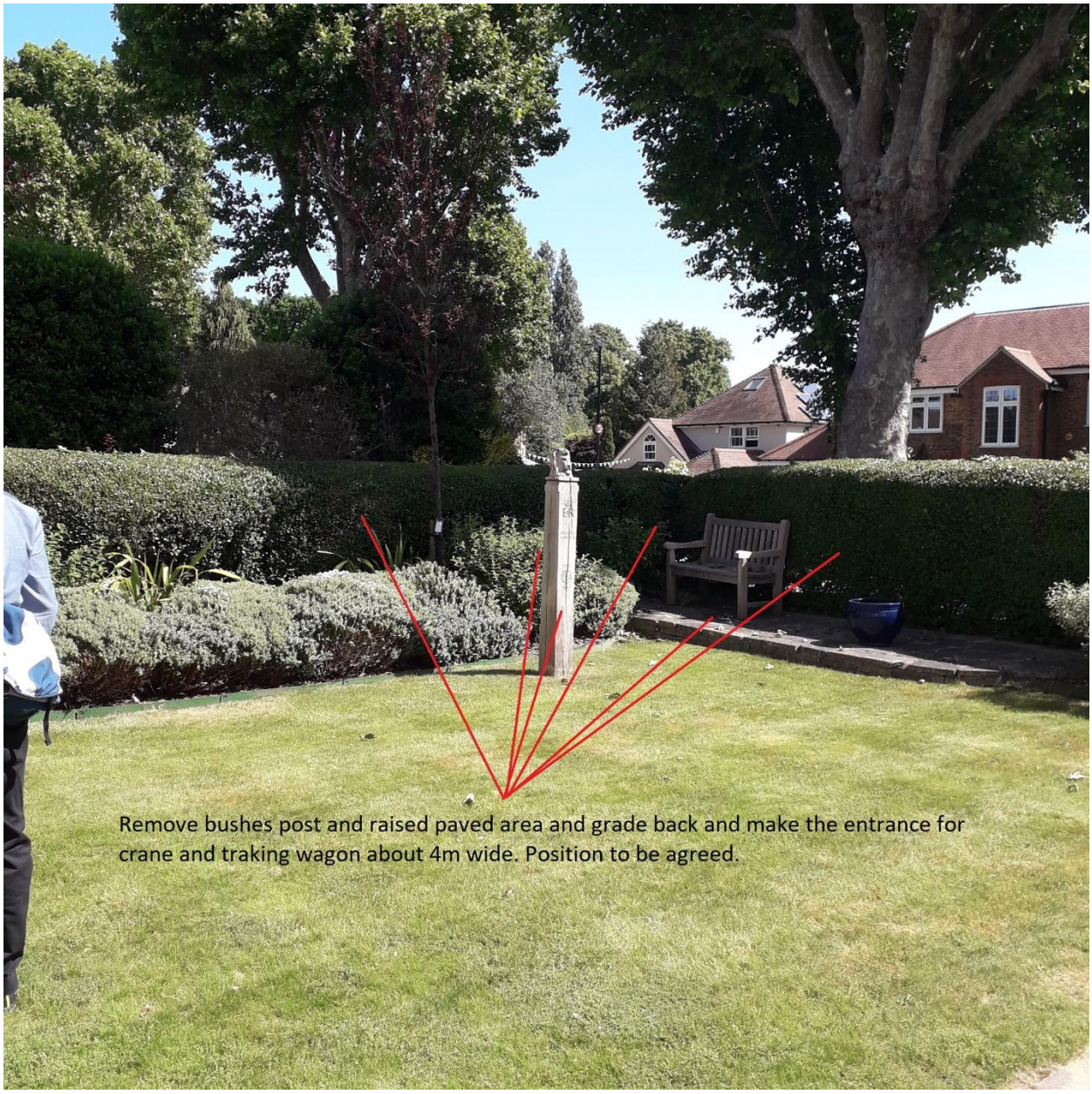
1. Module Installation

1.1 Module Delivery Information

The modules to be delivered will be five number UK093 Ultima modules 3.2m high internal ceilings. These works are looking to be carried out during the summer of 2021.
The site is within a residential area and the Pre-school is a converted house. The modules are to be sited at the rear of the school along the boundary fence line. They will have to be craned over the main school building and then some modules will have to be skated into position. Due to the overhanging trees we can't set a crane up on Wensleydale Road, as they would clash with the boom of the crane. Because of the positions of these trees and their overhanging branches the crane will have to be set up in the front garden of the school, which will need protecting with double cross laid portable alloy traking.
The modules will be craned from school garden with the delivery transport sited on Wensleydale Rd and traffic management will be required to assist with the traking installation and recovery and the module installation. (Picture 3)
There are some enabling works required to allow for the traking and crane to gain access into the school garden site. Bushes, posts and some raised paving will be required to be removed prior to the dates for installation. The paving is at a different level to the school garden and will need grading back to the pavement level. The pavement area, which the crane and traking vehicle will travel across, will need protecting with steel non slip plates. These are normally supplied by the appointed groundworkers. (Pictures 1 & 2)
Due to site constraints for the crane set up position all the five number modules will not be able to be positioned directly into place. This is due to the size of the only crane we can use in the garden. Atlas Industrial will have to assist with siting at least 2-3 modules. The module installation works will be carried out within one day and there will be two days for the traking installation and the recovery. Traffic management will assist with deliveries and vehicle movements on all three days.


Remove bushes post and raised paved area and grade back and make the entrance for crane and traking wagon about 4m wide. Position to be agreed.


KG
REC
YR1
Some bushes and posts to be removed for portable alloy traking

Hampton Pre School

Costs for Installation

130 tonne Crane:- £TBC

Traffic Management:- £TBC

Portable Alloy Tracking:- £TBC

Atlas Industrial:- £TBC

Please note all costs are for normal weekday working hours and please note that these are current 2020 prices.

18. Appendix 10 Davis Trackhire Brochure with Panel details

DAVIS trackhire

ALUMINIUM DTH PANELS

OVERVIEW

The **DTH Panel** system is primarily designed to provide a 3.0 metre wide load-bearing temporary access road to allow up to the heaviest road-going vehicles to safely travel over the harshest of terrain.

Dependent upon site conditions, these aluminium panels can be laid in almost any configuration from a single or double width roadway with turning circles and passing bays, to a large site compound or temporary car park to create a safe and efficient passage for both site traffic and pedestrians and avoid costly remediation works.

Each panel is made up of structurally designed box sections which slide together to form an articulated joint which allows the panel to follow the contours of the undulating surface.

The dual-purpose panel has two sides - a low-profile, pedestrian-friendly side and a high-profile, high traction side that provides high mechanical grip and all-round traction. DTH Panels also have hidden bolts and cross-plates which are encased within the panel, as well as flush overlapping edges.

SUITABILITY


Temporary Roadway

Crane Pad


Site Compound


Temporary Car Park

INSTALLATION

DAVIS trackhire

Scotland Depot: 103A Main Street, Newmains, Wishaw, ML2 9BG
England Depot: Gresley Road (Off Stirling Road), West Carr Industrial Estate, Retford, DN22 7SN
T : 01698 352751 E : info@davistrackhire.com

www.davistrackhire.com

DAVIS trackhire

ALUMINIUM DTH PANELS

DIMENSIONS AND PROPERTIES

Dimensions
Product Dimensions (Width x Length):
3000mm x 2497mm
Usable area when joined (Width x Length):
3000 mm x 2401mm = 7.2sqm

Box Section Properties
Width of section = 253mm
Depth of section = 53mm

Weight
265kg per panel

Weight Loading
Up to 15 tonnes per axle dependent upon sub-surface and panel configuration. Please seek further advice from Davis Trackhire if weight exceeds 15tn/axle

Mechanical properties and strength calculations

- Alloy 6005A T6
- Yield strength of alloy 215N/mm2 minimum value
- Ultimate tensile strength 255N/mm2 minimum value
- Hardness of alloy 85 Brinell

MECHANICAL PROPERTIES & STRENGTH CALCULATIONS

Load calculation condition 1:
1 plank, 3000mm long, simply supported at the ends, point load of 900Kg at centre.

Deflection = WL3/48EI Where W = 900Kg x 9.81 / 1000 = 8.83KN
L = 300cm
E = 6900Kn/cm² (Modulus)
I = 91.29cm⁴ (Second moment of area)
Y = 2.94cm

Therefore: **Deflection** = 8.83 x 3003 / 48 x 6900 x 91.29 = 7.885cm = **78.9mm**

Bending moment = WL/4 = 8.83 x 300/4 = **662.25M**

Bending stress = MY/I = 662.25 x 2.94/91.29 = 21.33KN/cm² = **213.3N/mm²**

Load calculation condition 2:
1 plank, 3000mm long, simply supported at the ends, uniformly loaded along its length with an 1800Kg load

Where W = 1800Kg x 9.81 / 1000 = 17.66KN
Deflection = 5WL3 / 384EI

Therefore: **Deflection** = 5 x 17.66 x 3003 / 384 x 6900 x 91.29 = 9.86cm = **98.6mm**

Bending moment = WL/8 = **662.25M**

Bending stress = MY/I = 662.25 x 2.94/91.29 = 21.33KN/cm² = **213.3N/mm²**

These load conditions are extreme, in reality the plank will always be support by the ground condition somewhere along its length. Also, loads will be spread over adjoining planks within in the panel.

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