

**11 THORNHILL  
ROAD,  
ICKENHAM,  
MIDDX.  
UB10 8SF**

**LANDSCAPE  
MANAGEMENT  
AND  
MAINTENANCE  
PLAN**

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## **1.0 Objectives**

- 1.1. To ensure the successful planting operations, establishment and continued healthy growth through to maturity of the trees, shrubs and grass.
- 1.2. To achieve a clean, tidy condition and appearance of all external areas.

## **2.0 Background Information**

- 2.1. We were commissioned in 2022 to prepare the following documentation:
  - Landscape Proposals
  - Soft Landscape Specification
- 2.2. The controlling authority are London Borough of Hillingdon, who should be consulted on any matters relating to existing trees and the approved detailed landscape proposals for the project.

London Borough of Hillingdon

Civic Centre

High Street

Uxbridge

Middlesex

UB8 1UW

## **3.0 Preliminaries**

- 3.1. Failures of Plants (Pre-practical Completion): the Contractor entirely at his own cost shall replace any trees, shrubs or other plants other than those found to be missing or maliciously damaged.
- 3.2. Malicious Damage or Theft prior to Practical Completion: the Contractor at his own expense shall make all loss or damage arising from theft or malicious damage prior to practical completion of the entire project good.
- 3.3. Post Practical Completion: the Contractor will carry out the maintenance of trees, shrubs and grasslands after the date of practical completion until the responsibility is transferred to the new owners or by the appointed Management Company.
- 3.4. Replacement of plants shall take place as many times as is necessary in order to maintain a complete cover of plants and to maintain the scheme as designed by the Architect, and within the correct season for the type of plant, tree, shrub and grassland mix.

## 4.0 General Maintenance

4.1. Following installation and after transfer the landscape shall be the responsibility of and maintained in perpetuity by:

- Domestic Owners,
- Commercial Owners,
- Righttime Investments Ltd and their appointed Management Companies (should these be contracted out),

The agreement for which shall be set up by the Developer, who shall confirm in writing to the Principal Planning Officer of London Borough of Hillingdon when the maintenance agreement is completed and is operative.

Refer to drawing Landscape Management and Maintenance Plan for an overview of the responsible parties for the landscaped areas.

4.2. The Developer shall ensure that any landscape contractor employed by the developer shall carry out the periodic maintenance of all planted areas, other than any areas for which the appointed Management Company becomes responsible during the said Maintenance Period. Inspection checks shall be carried out at monthly intervals and the appropriate work carried out.

4.3. The Developer shall ensure that any landscape contractor employed by the developer shall carry out in all areas any shrub, tree, grass and other plants replacements that may be necessary until transfer of responsibility to the Management Company.

- 4.4. The Management Company shall be responsible for all periodic maintenance and replacement thereafter for all planted areas to which its management agreement relates, and shall ensure that any landscape contractor employed by it carries out periodic maintenance of all such areas in accordance with the general horticultural schedules below. Either inspection checks shall be carried out by a competent person, a member of British Association of Landscape Industries (BALI) or the Landscape Institute (LI), acting for the Management Company, at minimum monthly intervals and the appropriate work carried out.
- 4.5. No existing trees, shrubs or grass shall be removed or cut without specific instructions from the Contract Administrator and written agreement of the Local Planning Authority Tree Officer. Existing trees are to be retained, protected and undisturbed throughout the contract.

## **5.0 Amenity Grass (Turf)**

- 5.1. Grass shall be cut during the growing season (generally April-October) using a sharp cutter to leave about 30-35mm of growth and remove arisings from site.
- 5.2. Grass will be cut at intervals of not more than 10-14 days depending on growing conditions. Arisings shall be collected and removed from site. A dressing of prepared fine fishmeal shall be applied at the rate of 60gms/m squared after the second mowing and the arisings of the cut following are to be allowed to fly.
- 5.3. The sward shall be maintained weed free by an annual application of a selective weed-killer or other equal and approved as necessary. This is to be used by an appropriately trained and qualified individual.
- 5.4. Grassed edges to planted areas to be trimmed to maintain a clear smooth edge to planted beds; strim edges elsewhere but not against trees; spike annually in October.
- 5.5. Should bare patches of grass develop, area is to be cultivated to 150mm and then seeded with amenity grass seed. To be cross-sown in two directions at right angles to each other,(half the seed being used in each direction) at the rate of 35 gm per square meter and the ground lightly raked over on a still dry day when the top 25mm of soil is dry. Use 'A22 Low maintenance' mix as supplied by Germinal Seeds Ltd, or similar and approved by Local Planning Authority. Germinal Seeds Ltd tel: 01522 868714.

### *General*

- 5.6. Grassed areas will be maintained by the Management Company.
- 5.7. This management plan should be made available to the new owners to help outline the principles of the retained habitats and encourage the future management of these areas in perpetuity.

## **6.0 Shrub and Tree Planting**

- 6.1. The Management Company will maintain all shrubs and trees.
- 6.2. Formative tree pruning is to be undertaken until a permanent structurally sound scaffold system of branches typical of the species and appropriate to the site circumstances is produced.
- 6.3. Post-planting management and maintenance of trees shall be in accordance with BS8545:2014 section 11 Trees: from nursery to independence in the landscape-recommendations.
- 6.4. A formal assessment of young tree health and development shall be undertaken annually. This assessment shall include foliar appearance, leaf size and leaf canopy density, extension growth and incremental girth development. Trees shall also be assessed continually throughout the year on an ad hoc basis. Wherever practicable the performance of young trees shall be assessed by testing leaf fluorescence and leaf chlorophyll content.
- 6.5. The density of planting will require that all weeding is carried out by hand, using the appropriate tools. All resultant material should be removed from site.
- 6.6. The Management Company is responsible for litter picking in those areas that it manages.
- 6.7. All plants shall be inspected monthly for wind firmness and firmed as necessary at the same time. Stakes shall likewise be checked for firmness and all tree and plant ties inspected and made good if required.
- 6.8. All stakes and ties shall be removed as soon as the developing root system is strong enough to support the tree, this is usually after two full growing seasons.
- 6.9. All protective furniture shall be inspected annually and removed as soon as it is no longer needed to protect the tree or where it is causing damage to the tree.
- 6.10. The soil around newly planted trees shall be regularly inspected for soil capping or compaction and remedial action taken if needed.

- 6.11. All trees shall be checked regularly for mammal, human or other external damage and remedial action taken where necessary.
- 6.12. Minor pruning of dead or damaged wood shall be carried out annually. All wounds must not be treated with a sealant as per BS3998:2010 Tree Works Recommendations. On substantial trees, the Local Planning Authorities Tree Officer must be consulted for any necessary approvals.

Watering: All plants are to be well watered immediately after planting operations. To be wet to full depth of topsoil or wet to field capacity using either potable mains water, recycled or treated grey water. If there is any surface compaction the soil is to be loosened to direct water to the rootzone, taking care not to damage or loosen plants. Watering operations are to be undertaken as many time as necessary in order to ensure the continued thriving of all planting materials. Any failures due to drought shall be replaced by the Management Company/ies at their own cost.

- 6.13. Water restrictions: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.
- 6.14. All planted areas shall be given an application of an approved top dressing at the rate of 40g/m<sup>2</sup> in May. This should be in slow release form e.g. Enmag or similar. This should be worked lightly into the soil, without disturbing the roots, before the bark mulch is re-spread. Unless specific nutritional deficiencies are identified, no fertiliser shall be applied to newly planted trees in the first season. If visual inspection points to nutrient deficiency further investigation of causes will be necessary. Remedial action may include addition fertiliser application, pH testing, assessment of organic content and levels of compaction.
- 6.15. Shrubs shall be maintained in a balanced shape and shall be annually pruned to allow for this. Any growth which will obscure windows, signs or sight-lines shall be removed. Once established, any support canes shall be removed from the shrubs. Trailing and climbing material shall be assisted in its growth by securing growing leaders where necessary.

- 6.16. The bark mulch should be maintained at an even spread, 75mm deep, of consistent thickness, to ensure that it is effective as a weed suppressant and moisture conserver. Following any maintenance operations and on a bi-annual basis, the mulch shall be supplemented to allow for any material which may have been lost.
- 6.17. No plant substitutions to be made without the prior written agreement of the Local Authority Landscape Section.

## 7.0 Maintenance Schedules

### *Every week*

- All plants shall be watered following 10 days without rain. Then weekly until natural rainfall during June – August.

### *Every two weeks*

- Amenity Grass to be cut every 10-14 days
- There should be a minimum fortnightly litter pick over the entire site within areas covered by the Management Company.

### *Every month*

- Weed control shall be allowed for at monthly intervals. All areas to be weeded by hand.
- All plants shall be inspected monthly for wind firmness and firmed as necessary at the same time. Stakes shall likewise be checked for firmness and tree ties checked.

### *Every six months*

- The bark mulch should be topped up bi-annually
- After two years tree stakes and ties are usually ready to be removed.

### *Annual*

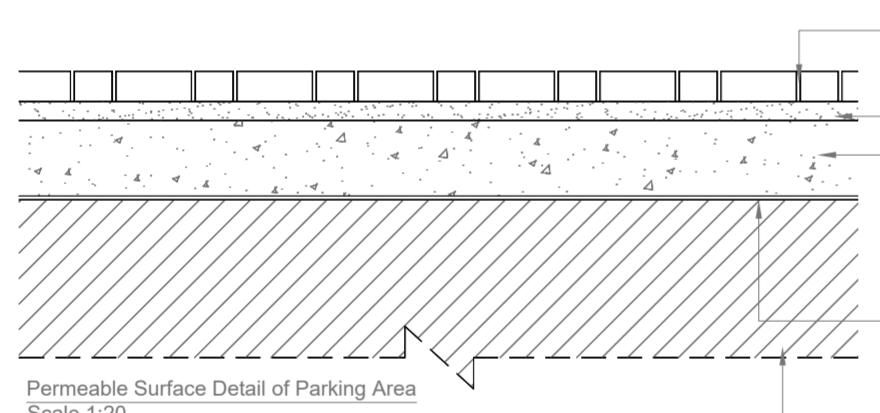
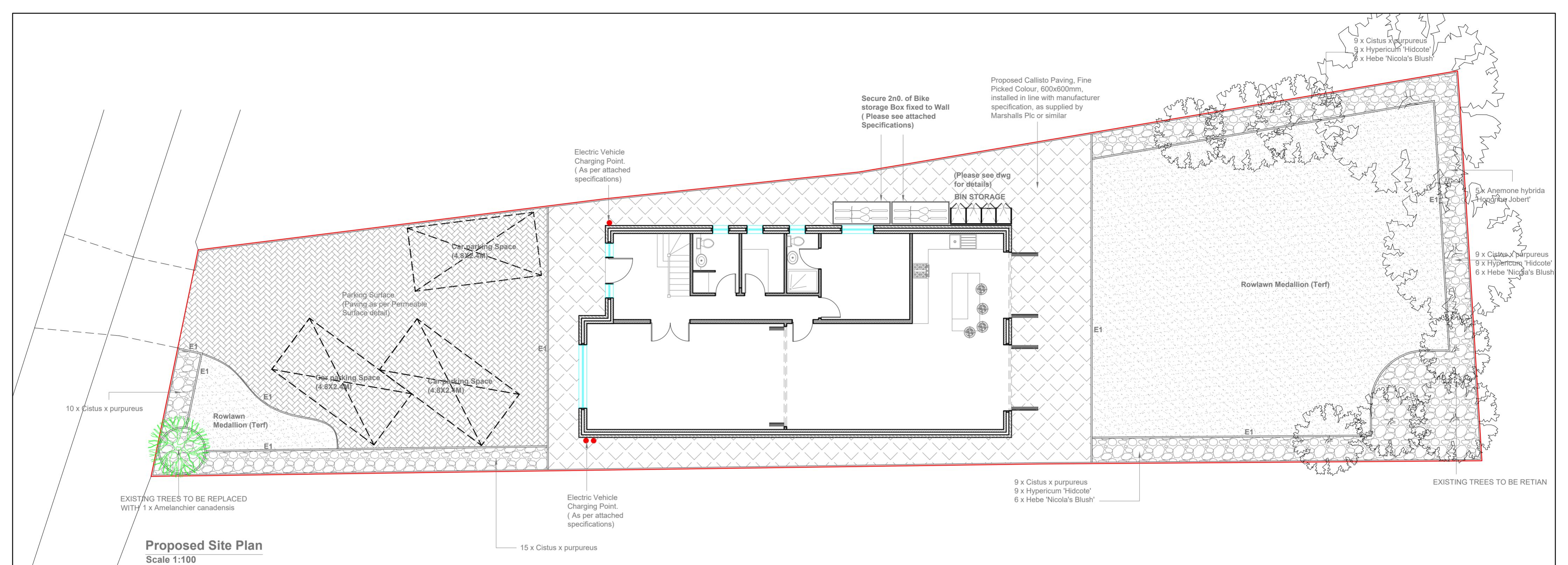
- Replacement of any failed trees or shrubs will be allowed for annually to ensure that the planting areas are fully stocked at all times.
- Any hollows which appear due to settlement shall be top dressed annually, early in the growing season.
- Minor pruning of dead or damaged wood shall be allowed for annually.
- All planted areas and trees shall be given an application of an approved top dressing in May. Not in Wildflower areas.
- Shrubs shall be maintained in a balanced shape and prevented from obscuring signs, windows and encroaching on paths.

- Check for invasive species as mentioned earlier and remove from site.
- Undertake a formal assessment of young tree health and development.
- Tree grilles, grids and guards shall be inspected and if necessary removed.

*Every 5 Years*

- A suitably qualified person employed by the Management Company to undertake a review of the condition, success and long-term maintenance of the planting.

Any amendments to the landscape management plan required to ensure a good planting scheme should be submitted to the LPA for approval. The LPA may draw the managing company's attention to defects in the maintenance or failure to comply with the landscape management plan and require that the Management Company rectify these defects or apply for a variation to the landscape management plan.



Permeable joint filled with 6 mm clean crushed stone  
Driveline Priora concrete Permeable block paving (Grey - 200x100x60)

Laying Course: 50mm depth of clean 6mm crushed stone

Sub Base: Min 200 mm depth of 20 mm clean crushed stone with well defined edges

Geotextile separating membrane (Terram)

Sub - grade



Proposed Callisto Paving,  
Permeable Paving  
Size: 600 x 600 x 80mm  
Bond: Herringbone, Colour: Bracken



Permeable paving  
parking area -  
Driveline Priora - Brindle

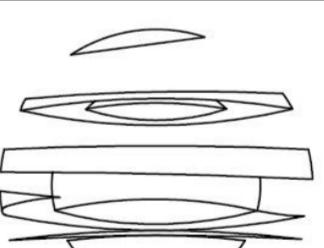


E1: Marshalls Concrete Edging  
914 x 50 x 150mm



Proposed Ornamental Planting

#### Tree Pit Detail: Soft Landscape



The root flare of the newly planted tree shall be clearly visible at the soil surface and is not to be buried by excess soil or mulch

Stakes to be requisite length, pressure impregnated, debarked softwood 100mm square or diameter, driven into ground sufficient depth to provide full support

Root Rain Metro tree pit irrigation system, or similar

Backfill material is to be applied in layers 150mm in depth, ensuring that the tree is held upright

Once tree has been positioned the hessian and twine surrounding the roots is to be loosened. Wire cages are to be removed

Base of tree pit to remain undisturbed unless there is evidence of poor drainage, soil smearing or panning in which case appropriate rectification measures will be required

#### Ornamental Planting

Planted into 450 mm depth topsoil.

#### Grass

Lay onto a minimum 100mm depth topsoil reduced to a fine tilth 10mm down particles.

Key	Mix	Quantity
GT1	Rowlawn Medallion	Total Area to be calculated on site by landscape contractor.

Species	Size(cm)	Pot Size(Lt)	No. / m <sup>2</sup>	Quantity
Cistus x purpureus	30-40	2L	4NO./M2	52
Hebe 'Nicola's Blush'	30-40	3L	4NO./M2	18
Hypericum 'Hidcote'	30-40	3L	4NO./M2	27
Anemone hybrida 'Honoree Jobert'	20-30	2L	0.30 Ctr	5

#### Trees

Tree pits for selected standards to be 800x800x800mm backfilled with 150mm clean stone and 650mm good quality topsoil. Stakes to be 65mm diameter treated softwood driven firmly into the ground. Stakes to be 600mm above ground level and fixed to tree with suitable rubber tree tie

Species	Size	Girth(cm)	Height(cm)	Root Con.	Quantity
Amelanchier canadensis	HvyStan	10 - 12	200 - 250	RB	1

#### OUTLINE SPECIFICATION

##### General

All planting work shall be in accordance with approved horticultural standards and all relevant British Standards. Plants shall be supplied in accordance with the HTA Trade Certification Scheme and handled in accordance with the CPSE Handling and Establishment of Landscape Plants Guidelines. Herbicides, pesticides and other chemicals may only be used with approval of the contract administrator. Use of chemicals shall be in accordance with all relevant guidelines and the manufacturer's recommendations. Imported topsoil shall be a minimum specification of BS 3882:2007 Multipurpose Classification unless otherwise instructed. 1m<sup>2</sup>/20m<sup>2</sup> approved compost/organic material/soil ameliorant shall be cultivated into topsoil before planting. Peat shall not be used. Following planting all shrub beds shall be treated with an approved granular fertiliser at rates as recommended by the manufacturer. All planting beds shall be mulched with 50mm depth medium grade bark mulch.

##### Maintenance

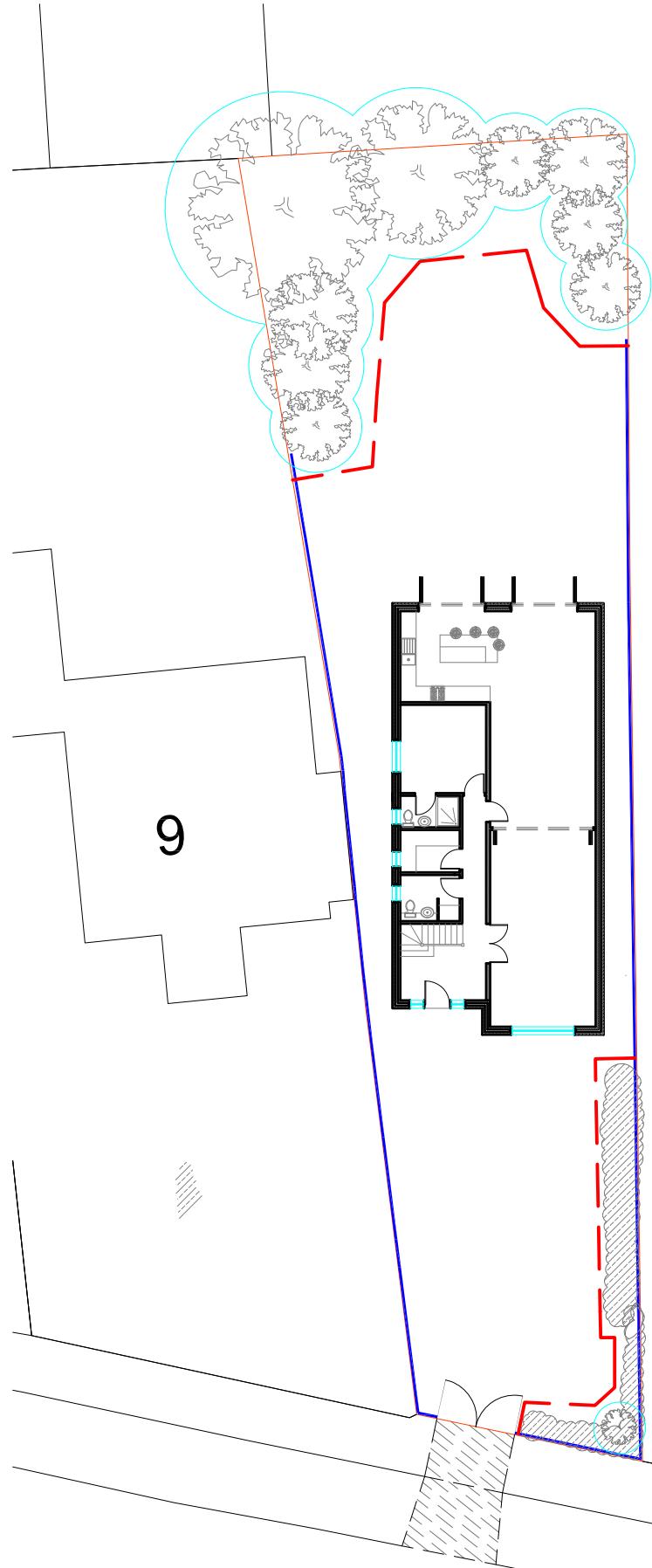
The Defects liability period for planting shall be 12 months from completion of the works. During this period any plant which is found to be dead, dying or otherwise defective shall be replaced during the next planting season. The contractor shall make maintenance visits as required to ensure the successful establishment of the planting and Proposed Ornamental maintain all shrub areas in a weed free condition.

Components as supplied from GreenBlue Urban or similar

Site Address	Scale: 1:100 @A2	Revision Date:
11 Thornhill Road	A	09-01-2023
Ickenham	Date: 29/11/2022	
Middlesex	Drawing No.: 2021/149 -12	
UB10 8SF	Drawn By:	
	e-mail - faluckpatel@yahoo.com	
	(M) +44 (0) 7871 466 254	

## LANDSCAPE PLAN & DETAILS

GENERAL NOTES:  
1. ALL DIMENSIONS ARE IN MILLIMETER.  
2. VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BUILDING OR STARTING CONSTRUCTION. NOTIFY THE DESIGNER IMMEDIATELY OF ANY DISCREPANCY OR VARIATION.  
3. ALL WORK TO COMPLY WITH CURRENT BUILDING REGULATIONS AND CODES OF PRACTICE



2.4 m painted ply hoarding  
around perimeter of site

Location of Protective Fencing - BS 5837 Feet fence (or similar)

Root Protection Area

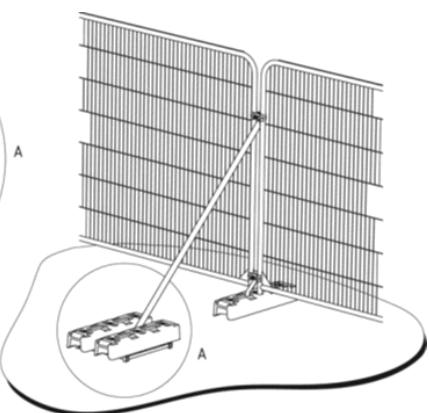
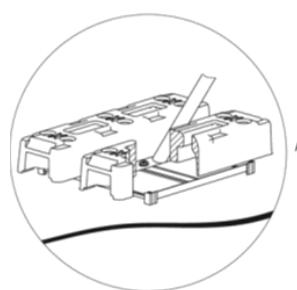
Crown Spread of Tree  
Tree Canopy Extent

#### **TREE PROTECTION PLAN**

Tree protection is essential to successfully integrate the proposal into the surrounding trees. It is designed to manage the impact on the underlying soil and rooting environment. It must therefore be installed prior to any further site activity. Even apparently minimal tracking of the soil near trees has the capacity to irretrievably modify the soil environment to the detriment of tree health and stability.

All our fencing specifications accord with advice and guidance within BS 5837. Modifications to fence types are possible but should be discussed prior to implementation. In all other instances the form detailed below should be shown. This offers the best protection to retained trees.

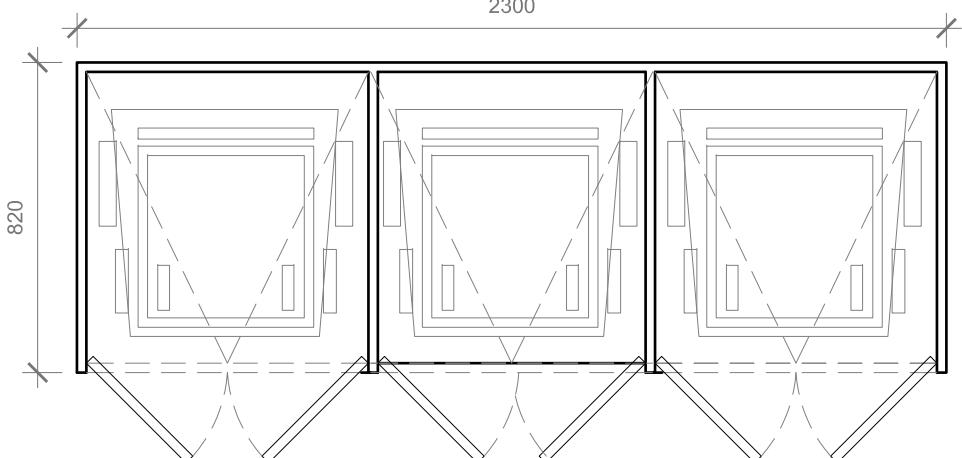
- All tree protection must be in place prior to any site activities. It is recommended that this fencing is installed prior to any site works.
- fencing should be a minimum height of 1.5 metres
- To be effective Tree Protection must remain in place for the duration of the development and form part of the site induction process.
- Site operatives to be briefed of fencing requirement & purpose.
- To be combined with ground protection (not shown right)



#### **Protective Fencing Signage**



### Product : Rowlinson Triple Bin store



**Proposed Bin Enclosure Plan**

Scale 1:20

#### Description

Rowlinson Bin Stores are the ideal way to hide away your necessary but unsightly wheelie bins. Lifting lids with chains that attach to your bin and opening fronts provide easy access when filling and removing your bins on collection day. All Rowlinson Bin Stores are pressure treated against rot, ensuring that they will be hiding away your bins for many years to come. Available in single, double and triple capacities.

#### Features:

- Attractive storage for three standard sized wheelie bins (Max. bin size: H1060mm W740mm D740mm)
- Lifting lids with chains to bin lids for easy use
- Easy access
- Natural timber finish
- Pressure treated against rot

#### Dimensions:

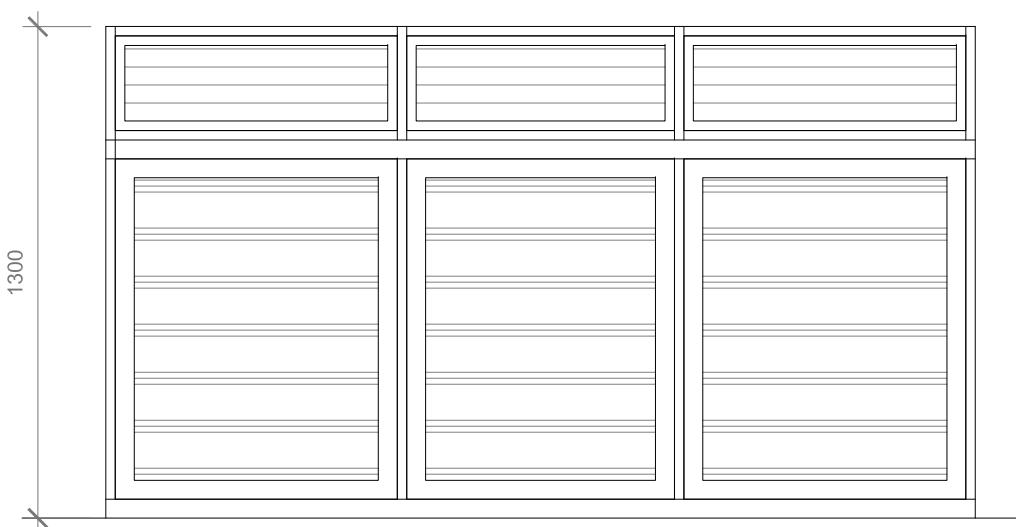
- Height: 1300mm
- Width: 2305mm
- Depth: 820mm

#### Includes:

- Full fixing kit
- Assembly instructions

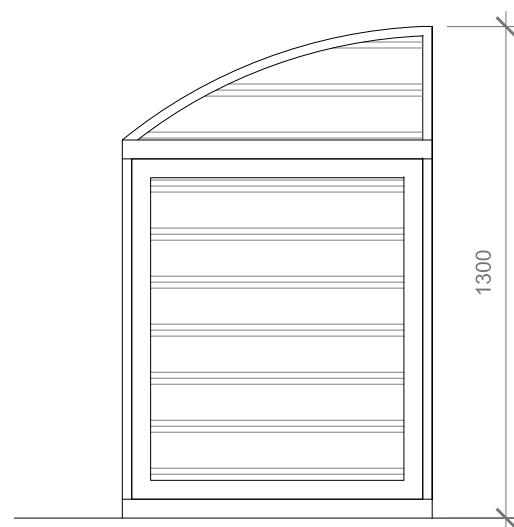
#### Features

Use - Triple  
 Material - Wood  
 Length - 74 cm  
 ManoMano Reference - ME7525421  
 Warranty - 1 0 years  
 SKU - BINTRPL1



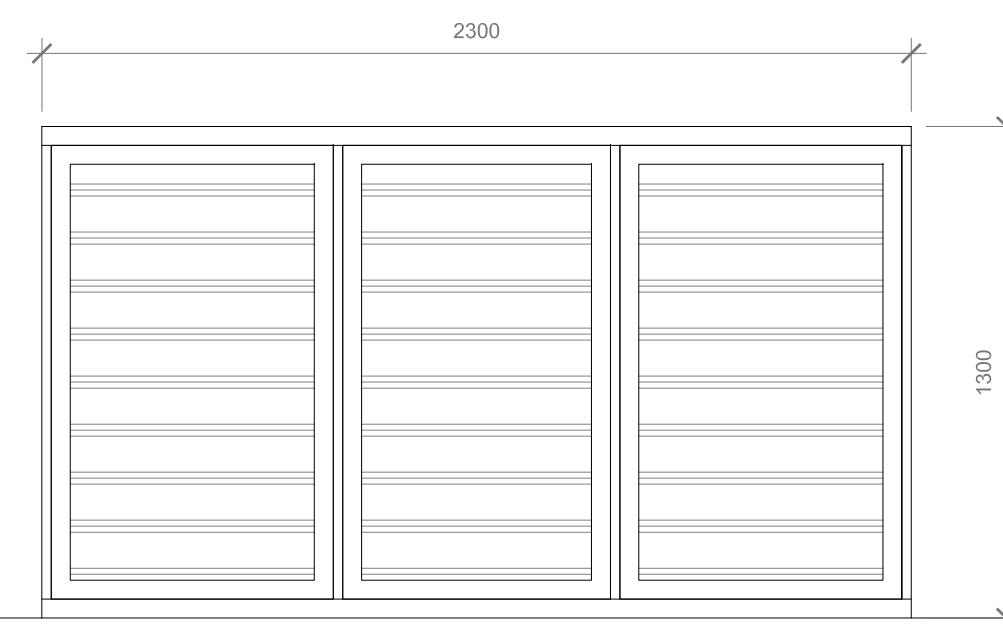
**Proposed Front Elevation**

Scale 1:20



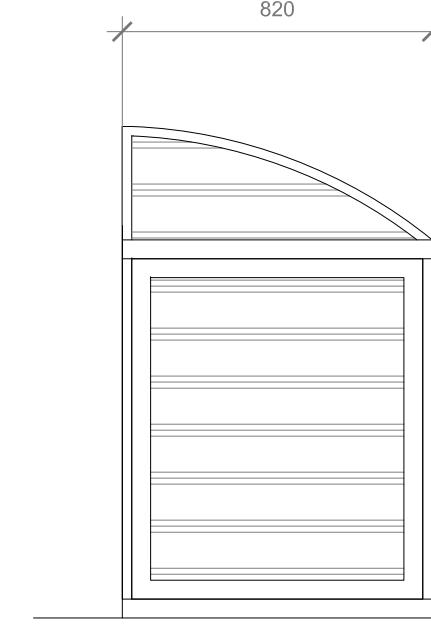
**Proposed Side Elevation**

Scale 1:20



**Proposed Rear Elevation**

Scale 1:20



**Proposed Side Elevation**

Scale 1:20



#### GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETER.
2. VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BUILDING OR STARTING CONSTRUCTION. NOTIFY THE DESIGNER IMMEDIATELY OF ANY DISCREPANCY OR VARIATION.
3. ALL WORK TO COMPLY WITH CURRENT BUILDING REGULATIONS AND CODES OF PRACTICE

Title:

### Bin Enclosure Details

Site Address

Scale: 1:20 @A3

Date: 29/11/2022

Drawing No.:

2021/149 -13

Drawn By:

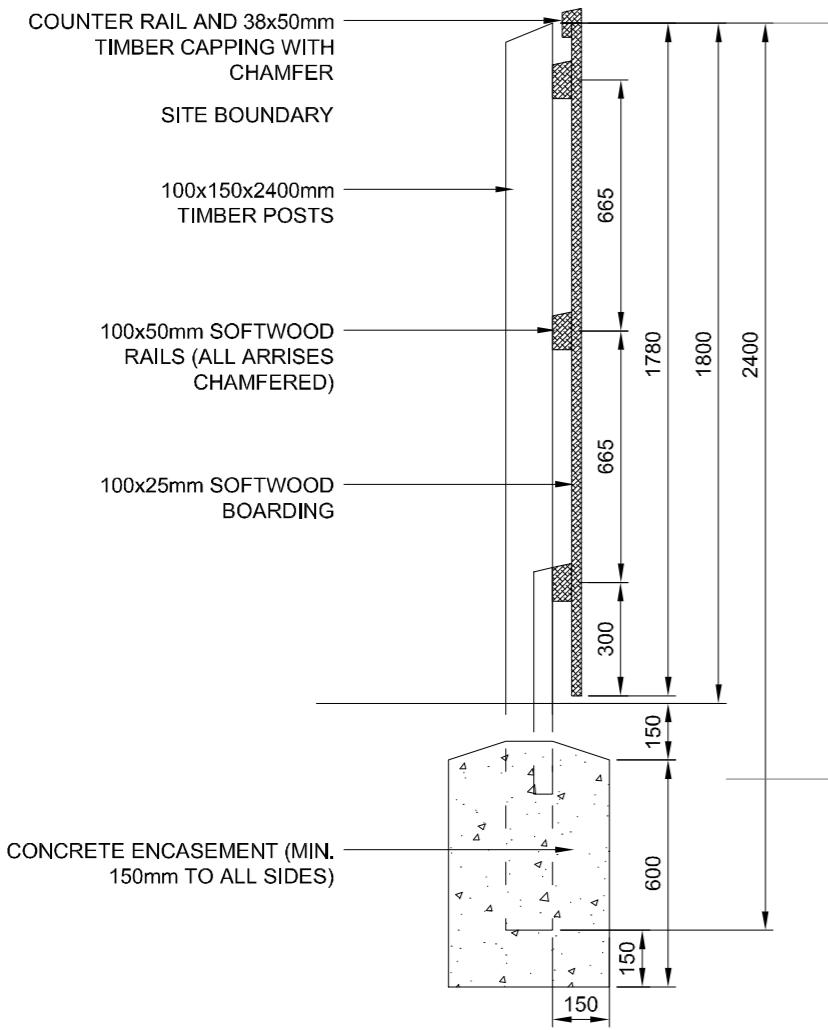
FP

Revision Date:

e-mail - faluckpatel@yahoo.com

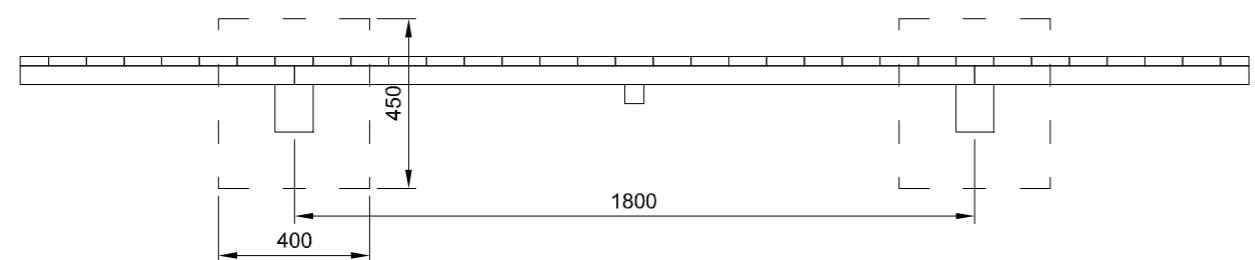
(M) +44 (0) 7871 466 254

**Faluck Patel**



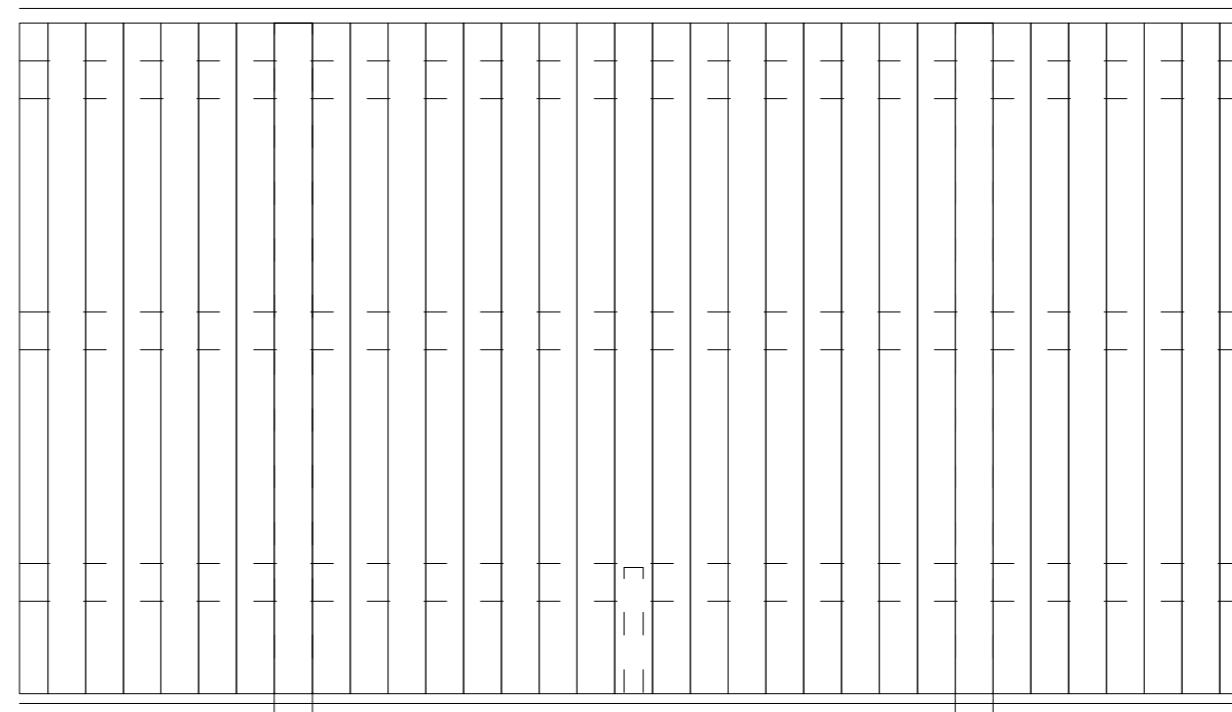
## Timber Fence Section

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# **Timber Fence Plan**

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## **Timber Fence Elevation**

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**GENERAL NOTES:**

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Title:

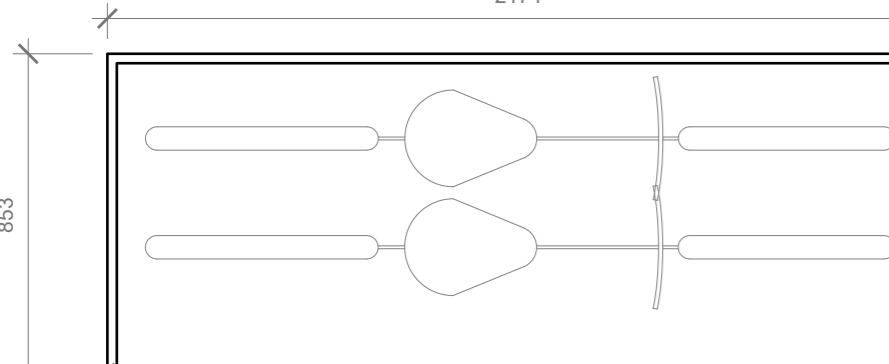
## Boundary Details

Site Address  
11 Thornhill Road  
Ickenham  
Middlesex  
UB10 8SF

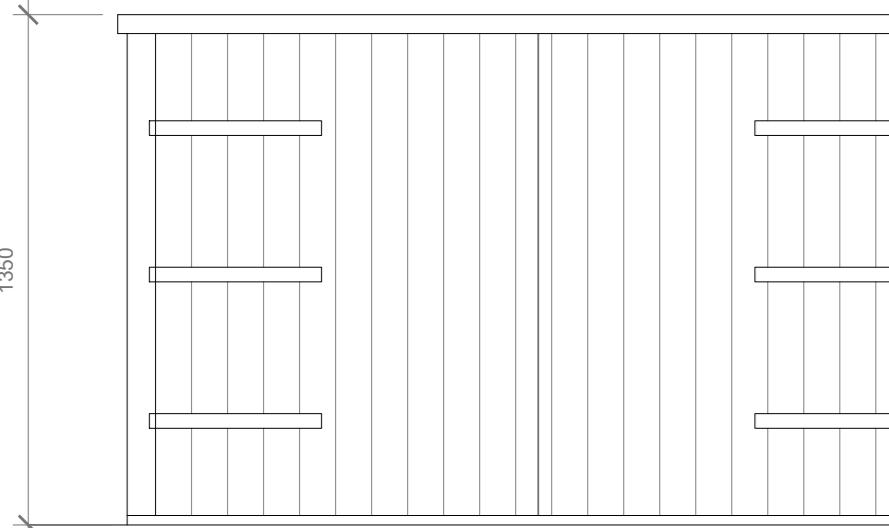
Scale: 1:20 @A3	R
Date: 29/11/2022	
Drawing No.: 2021/149 -14	
Drawn By:	

Revision Date:

# Saluck Patel

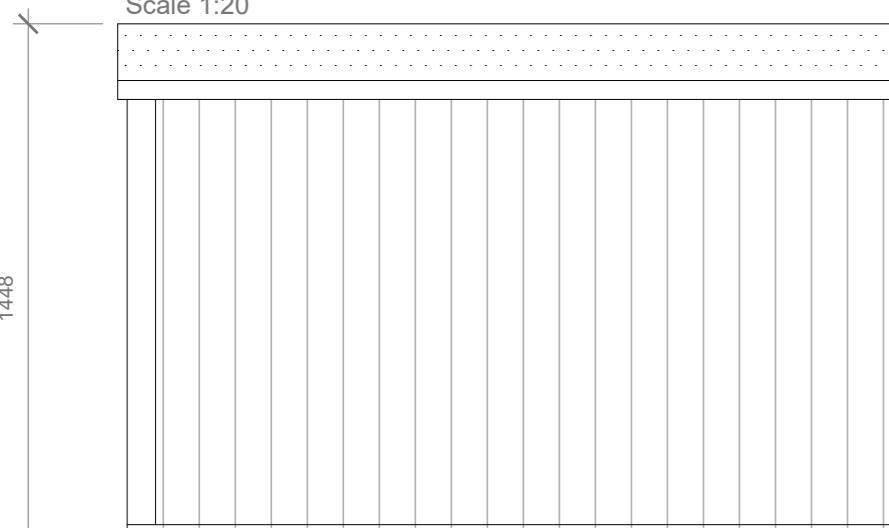


**Proposed Bicycle Storage Plan**  
Scale 1:20



**Proposed Front Elevation**

Scale 1:20



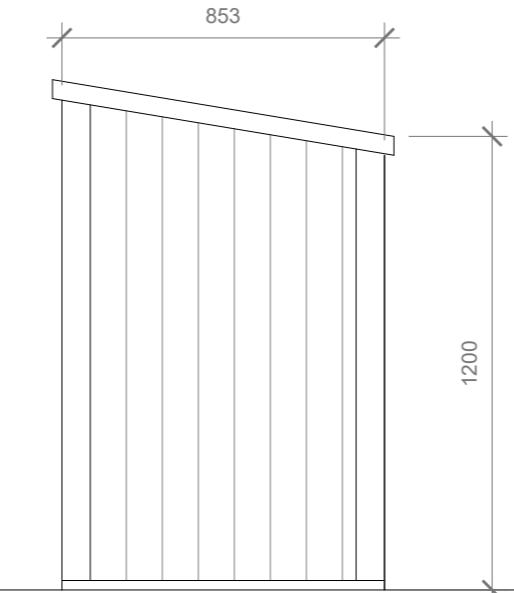
**Proposed Rear Elevation**

Scale 1:20

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 AND CODES OF PRACTICE

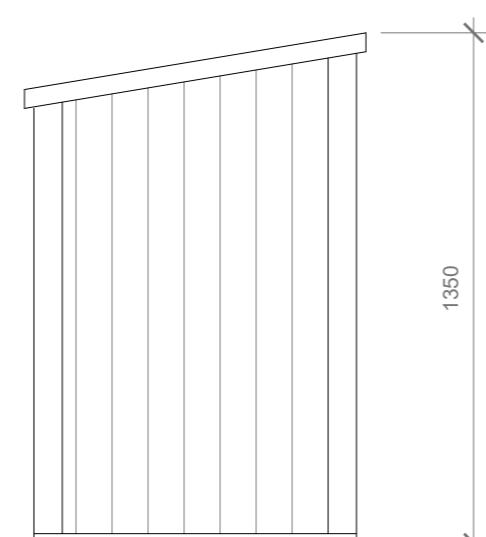
Title:

<p><b>Bicycle Storage Details</b></p>		<p>Site Address 11 Thornhill Road Ickenham Middlesex UB10 8SF</p>	Scale: 1:20 @A3	Revision Date:
			Date: 09/01/2023	
			Drawing No.: 2022/071 -BCY	
			Drawn By: FP	
			e:mail - faluckpatel@yahoo.com (M) +44 (0) 7871 466 254	



**Proposed Side Elevation**

Scale 1:20



**Proposed Side Elevation**

Scale 1:20

#### Product Details

- Shed Type: Storage Shed
- Material: Wood
- Product Warranty: 108 Year conditional anti rot guarantee.
- Floor Included: No
- Ventilation: No
- Assembly Required: Yes
- Storage Capacity: 1350272cm<sup>3</sup>
- Additional Parts Required: No
- Cladding Style: Shiplap
- Treatment: Dip Treated

#### Features

- Material: Wood
- Comes with double doors
- Made from high grade pine
- Flooring not included
- Foundation not included
- Roof style: Pent
- Cladding style: Shiplap
- Base coat treatment
- Made in the UK

Provides storage for up to 3 bicycles or can be used as a store for toys and garden equipment. Wall panels are made from shiplap FSC certified timber and supplied in a honey brown timber basecoat. The roof is constructed from solid board (OSB) for ease of installation and comes without a floor to allow the bikes to drain without damage to the store. The Bike Store comes complete with fixing kit, roof felt, installation instructions and includes home delivery.

#### Specifications

- Weights & Dimensions
- Other Dimensions
- Overall: 138cm H x 185cm W x 63cm D
- Interior: 137cm H x 176cm W x 56cm D
- Door: 135cm H x 171cm W
- Approximate Width - Side to Side (Ft.): 185 '
- Approximate Depth - Front to Back (Ft.): 63 '
- Wall Thickness: 1.2 cm
- Overall Product Weight: 70 kg

#### Assembly

- Assembly Required: Yes
- Tools Needed for Assembly: Hammer; Tape; Measure; Saw; Drill; Additional Parts Required: No Screwdriver; Ladder

#### Warranty

Product Warranty: 108 Year conditional anti rot guarantee.

#### Specifications

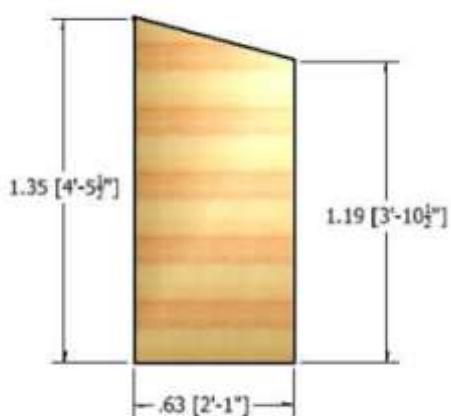
- Commercial OR Residential Certifications: Yes
- FSC Certified: Yes

Year-Round Use: Yes  
 Roof Style: Pent  
 Skylight: No  
 Environmentally Friendly: Yes  
 Product Care: Requires regular preservative treatment  
 Country of Manufacture: United Kingdom

Recommended Foundation Size:  
 195cmW x 80cm D



## 1. Bicycle Storage Details



This Building is handmade so there may be a slight variation in the sizes shown

- Overall: 138cm H x 185cm W x 63cm D
- Overall Product Weight: 70kg

Provides storage for up to 3 bicycles or can be used as a store for toys and garden equipment. Wall panels are made from shiplap FSC certified timber and supplied in a honey brown timber basecoat. The roof is constructed from solid board (OSB) for ease of installation and comes without a floor to allow the bikes to drain without damage to the store. The Bike Store comes complete with fixing kit, roof felt, installation instructions and includes home delivery.

#### Features

- Material: Wood
- Comes with double doors
- Made from high grade pine
- Flooring not included
- Foundation not included
- Roof style: Pent
- Cladding style: Shiplap
- Base coat treatment
- Made in the UK

#### Product Details

- Shed Type: Storage Shed
- Material: Wood
- Product Warranty: 108 Year conditional anti rot guarantee.
- Floor Included: No
- Ventilation: No
- Assembly Required: Yes
- Storage Capacity: 1350272cm<sup>3</sup>
- Additional Parts Required: No
- Cladding Style: Shiplap
- Treatment: Dip Treated

## Specifications

### Weights & Dimensions

#### Other Dimensions

- Overall: 138cm H x 185cm W x 63cm D
- Interior: 137cm H x 176cm W x 56cm D
- Door: 135cm H x 171cm W
- Approximate Width - Side to Side (Ft.): 185 '
- Approximate Depth - Front to Back (Ft.): 63 '
- Wall Thickness: 1.2 cm
- Overall Product Weight: 70 kg

#### Features

Shed Type: Storage Shed	Material: Wood
	Material Details: Pine
Floor Included: No	Foundation Required: Yes
	Foundation Included: No

Ventilation: No	Storage Capacity: 1350272 Cubic Centimetres
Cladding Style: Shiplap	Treatment: Dip Treated
Colour: Honey Brown	Number of Items Included: 1
Wood Construction Type: Solid and manufactured wood  Wood Construction Type Details: High grade and slow grown; North European Pine	Wood Species: Pine
Wood Finish: Honey	Composite Wood Product (CWP): Yes
Fire Resistant: No	Weather Resistant: Yes  Weather Resistant Details: Felt supplied and weatherproof once treated
Water Resistant: Yes  Water Resistant Details: Felt supplied and waterproof once treated	Rust Resistant: Yes
Flower Box Included: No	Number of Doors: 2
Door Style: Double Door	Padlock Compatible Doors: Yes
Lock Included: No	Windows Included: No
Year-Round Use: Yes	Roof Style: Pent
Skylight: No	Environmentally Friendly: Yes
Product Care: Requires regular preservative treatment	Country of Manufacture: United Kingdom
Recommended Foundation Size: 195cmW x 80cm D	

### Assembly

Assembly Required: Yes  Tools Needed for Assembly: Hammer; Tape; Measure; Saw; Drill;	Additional Parts Required: No
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Screwdriver; Ladder	
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Warranty

Product Warranty: 108 Year conditional anti rot guarantee.	
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Specifications

Commercial OR Residential Certifications: Yes  FSC Certified: Yes	
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This datasheet details the technical specifications for the Solo 3 (Home) a variant of the Solo product family. If you're unsure which model you have, please contact Pod Point directly.

The Solo 3 includes and exceeds all required and “optional” safety features noted in the BS EN 61851-1 standard for electric vehicle charging. The Solo 3 is available in universal socketed or tethered models with either Type 1 or 2 cables. The Solo 3 is available with models offering charging rates of either 3.6kW, 7kW and 22kW - with the 22kW not compatible with Auto Power Balancing feature as standard.

Speed category	Fast charging
Charging rate	3.6, 7 or 22kW
Product family	Solo



Single vehicle charging



Wi-Fi enabled



3 Year warranty



Smart Reporting & Pod Point Network enabled



**Universal  
Socket**



**Tethered**

Type 1 - 4.8m cable or  
Type 2 - 7.5m cable

## Power and Environmental

Power rating	2.5~22kW - AC
Input voltage range	240~400 VAC (50Hz)
Output current	0~30A - AC RMS
IP rating	IP54 enclosure (IP44/54 for plugs and socket)
Operating temperature	-25°C to 50°C
Standby consumption	<2.5W
Materials	Polycarbonate
Protections	6mA DC Leakage, Over current, PME and failed earth protection.

## Physical properties

Height	330mm
Width	290mm
Depth	112 (167mm Socketed)
Weight	Socket - 3.5kg Tethered - 6kg
Charging connectors	1 Type 1 (SAE J1772) 2 Type 2 (IEC 62196-2)
Colour	Black/Grey

## Socket

Socket type	Mennekes Type 2 (IEC 62196-2) socket with statutory locking mechanism.
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## Standards & Compliance

Standards compliance	LVD 2014/35/EU EMCD 2014/30/EU BS EN 61851-1:2019 EN61000-3 and -2 CE Certified BS7671: 2018
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## Connectivity & Communication

Connectivity	IEEE 802.11bgn Wi-Fi
Feature updates	Yes - Via Wi-Fi
Software updates	Yes - Via Wi-Fi

## Security

Wi-Fi	WEP, WPA, WPA2 or Open Wi-Fi
Connection security	Secure data encryption HTTPS with SHA-256 hash algorithm

		Solo 3 Home - Model Matrix				
Model	S7-1C-03 (single-phase)	S7-2C-03 (single-phase)	S7-UC-03 (single-phase)	S7-UCB-03 (single-phase)	S22-2C-03 (three-phase)	S22-UC-03 (three-phase)
Connection type	Tethered	Tethered	Universal Socket	Universal Socket	Tethered	Universal Socket
Vehicle connector	SAE J1772 (Type 1)	IEC62196-2 (Type 2)	Any <sup>(1)</sup>	Any <sup>(1)</sup>	IEC62196-2 (Type 2)	Any <sup>(1)</sup>
Cable length	4.8 m	7.5 m	NA <sup>(1)</sup>	NA <sup>(1)</sup>	7.5 m	NA <sup>(1)</sup>
Cable holster supplied	Yes	Yes	No	No	Yes	No
Maximum power rating	30A (~7kW) <sup>(2)</sup>	30A (~7kW) <sup>(2)</sup>	30A (~7kW) <sup>(2)</sup>	30A (~7kW) <sup>(2)</sup>	30A x 3 (~22kW) <sup>(2)</sup>	30A x 3 (~22kW) <sup>(2)</sup>
Auto Power Balancing (Load management)	Yes	Yes	Yes	Yes	No	No
Variant	ABG <sup>(3)</sup>	ABG <sup>(3)</sup>	ABG <sup>(3)</sup>	ABG <sup>(3)</sup>	AAA <sup>(4)</sup>	AAA <sup>(4)</sup>

<sup>(1)</sup> User provides the suitable charging cable, supplied with the vehicle or purchased separately.

<sup>(2)</sup> Power rating will vary due to vehicles maximum rate of charge and local supply voltage.

<sup>(3)</sup> All the ABX variants

<sup>(4)</sup> All the AAX variants

Pod Point's hardware and software are engineered in house to meet the requirements of BS EN 61851-1 edition 3 and are tested using accredited independent test facilities. BS EN61851-1 includes various mandatory test standards that must also be adhered to.

UK and European based manufacturing facilities are used for production, In house customer support teams are locally based providing best in class support.

Universal socket models include a locking mechanism as standard (BS7671:2018 regulation 722.55.101.4)

## Installation & Safety

- For full installation details, please see our Solo 3 Home - Install guide [here](#)
- To start training to become a Pod Point Domestic Certified Installer please visit our website [here](#) for more information.
- Our on-board 6mA DC Leakage protection is fully compliant with BS 7671:2018 - regulation 722.531.2.101. This can be used safely in conjunction with a Type A RCD/RCBO, instead of requiring a more costly Type B RCD.
- Certified Pod Point installations include double or four pole RCD protection (Regulation 722.531.2.1.1) fitted at source providing protection for the entire installation. This RCD/RCBO may also fulfill requirements of regulation 722.537
- An Energy Clamp (single-phase only) that protects your home's main fuse from over currents that may result from the additional supply load when charging an EV.
- All Pod Point charging units include the Pod Point PEN Isolation system, which provides complete earthing protection without the need of additional earth rod installation. This is in compliance with BS7671:2018 regulation 722.411.4.1 (v)
- Standard installation costs include the supply cable (up to 15 metres), a mini consumer unit with RCBO, domestic load sensor cable and general sundries (cable cleats, screws etc..)

## After sales service

- We will not undertake any repairs for any out-of-warranty failures without first receiving acceptance of our quotation for related costs. Refer to the Solo 3 installation guide for further details of supply requirements. Our Solo 3 is provided with a 3 year product warranty as standard, the terms of which can be found [here](#).

## Smart Charging

- Charging may be interrupted or rate-limited for brief periods to facilitate grid management in periods of peak local, regional or national demand. If utilised, Pod Point will manage these limits to mitigate any significant effect on vehicle charging times overall.

## Limitations of use

- Pod Point do not authorise the use of charging cable adaptors and "smart" cables due to their impact on safety.\*
- Pod Point equipment must only be used with European certified vehicles and cables, (damaged or non approved cables should not be used with any EVSE or vehicles).

\* BS EN 61851-1 forbids the use of in cable adaptors, extensions leads and cables that change the operational state of the EVSE (smart cables).

## Warranty and support

To maintain our 3 year limited warranty, The installation shall be in accordance with Pod Point's guidance, comply with relevant legislation and be installed by a certified electrician.

Any hardware failure should be promptly reported to us [here](#). You must quote the serial number and location of the product with a brief description of the failure.

Our support team will then investigate and attempt to remotely resolve the issue. They may ask you to provide additional information to assist in this.

If the issue cannot be resolved remotely, and the product is within warranty, we will arrange for one of our team to visit. If the issue is a result of any shortcoming in design or manufacture it will be made good free of charge or at our option, exchanged for a replacement product. If we attend site and the fault is not a result of a design or manufacture issue of our product, we will make reasonable attempts to diagnose the issue and propose a resolution which may have an associated fee. A call out fee will be applicable where our product is not at fault.

## Limitation of liability

In no event will we accept any liability for any loss, costs or damages consequential of the use and/or misuse of our hardware products, except and only to the extent that this is caused by our negligence.

**Solo 3**

# **Technical File**

The Electric Vehicles (Smart Charge Points)  
Regulations 2021

This document is the technical file for the following chargepoint:

Chargepoint make:	Pod Point
Chargepoint model:	Solo 3: S7-UC-03, S7-UCB-03, S7-2C-03, S7-1C-03, S22-UC-03, S22-2C-03
Compliant software versions:	Refer to the Pod Point App to see the current software version running on your charger <b>A30P-5.0.0</b>
Seller:	Pod Point Ltd. 28-42 Banner Street, London, EC1Y 8QE
Last update to technical file:	14th Dec 2022



## Description of the smart charge point

The Solo 3 includes and exceeds all required and “optional” safety features noted in the BS EN 61851-1 standard for electric vehicle charging. The Solo 3 is available in a universal socketed or tethered model, with either Type 1 or Type 2 cables. The Solo 3 is available in charging rates of either 3.6kW, 7kW or 22kW. The auto power balancing feature is not available on the 22kW model.

The Solo 3 incorporates a simple LED user interface on the charger itself, with more advanced operations available via the Pod Point App. A Wi-Fi connection for the charger is required for app functionality.

## User Guide

A copy of the operating instructions for this charger can be found at:  
[pod-point.com/solo-3-user-guide](http://pod-point.com/solo-3-user-guide)

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The following technical solutions have been implemented to meet the requirements of the regulations when a charger is installed in a domestic setting.

## Smart functionality

The Solo 3 is able to connect to a communications network via a local Wi-Fi network, or where installed, a cellular data link.

The Solo 3 can respond to commands sent over the communication network to alter the allowed current limit during a charge, including pausing the charge. This mechanism allows the Solo 3 to participate in DSR services and scheduled or 'off-peak' charging.

The LED on the front of the Solo 3 indicates its current status and users are able to schedule their charges via the Pod Point App.

## Electricity supplier interoperability

The Solo 3 is not dependent on any particular electricity tariff or provider and will continue to provide all functions on any suitable power supply, including features available via the Pod Point App.

## Loss of communications network access

In the event that the Solo 3 is unable to connect to the communication network, it will default to charging the vehicle when plugged-in, subject to an (up to) 600 second random delay in some circumstances. For example:

- the random delay is applied if a Solo 3 is energised when a vehicle is already plugged-in.
- if the communication network becomes unavailable during a paused charging session.

To ensure the owner remains in direct control, the time schedule will be ignored while the communication network is unavailable and a plugged-in vehicle will charge subject to the random delay.

## Safety

Local safety systems within the Solo 3 will take priority over commands to start charging received via the communication network or the user overriding random delays, demand side response actions or default schedule settings. These are designed to prevent overloading of the circuit supplying the charger and mitigate against the risk of electric shock.

## Measuring system

The Solo 3 is capable of measuring:

- Electricity flowing to a connected vehicle, in kilowatt-hours (kWh).
- The total time within a charging session during which power was flowing.

This information is available via the Pod Point App. The app can be used to view all charges within the last 12 months. These can be viewed individually, or grouped by week, month or year.

Solo 3 electrical power measurements sent over the communication network have been tested to be accurate within 10%. The electrical power measurements are made every 1 second. Power measurements will not be sent during periods of unavailability of the communication network. Therefore, unavailability of the communication network from time to time may lead to some inaccuracy in monthly or annual aggregated charge statistics.

## Off-peak charging

After completion of an installation and once the charger has been connected to the Pod Point App, the Solo 3 will have a default schedule activated to charge vehicles when demand on the electricity grid is lowest.

You can change the schedule times or disable the scheduling feature via the Pod Point App.

If the charger is sold with a DSR agreement, allowing a third party to manage the charging rate and control energy usage for a defined group of chargers, the schedule will not be activated.

## Randomised delay

During the following scenarios, a random delay of up to 600s will be applied to a charge's start or stop operation:

1. When a charge is started or stopped by a user created schedule or the default charging schedule.
2. When the Solo 3 is energised and it is already connected to a vehicle which is able to accept charge.
3. When the communication network becomes available and the Solo 3 is set to perform a scheduled charge.
4. When the communication network becomes unavailable outside of the user's scheduled charging times and a vehicle which is able to accept charge is connected.

The duration of the random delay is capable of being increased to 1800 seconds if required.

A user can override this delay in each case by either temporarily disabling the schedule (in scenario 1) or by unplugging the vehicle and reconnecting it (in scenarios 2, 3 & 4) in each case the delay will be applied.

## Physical Security

The Solo 3 is designed to provide protection against physical damage and complies with IK10 as defined in BS EN 62262.

If the charger detects the cover of the Solo 3 has been opened, enabling access to the internal hardware, an entry will be recorded in the Event Log section of the Pod Point App stating the date and time at which the cover was opened.

## Data Security

The Solo 3 is protected to ensure that data contained upon it is secure and any identifiable information cannot be retrieved once it has been manufactured

- Only Pod Point signed firmware binaries can be installed on the device.
- Chargers validate the signature of the firmware on boot.
- All interfaces and access privileges not required for the charger to operate are disabled after manufacture and testing (STM Readout Protection Level = Level 2).
- Each Solo 3 has its own unique x.509 certificate injected during manufacture.
- The certificate is stored on encrypted flash, ensuring that it cannot be read from the charger.
- All application user interfaces are password protected.
- Passwords are user generated or where preset are unique to the charger and not based on any publicly identifiable information.
- Wi-Fi credentials entered on the Solo 3 can be removed via the option on the chargers Access Point page if needed, further information on this process is included in the Wi-Fi user guide for the charger.

## Secure Communication

Remote functionality available with the Solo 3 can only be performed via the applications and services provided by Pod Point. Secure communication between the charger and Pod Points Charge Station Management System (CSMS) is ensured by:

- Communication via websockets encrypted using mTLS.
  - Chargers validate the issuing authority of the CSMS certificate and will only allow connectivity when the issuer is trusted.
  - Pod Point CSMS will only accept websocket connections from a device with a Pod Point issued certificate
  - Charger certificates are unique to the device.
- Rejection of any configuration updates sent to the charger that fail validation checks.

## Security Updates

The firmware installed on the Solo 3 can be updated as new versions become available. The following process will apply when this occurs:

- Firmware updates are provided Over the Air (OTA) when the Solo 3 is connected to Wi-Fi.
- When a new version of firmware is available, this is indicated within the Pod Point Mobile App.
- When first installed a check is made for an available firmware update and if available the latest version will be installed.
- When future versions become available Pod Point will proactively update the firmware on the Solo 3 automatically.
- Firmware updates will be provided for 3 years starting from the point of installation.

The following mechanisms are used to check firmware validity and to ensure that only valid Pod Point firmware is installed and run on the Solo 3:

- The OTA process is only possible over the secure mTLS connection to the Pod Point CSMS. The Solo 3 verifies that the firmware binary is from a trusted source by validating the servers certificate.
- Firmware binaries are checked on device boot and when made available through an update to confirm that they have been correctly signed using a Pod Point firmware signing key.
- A failed validity check is registered in the security log of the Solo 3 which can be viewed within the Pod Point App.

## Further Information

Should you have any concerns or problems relating to security please consult our vulnerability disclosure policy which can be found at:

<https://pod-point.com/legal/policies>