

Controlled Document

Liniar Deck Kits Installation Manual
Issue A, March 2017



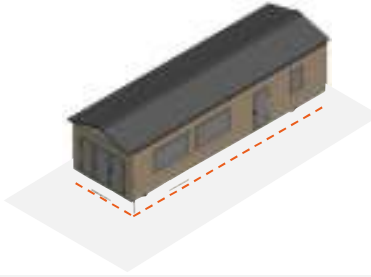
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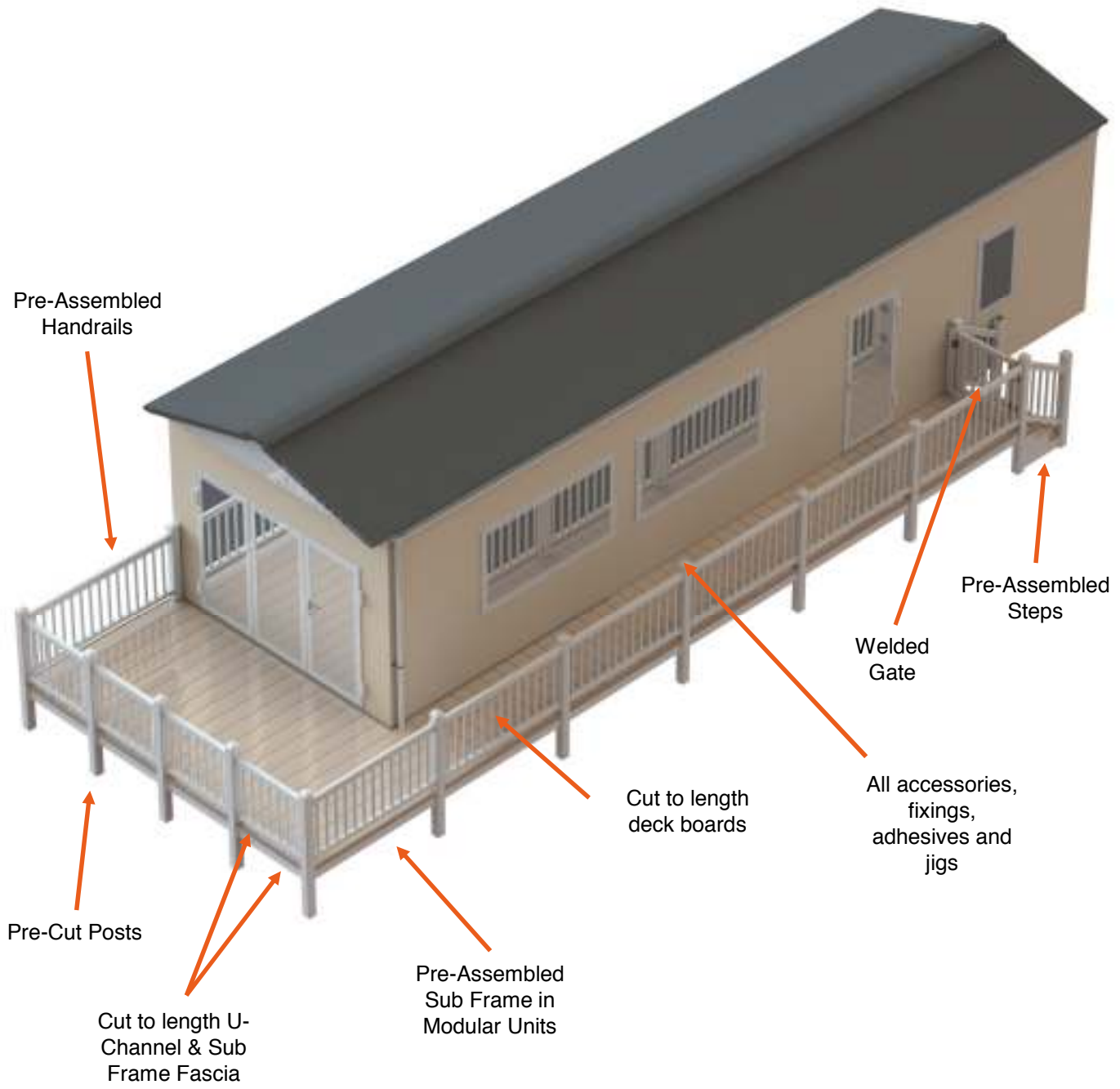
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* Note- If skirting is to be installed, it is best practice to install before deck boards are fit.



The purpose of this manual is to provide detailed information on how to correctly install a Liniar deck that is supplied in kit form. This manual shows the correct procedure for installing a standard wrap around deck and the same principals should be followed when installing any other decking kit unless otherwise specified.

Before beginning the installation, it is strongly advised that all installers have a good understanding of the installation process and all tools and consumables are available. Each decking kit comes with dedicated worksheets and they are mentioned throughout this manual to refer to.



Health & Safety

When building a structure on a private park ensure you have written permission to construct the structure. Also for your own safety and safety of others, corner off the construction area.

Liniar are suppliers of PVCu fencing and decking products and can not accept any responsibility for the actions or omissions of personnel not employed directly by Liniar.

Installers and Fabricators are reminded of their statutory obligations to employees through the Health and Safety at Work Act (1974) and the Management of Health and Safety and Welfare regulations (1999).

Below is detailed the Health and Safety Data sheet for PVC Products manufactured by HL Plastics Ltd, for consideration when carrying out C.O.S.H.H.(Control of Substances Hazardous to Health) and Risk Assessments and subsequent PPE (Personal Protective Equipment) issue.

Health and Safety Data For PVC and PVCu products.

General responsibilities.

This document provides information in accordance with the requirements of the UK Health and Safety at Work Act 1974 and the Control of Substances Hazardous to Health Act 1988. (COSHH)

The principles of COSHH regulations require that exposure to hazardous substances is prevented or controlled. When contact with such materials is unavoidable then personnel must be adequately protected

The HSE publication of 'The Application of COSHH to Plastic Processing' is now available and should be read in conjunction with this document.

The occupational exposure limits are taken from the HSE publication EH40/92.

1. Identification of Material

H. L. Plastics Ltd products are produced from PVCu composite materials converted from pellet or powder form.

2. Hazard Identification

It is generally accepted that under normal conditions PVCu products are inert and hazard free. During decomposition however (if allowed to burn) toxic gasses may be given off in the form of Carbon Monoxide and Hydro Chloride.

Exposure limits	LTE 8hr TWA	STE 10 min ref period
Carbon Monoxide	50 ppm	300 ppm
Hydrogen Chloride HC1	-	7 ppm

3. Exposure Controls/Personal Protection

In some applications it may be necessary to weld PVCu components together. Great care should be taken not to exceed temperatures that are likely to cause decomposition.

During sawing operations dust may be given off and care must be taken to avoid contact with eyes, inhalation and ingestion.

4. Disposable Considerations.

Whenever possible PVCu waste should be recycled. If this is not possible then dispose to national and local authority regulations.

5. First Aid Treatment.

Inhalation of noxious fumes

Remove casualty to fresh air and seek medical attention immediately, Apply artificial respiration if necessary.

Ingestion

Seek medical attention immediately.
DO NOT induce vomiting.

Eye Contamination

Flush eyes with plenty of clean water for at least 10 minutes.
Seek medical attention if symptoms persist.

Skin Contact

Wash with soap and water.

Dust from PVCu has been considered as a 'nuisance dust' defined as producing no irreversible change in living tissues when exposure is kept under reasonable control, e.g. to a hygiene standard of 10 milligrams/cubic metre

The HSE have issued a guidance note 'Control of Exposure to PVC Dust 1982', in which they draw attention to possible health risks which could result from exposure to PVCu dust and in which they make the following recommendations:-

-Exposure to PVCu dust should be kept as low as is reasonably practicable.

-Any exposure to PVCu dust should not exceed 10mg/m³ for total PVCu dust in air, and 5mg/m³ for respiratory dust in air. The guide also gives sampling and measurement methods.

6. Fire

PVCu will not normally support combustion, but if supported by other combustible materials such as wood, paper, etc. then it will burn, giving off dense acrid fumes. When PVCu products are stored, it must be recognised that the packing and pallets can themselves be a fire risk and are a much more likely route for rapid fire spread.

Most commonly available fire extinguishers are effective, but care should be taken to assess the items close by, electric appliances, etc.

In the event of a small localised fire, immediate action may be taken by personnel in the vicinity. Great care should be made not to breath in the decomposition fumes after the fire has been extinguished. Ventilation should be introduced to clear the fumes as quickly as possible.

In the event of a major outbreak of fire, the Fire Service should be called immediately and personnel evacuated from the area.

7. General

As with most surfaces, care must be taken when walking on a wet decked area.

Technical Sales, HL Plastics Ltd, Flamstead House, Denby Hall Business Park, Denby, Derbyshire, DE5 8JX. Tel: 01332 883900. Fax: 01332 883901. sales@liniar.co.uk.

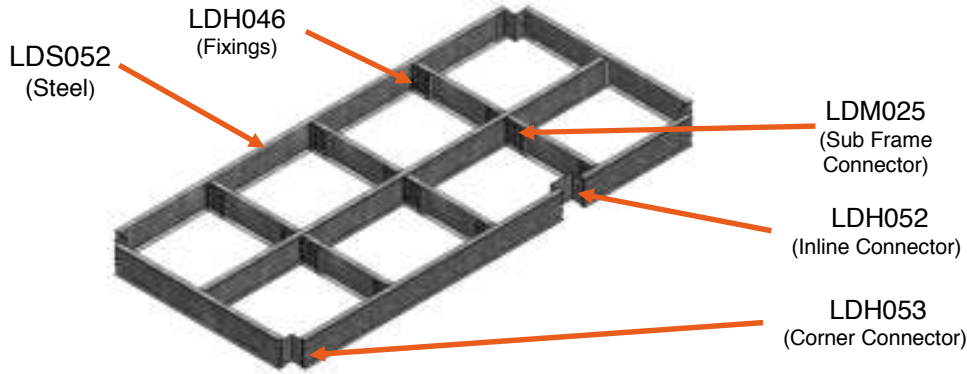
8. Product Specifications

Liniar reserves the right to change product specifications shown in this manual.

Kit Components

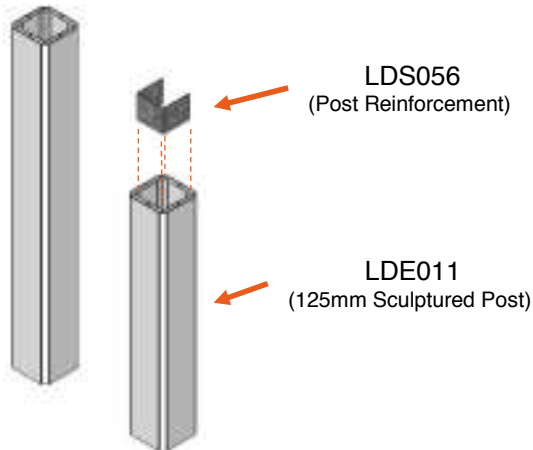
Steel Sub-Frame

Pre-assembled Modular Units



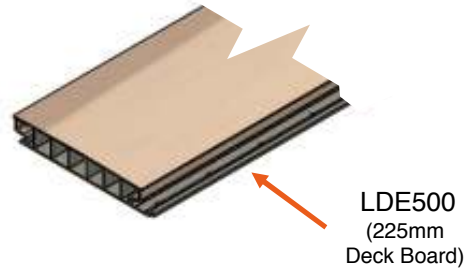
Posts

Pre-cut Posts



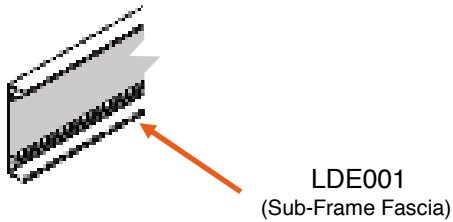
Deck Boards

Pre-cut Deck Boards



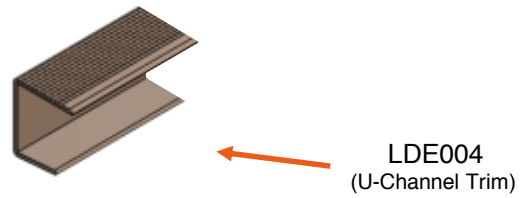
Sub-Frame Fascia

Pre-cut Fascia

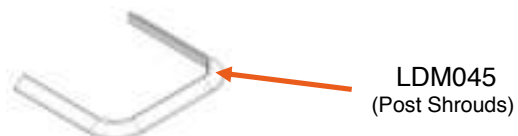
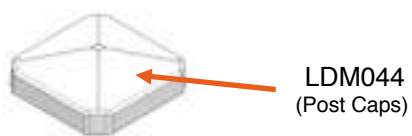


U-Channel Trim

Pre-cut U-Channel Trim



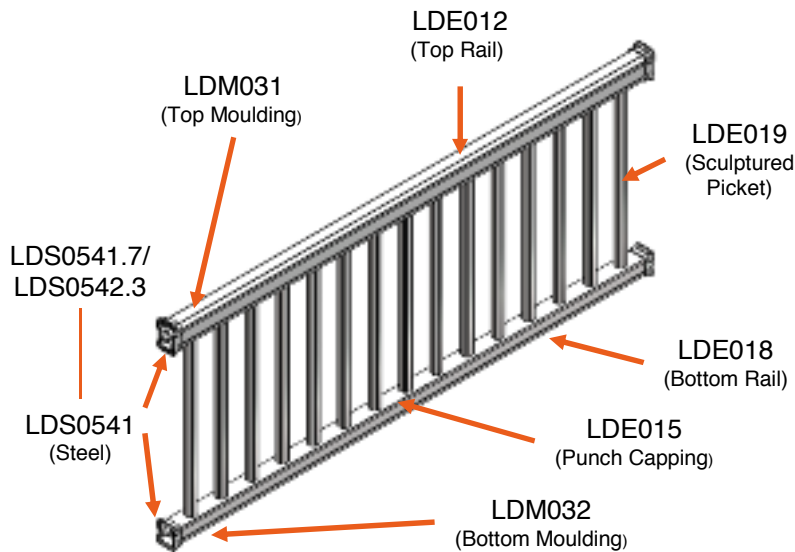
Extra Post Components



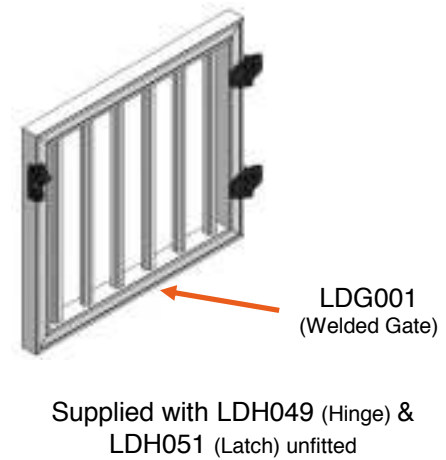
Handrails

Gate

Pre-assembled Handrails



Fully Welded Gate

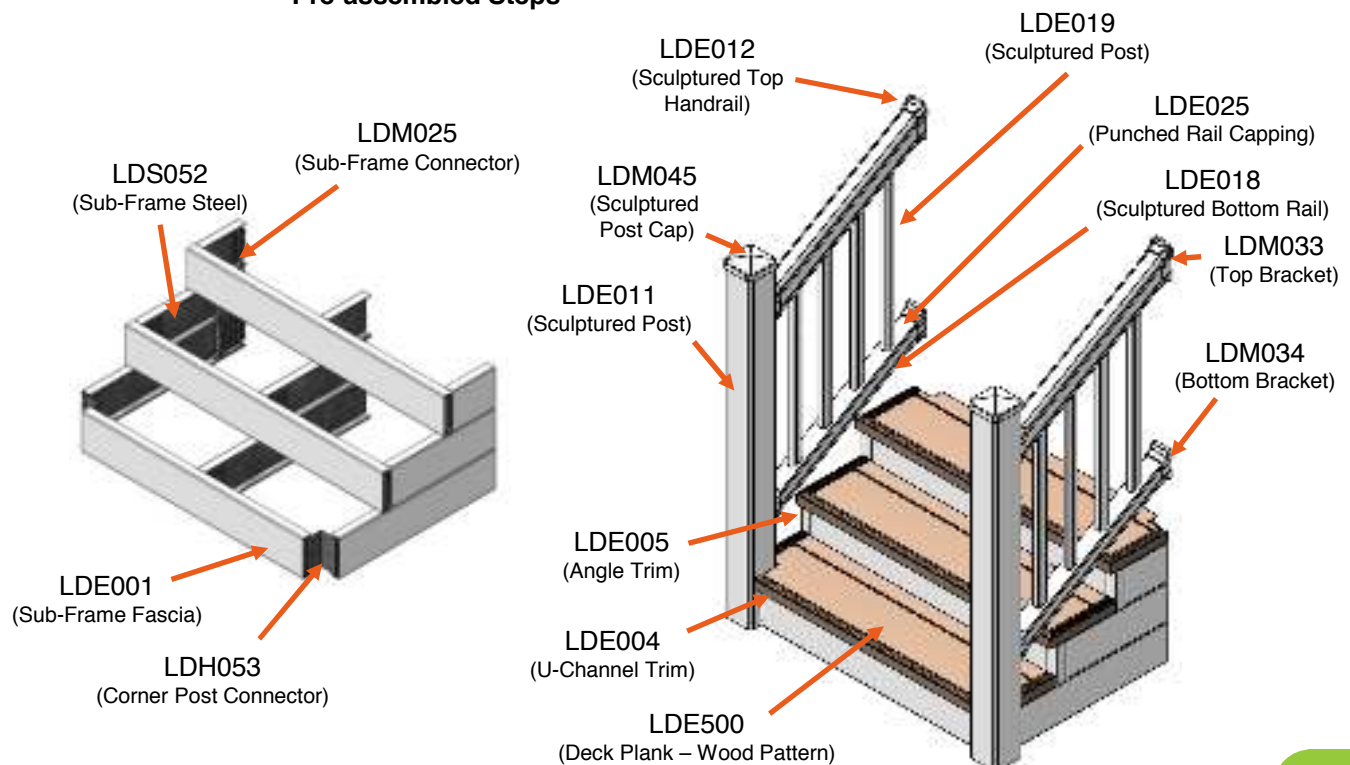


Fixings & Jigs



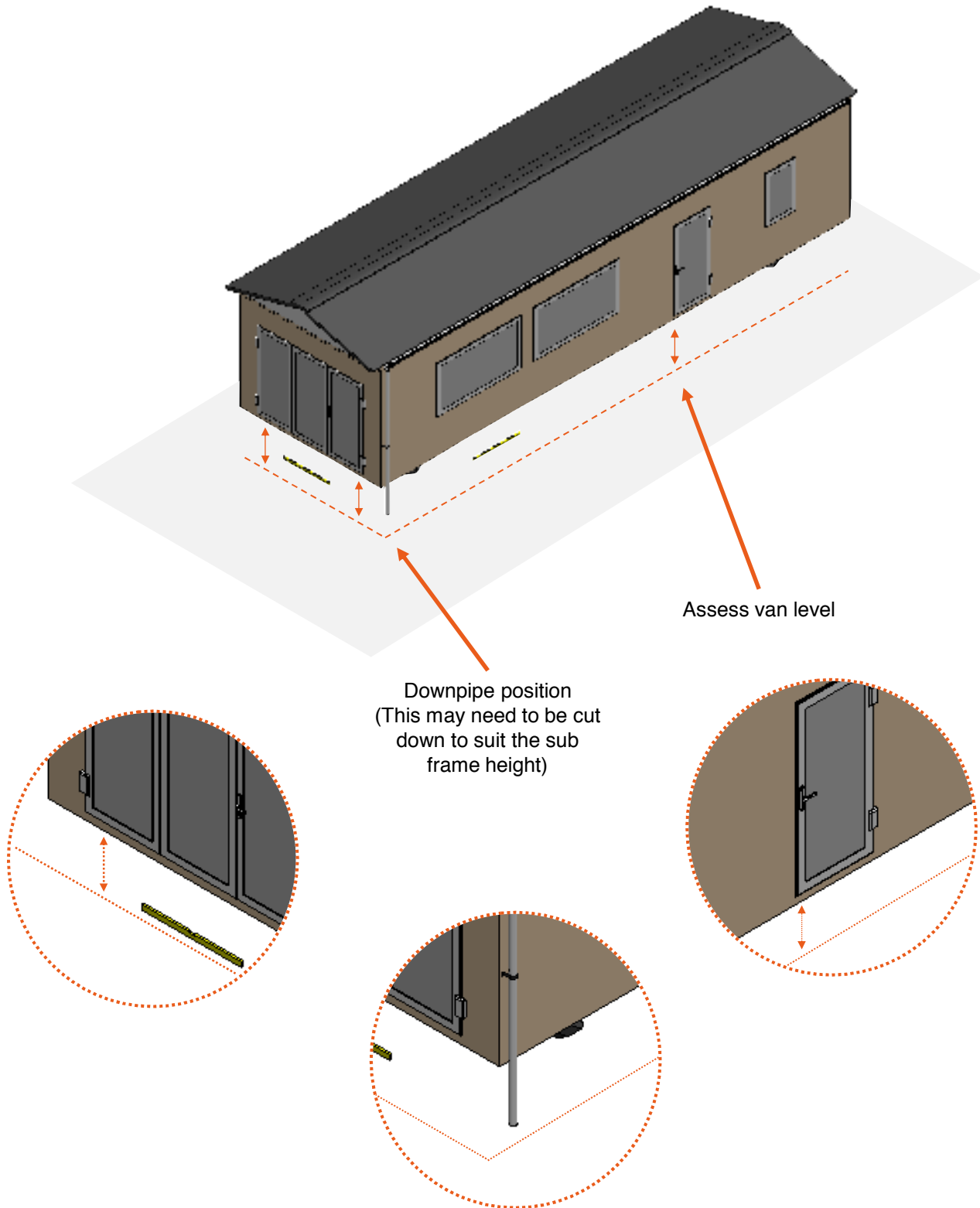
Steps

Pre-assembled Steps



Area / Height Assessment

Conduct a full area assessment before starting installation. Ensure the deck height will not interfere with any openings or drainage.



Tools & Consumables Required



or



Chop Saw
for cutting down posts/trims

Hand Saw
for cutting down posts/trims

Cordless Drill
for drilling/fixing all components

Jig Saw
for notching deck boards
around posts



Caravan Axle Stand
for supporting steel units

Spirit Level
for levelling the deck

Silicone Gun
for trims & shrouds

String Line
for aligning posts



or



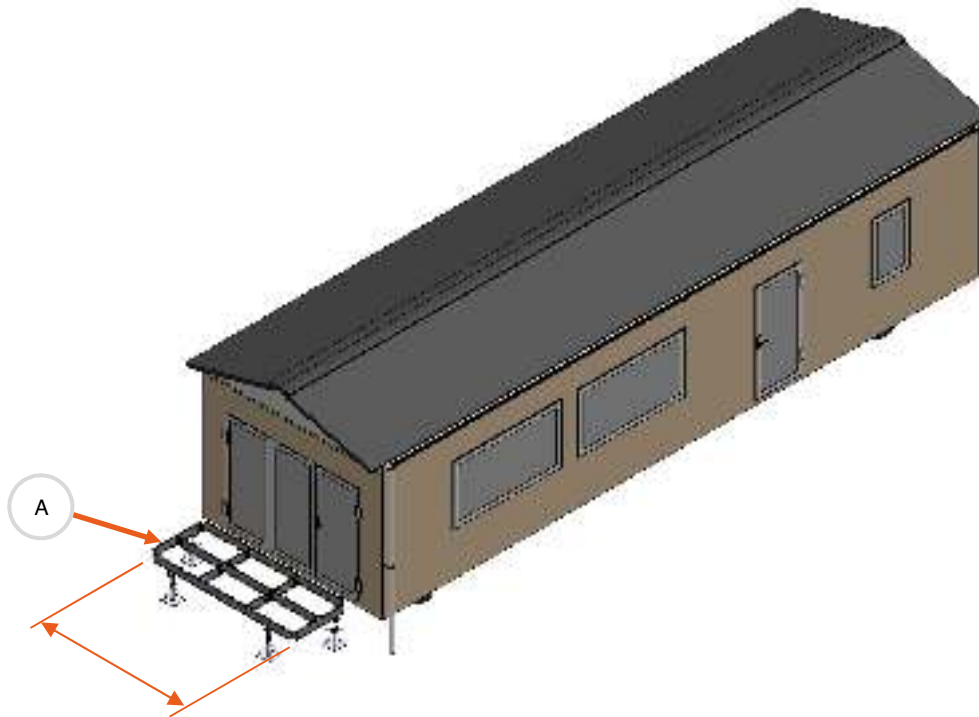
Selection of Drill Bits
Screwdriver Heads - PZ2 bit for LDH047 & 48
(8mm hex head attachment for LDH045 & 46,
Bit Extension - for fixing hand rails/deck boards

**G-Clamp or Quick Release
Clamp**
for joining sub-frame units
together for final fixings

Tape Measure

Sub Frame Installation - 1

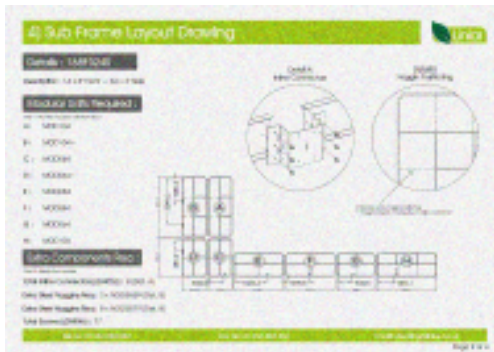
Using the paperwork provided, position the 1st modular unit. This is shown as modular unit 'A' in this example.



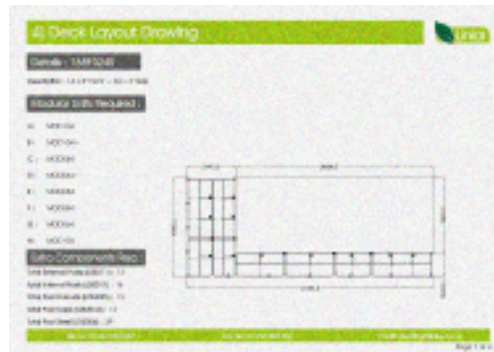
Using the 'Deck Layout Drawing', the modular unit can be positioned to suit the dimensions shown (note that the dimensions work to the outer edges of the posts, so take that into consideration when positioning).

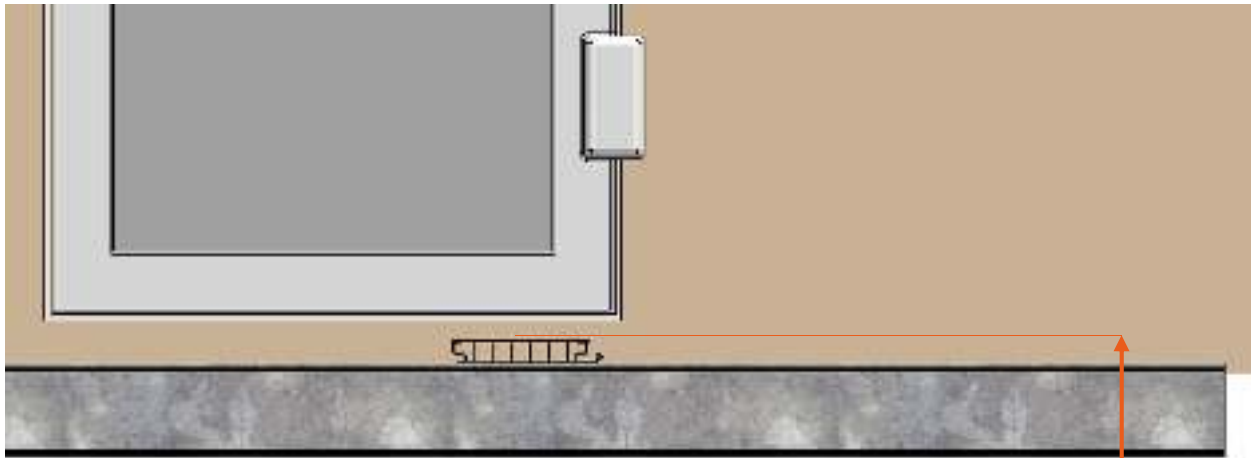
Paperwork Required:

Sub-Frame Layout Drawing



Deck Layout Drawing

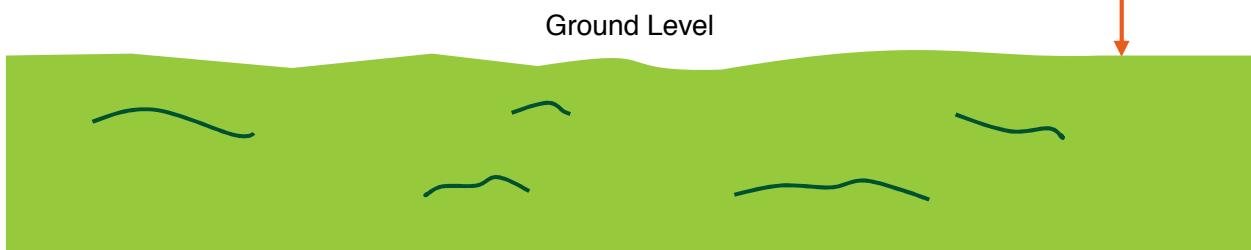




The height of the modular unit will be calculated as shown:

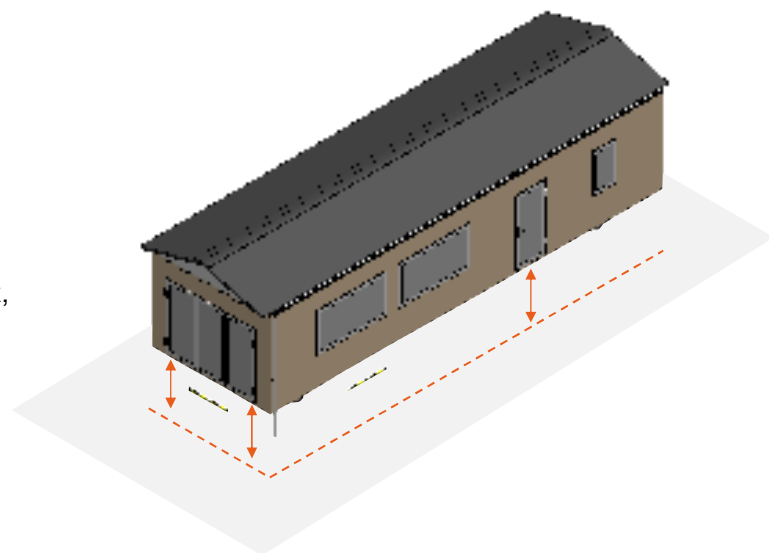
$$\text{Sub Frame Height} = \text{Overall Deck Height} - 39.7\text{mm}$$

Overall Deck Height



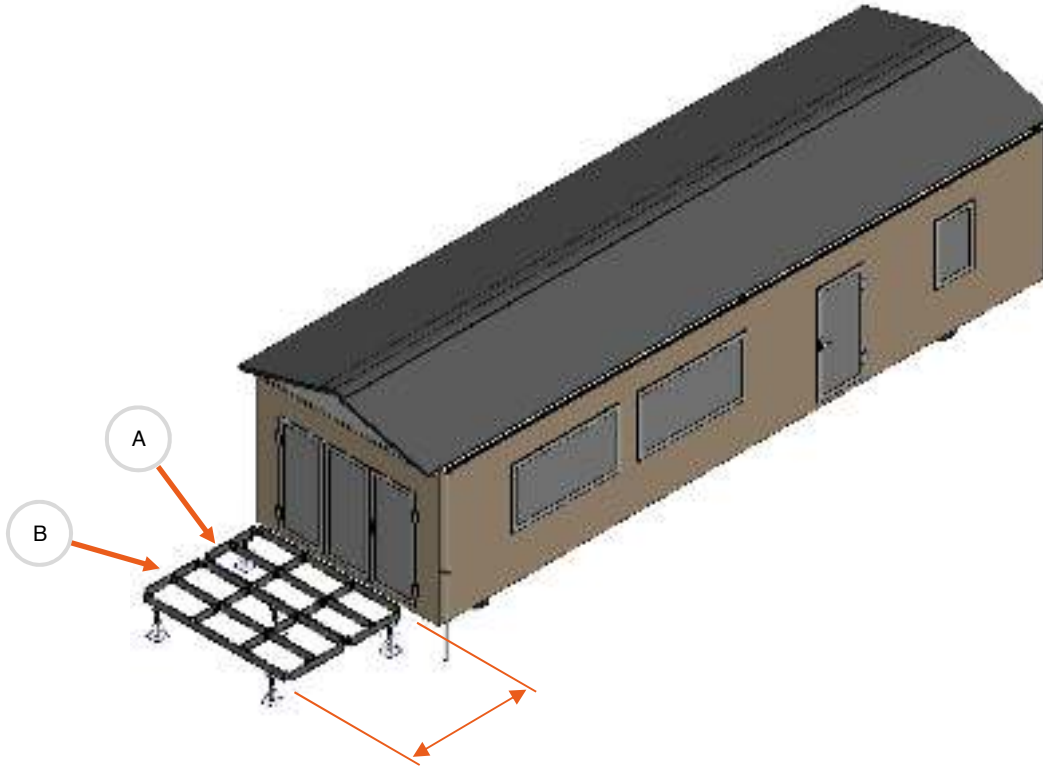
* Ensure that the height does not interfere with any openings & the deck boards will not run too high/low across the area intended to be decked.

I.e. If installing a wrap around deck, ensure the deck height suits both the side door and front doors without having to run out of level.



Sub Frame Installation - 2

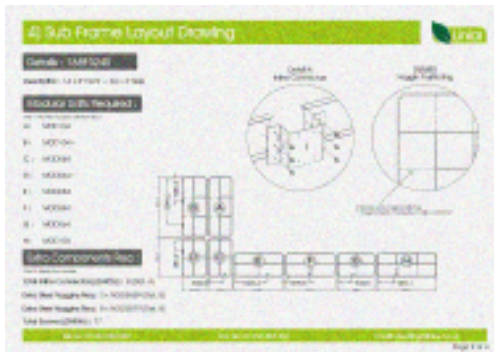
The second unit can now be positioned & fixed level to unit A.



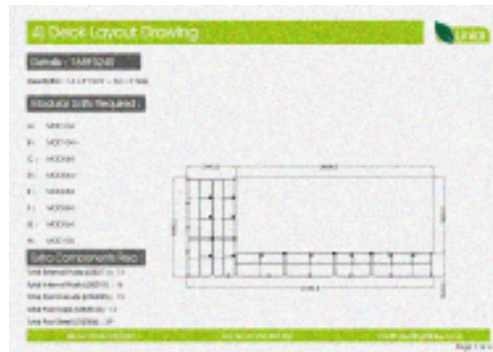
Again, the 'Deck Layout Drawing' can be used for positioning. If there are any post cut outs in the unit, ensure they are in the correct orientation to the paperwork.

Paperwork Required:

Sub-Frame Layout Drawing



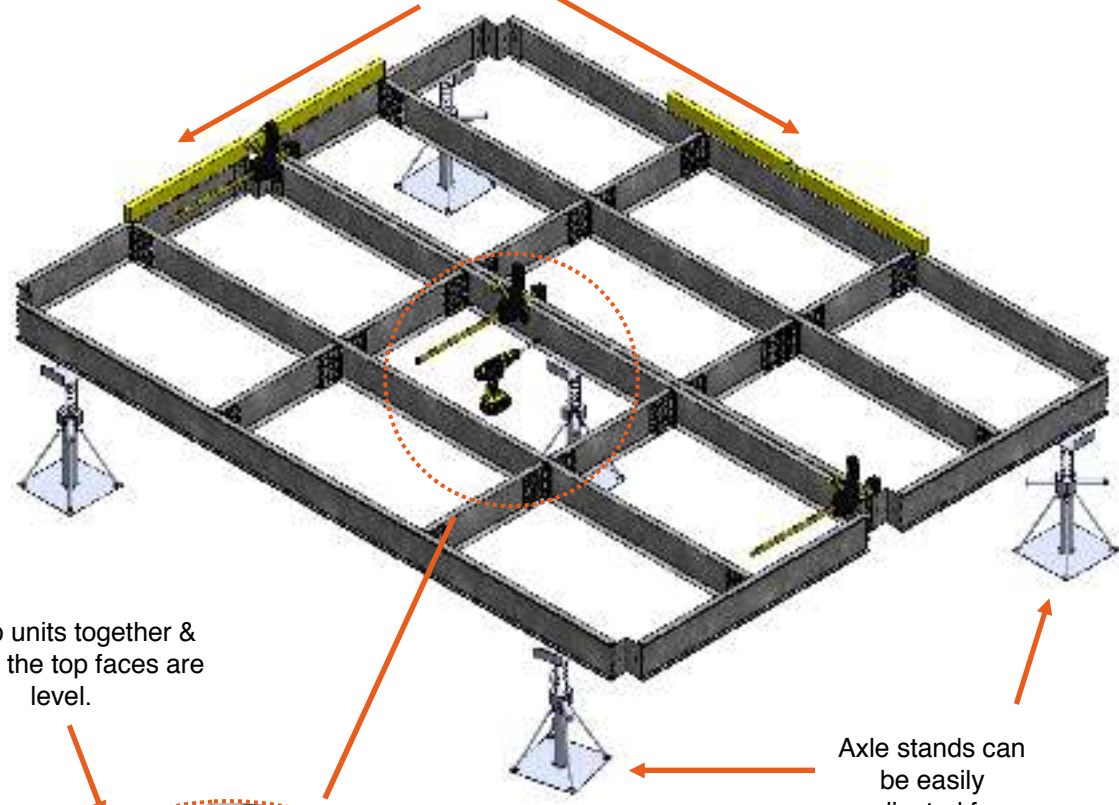
Deck Layout Drawing





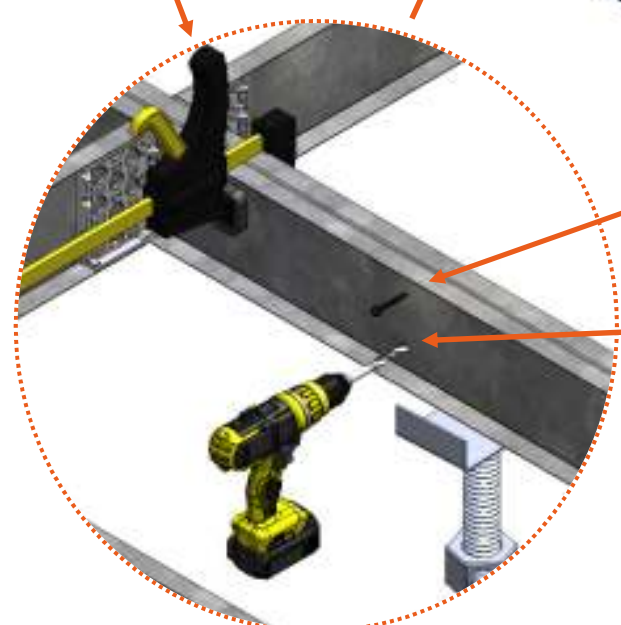
Positioning 2nd modular unit:

Ensure level in both directions



Clamp units together & ensure the top faces are level.

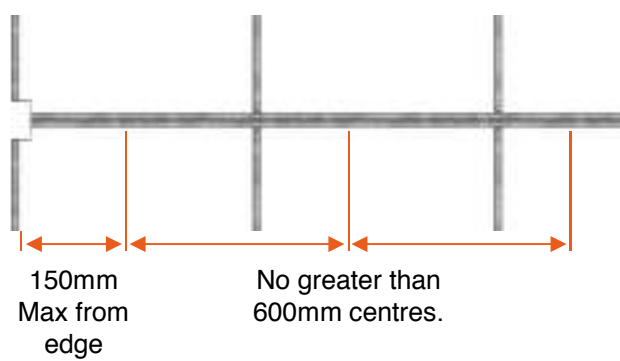
Axle stands can be easily adjusted for levelling.



Fix together using LDH045.

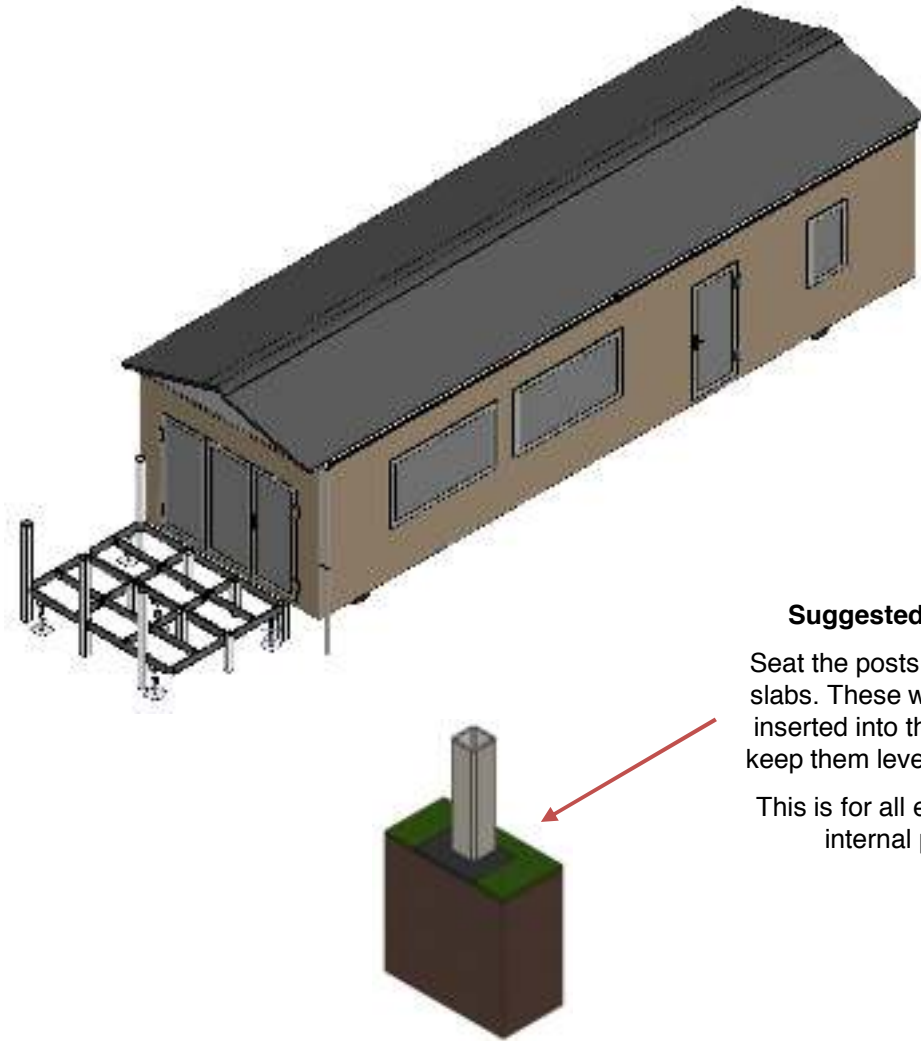
Pre Drill 1st.

* Fixing Details



Post Installation

Once the two units have been assembled, the posts can now be installed. All posts come 200mm longer than requested to allow for unforeseen floor deviation.



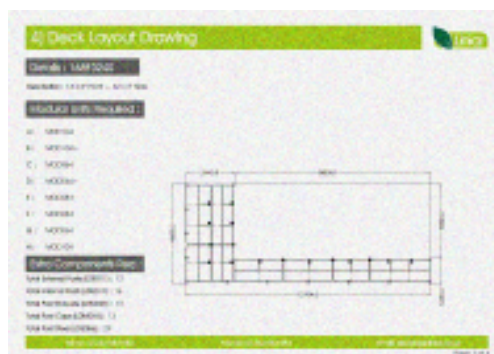
Suggested Method

Seat the posts on concrete slabs. These will ideally be inserted into the ground to keep them level and sturdy.

This is for all external and internal posts.

Paperwork Required:

Deck Layout Drawing

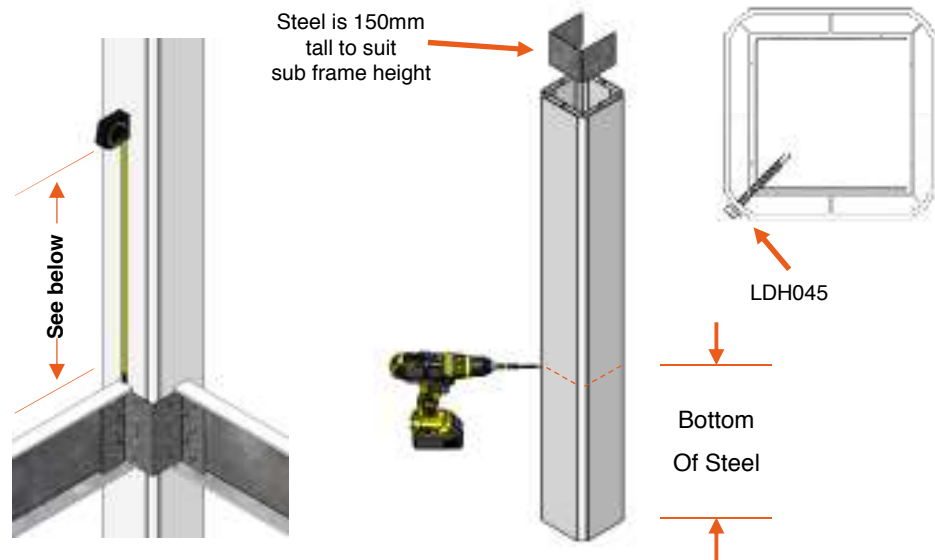


External Posts

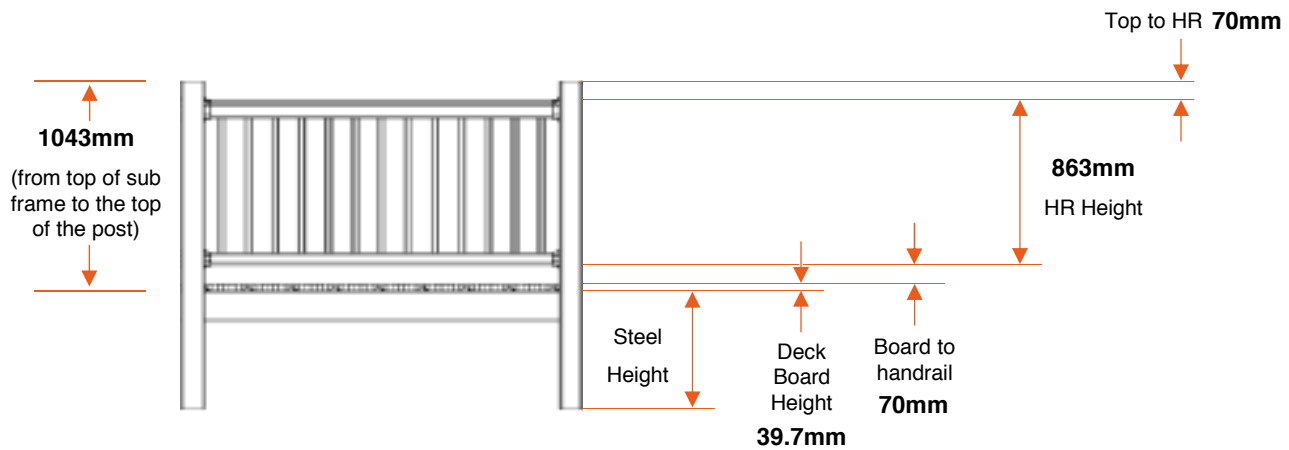
Install External Posts

Cut down posts to suit
(Note the dimensions below for sizes required)

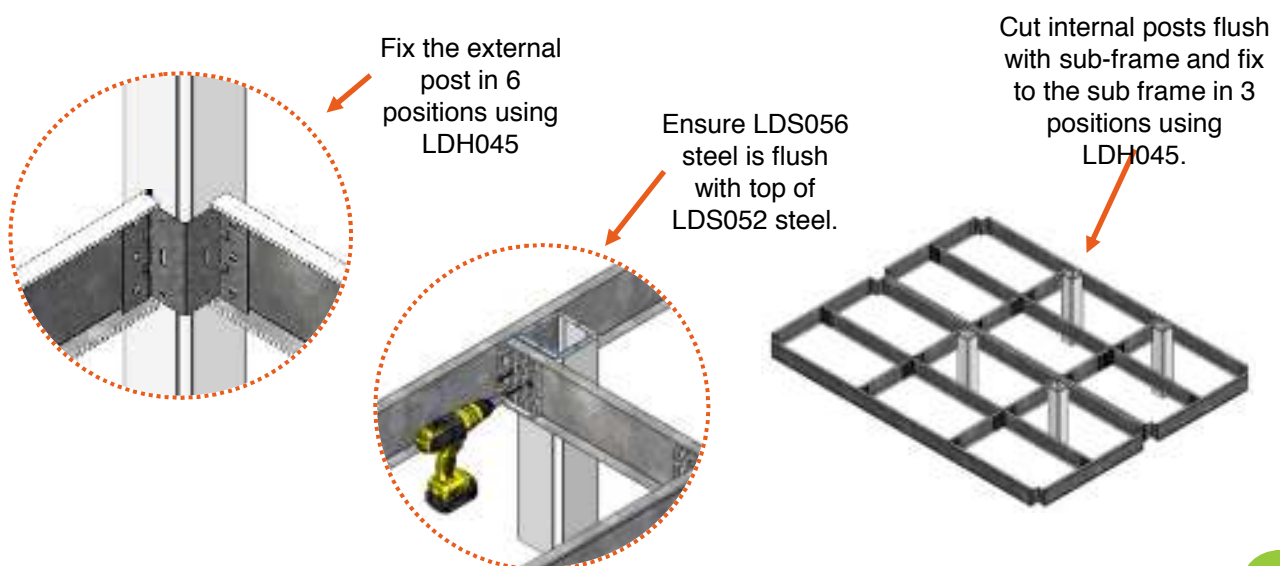
Once the post is cut to size, push the post into position and use a screw to position the post steel. Ensure the screw is on the inside of the deck so not visible. (The steel rests on the screw when dropped into position)



Dimensions Required for Handrails

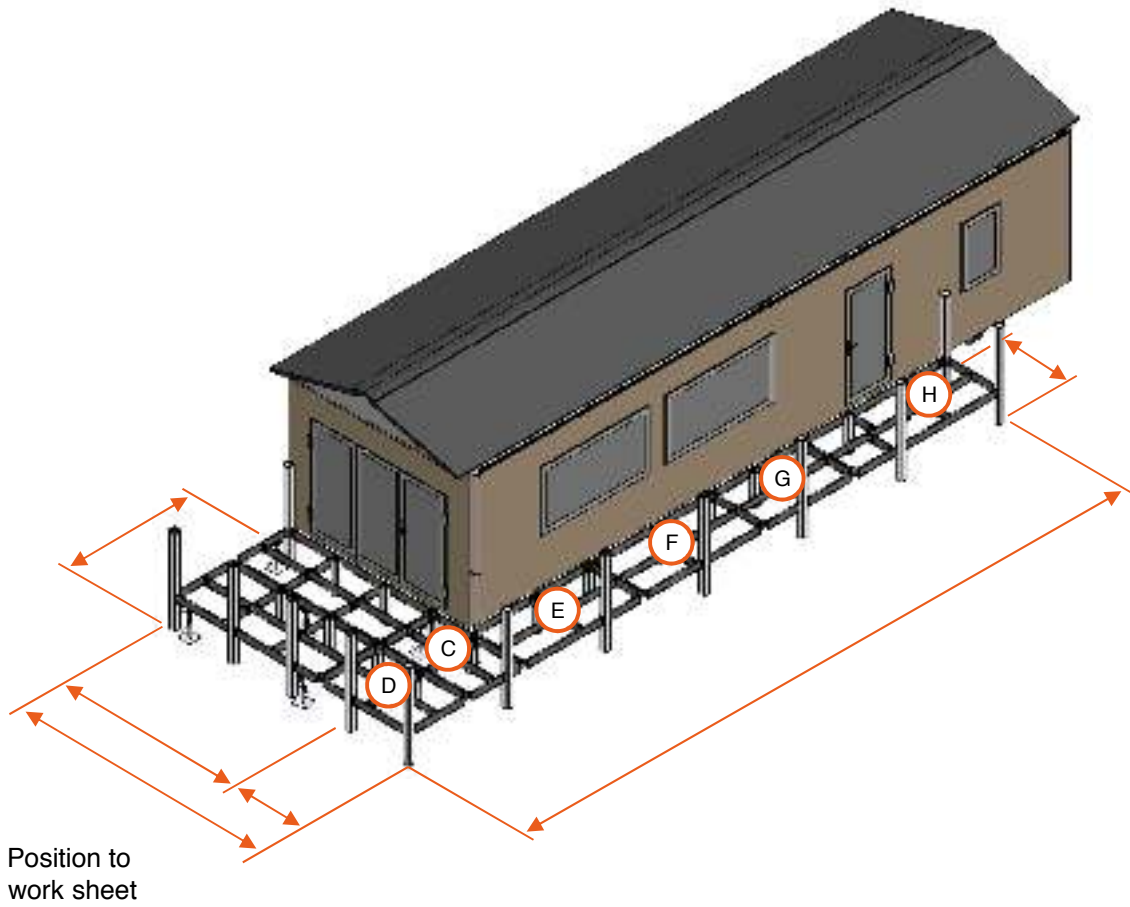


Fixing to Sub Frame



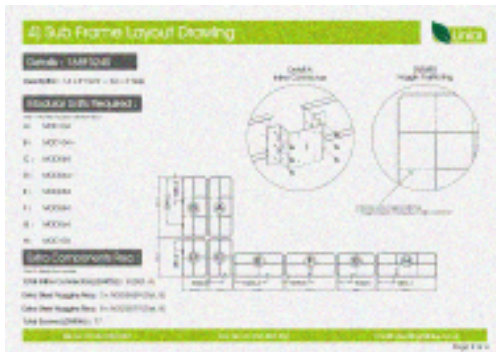
Sub Frame & Post Installation

Follow the same process & install the remaining modular units & internal/external posts.

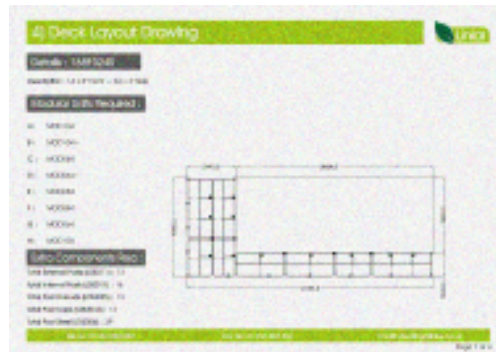


Paperwork Required:

Sub-Frame Layout Drawing

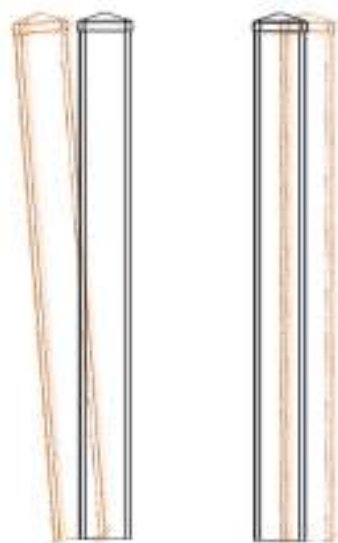
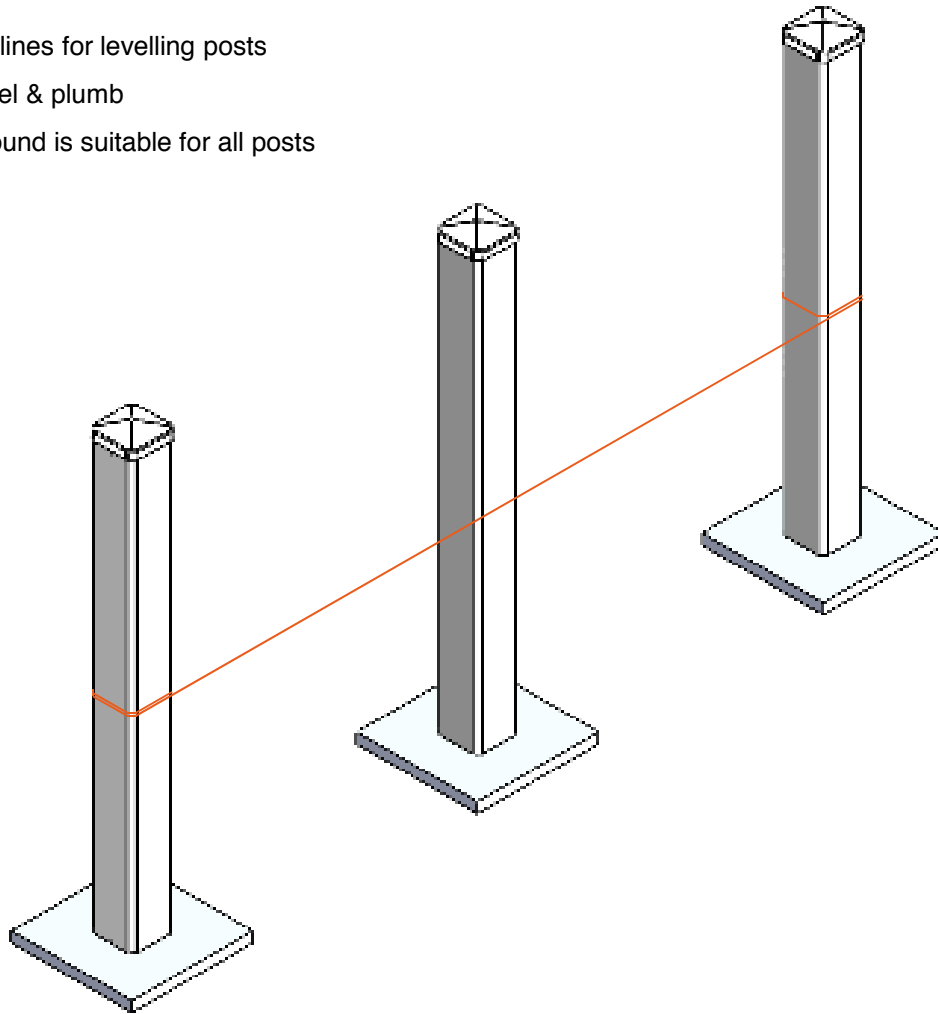


Deck Layout Drawing



Levelling up all external posts

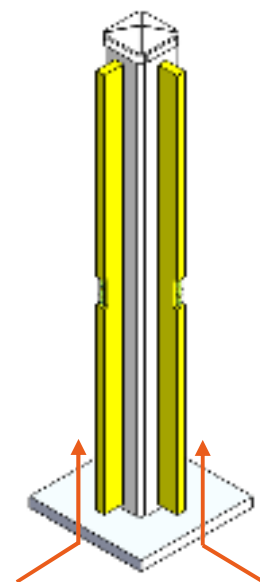
- Use string lines for levelling posts
- Ensure level & plumb
- Ensure ground is suitable for all posts



Ensure level

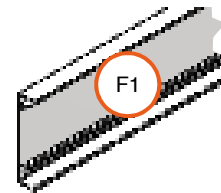
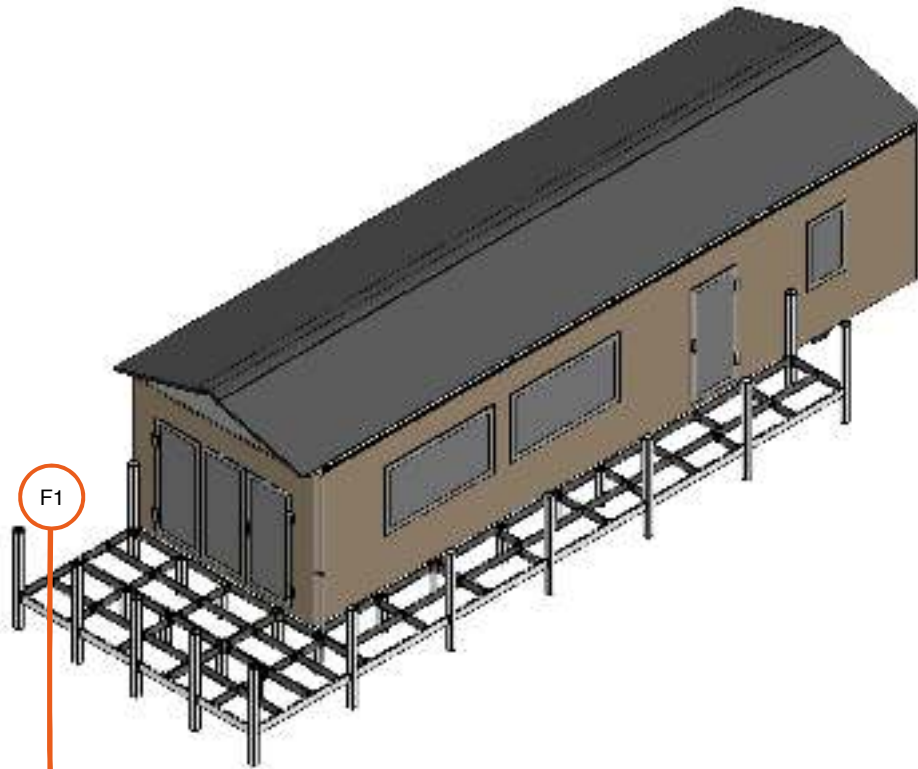
Ensure aligned

Using the string line and spirit levels will ensure that the posts all run upright and parallel to one another, in both directions.



Fascia Assembly

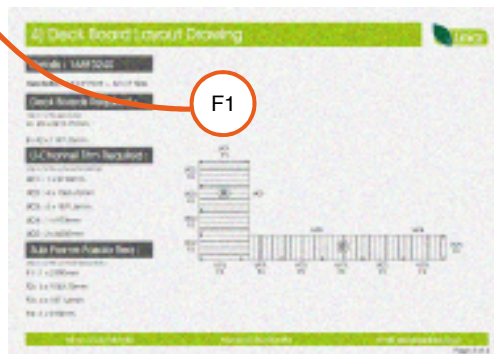
Before the deck boards can be installed, the sub-frame fascia needs to be fitted.

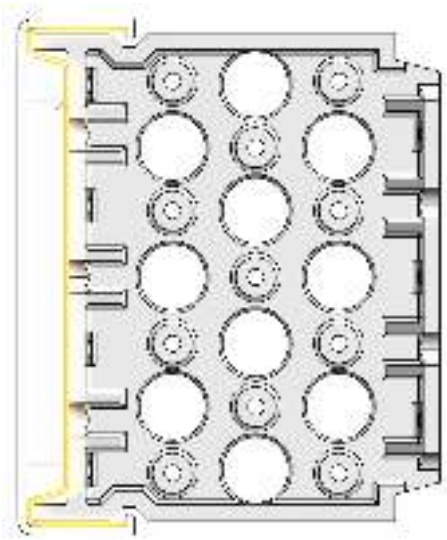


All sub-frame fascia is supplied to the correct size & is clearly marked in position as per the worksheet.

Paperwork Required:

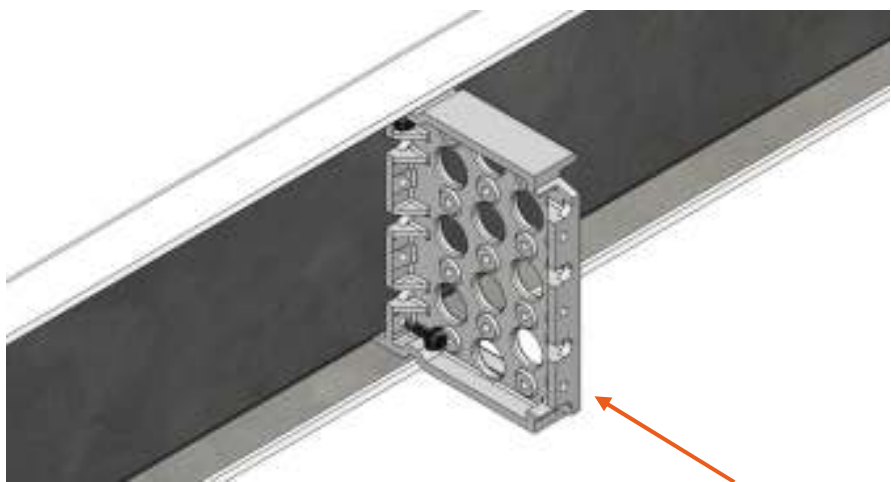
Deck Board Layout Drawing



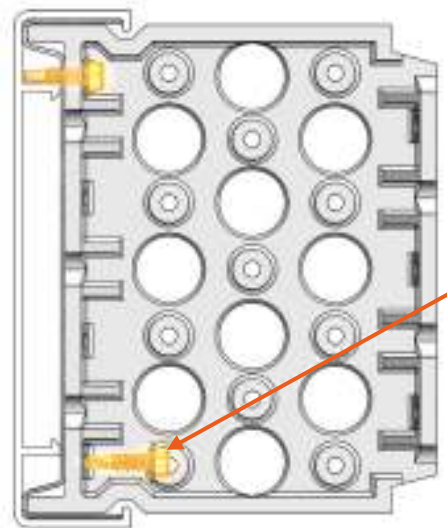


The fascia is clipped onto the steel as shown.

Ensure the fascia is fully engaged.



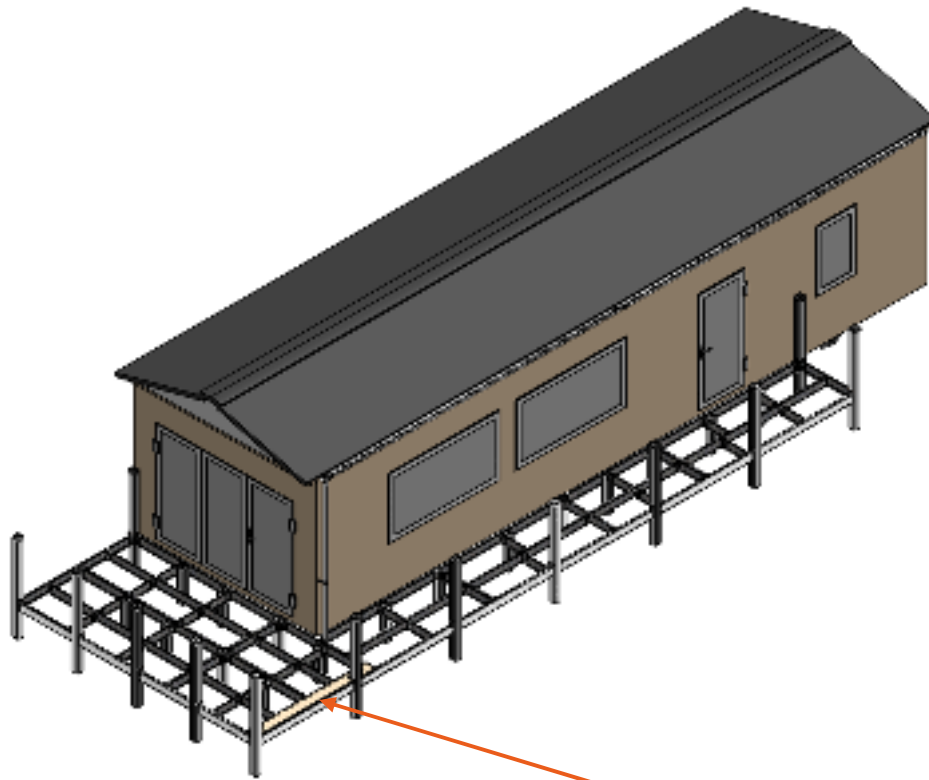
Wherever a LDM025 moulding is present, the top & bottom screws will need removing from the moulding or the fascia will not fit correctly.



The screws can cause the legs to catch and blemishes to appear on the outer surface. So remove the screws, fit the fascia & then re-fit the screws.

Deck Board Installation - 1

The deck boards can now begin to be installed. All boards will be supplied cut to the exact length required.

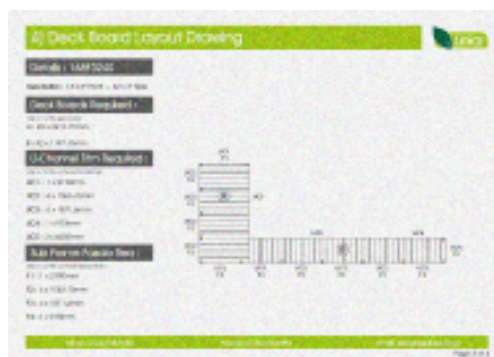


Install the 1st deck board.

Use the 'Deck Board Layout Drawing' to see the boards required & what orientation they sit.

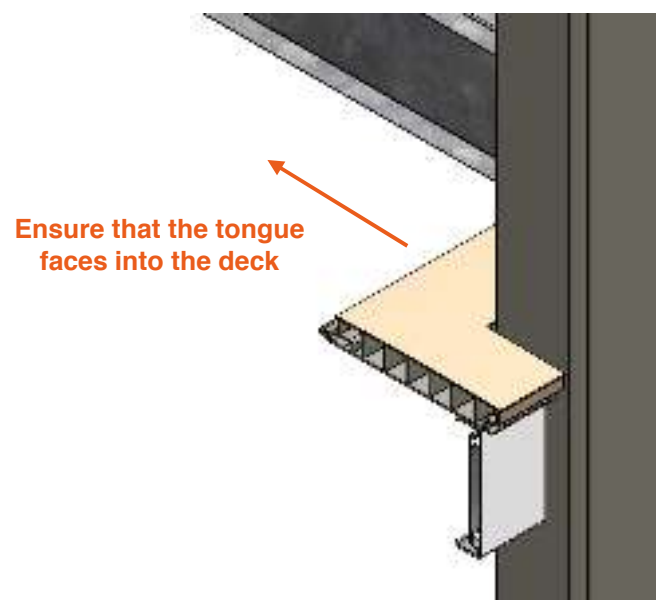
Paperwork Required:

Deck Board Layout Drawing

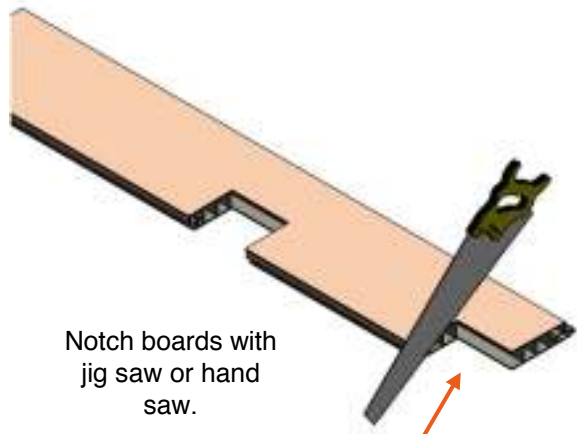
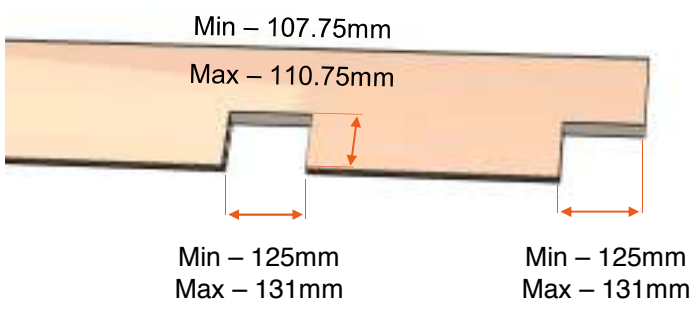




The first board will need to be notched around the posts. Ensure the first board is installed with tongue facing into the deck as shown below.

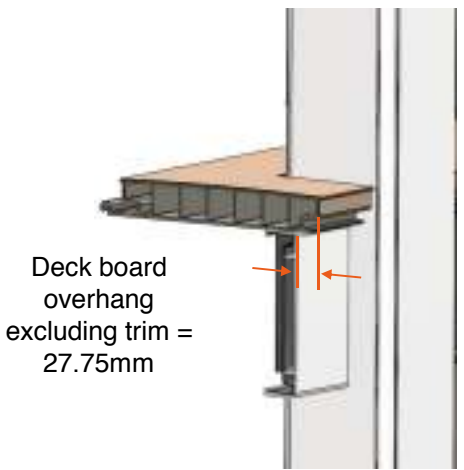


Board Notching Details



Notch boards with jig saw or hand saw.

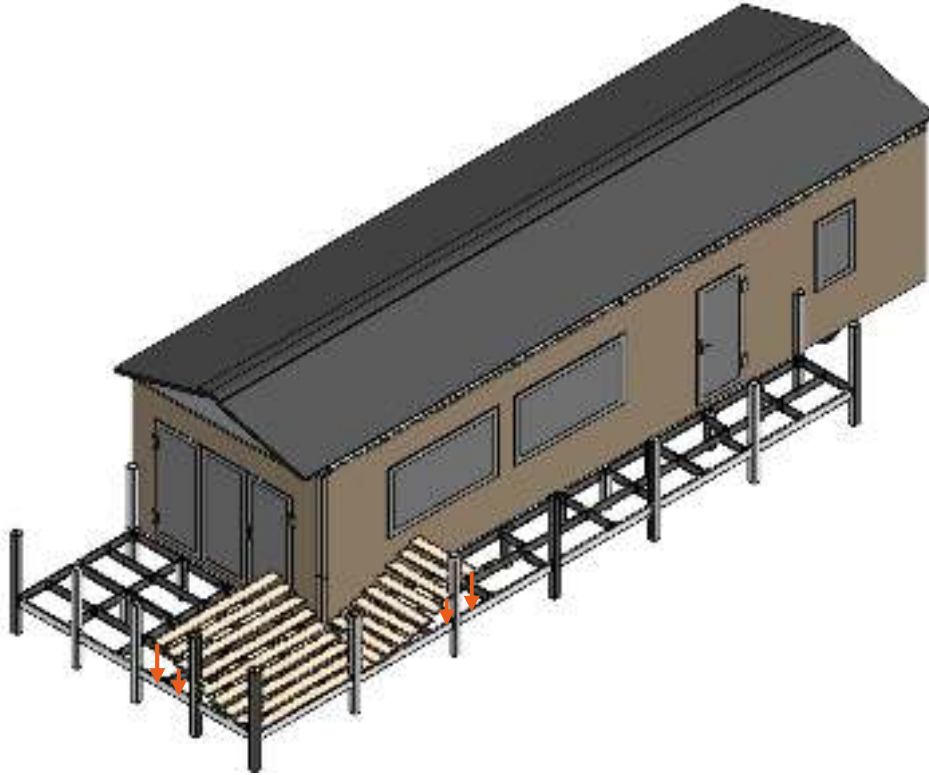
Deck Board Overhang



The post shroud will cover the notching so there is no need to follow the sculptured profile.

Deck Board Installation - 2

All deck boards can now be installed.

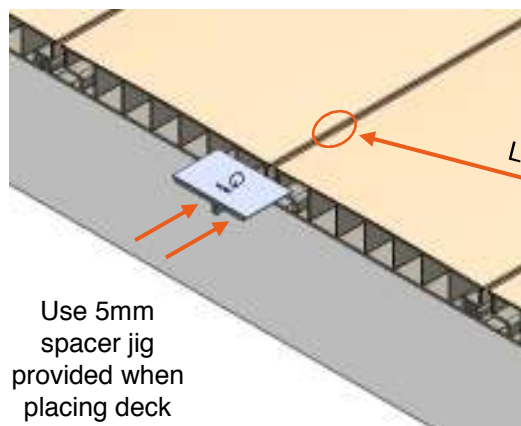
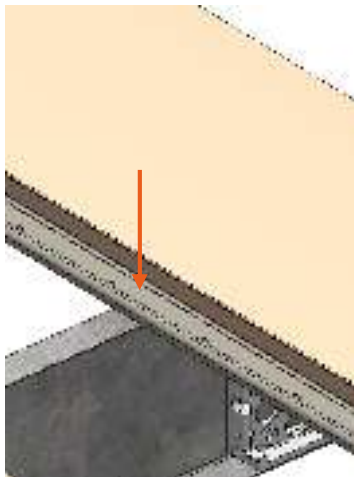
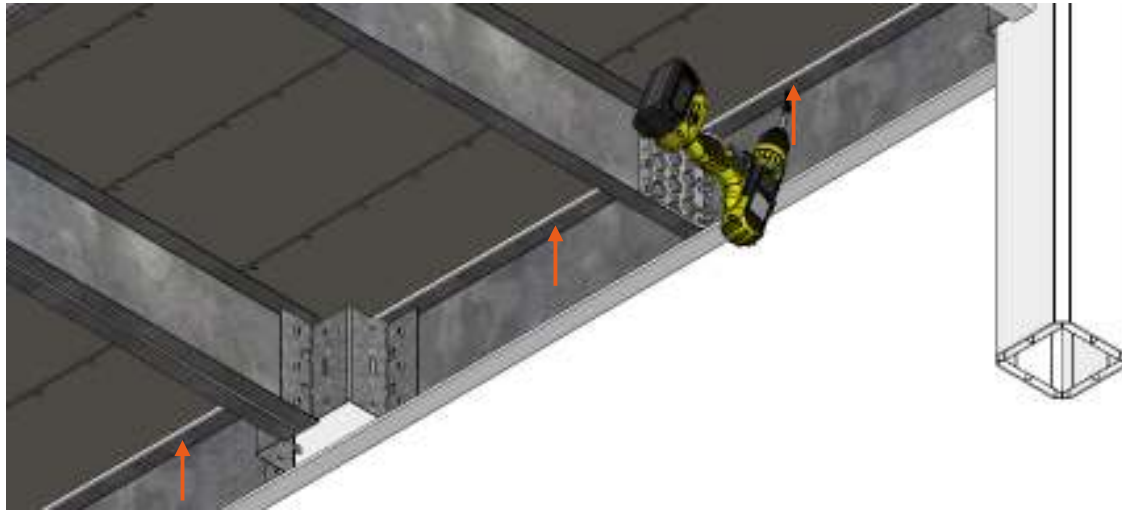


Paperwork Required:

Deck Board Layout Drawing



The first board is fixed to the sub-frame from underneath. Pre-drill a 5mm \varnothing hole through the steel & fix in place using LDH048.

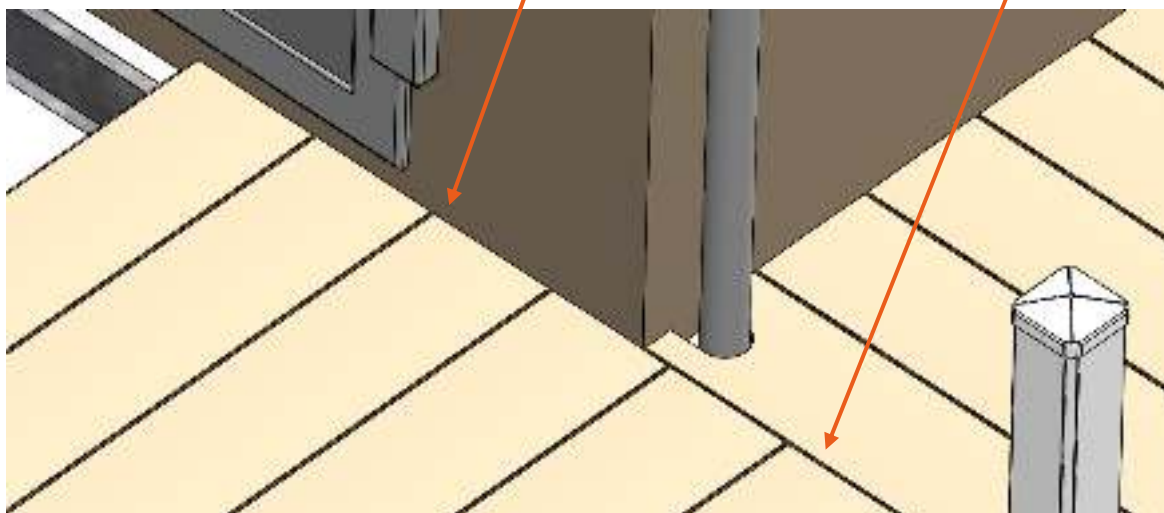


Use 5mm spacer jig provided when placing deck boards.

Following this, fix the boards through the tongue using LDH046 onto every sub frame brace supporting the boards.

5mm gap at van side.

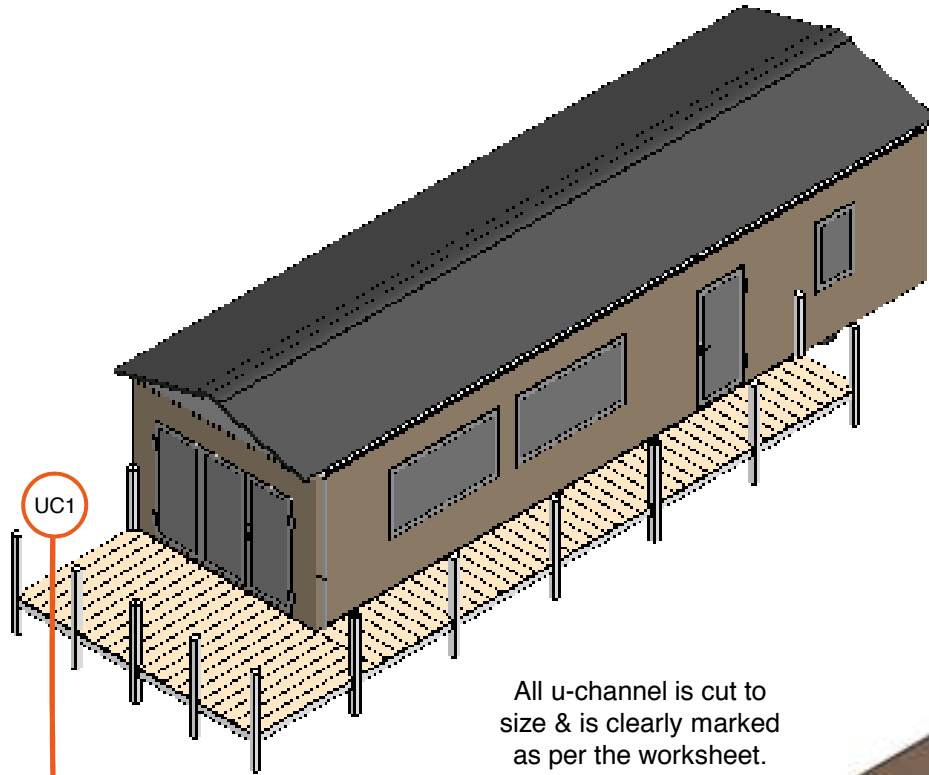
5mm gap when boards meet at 90°.



* The last board may have to be cut down its length to suit the deck size.

U-Channel / Shroud Installation

The u-channel trim & post shrouds can now be fitted.

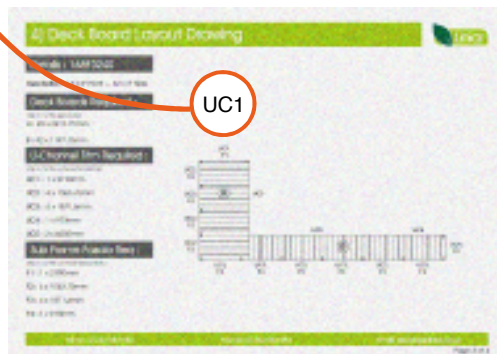


All u-channel is cut to size & is clearly marked as per the worksheet.



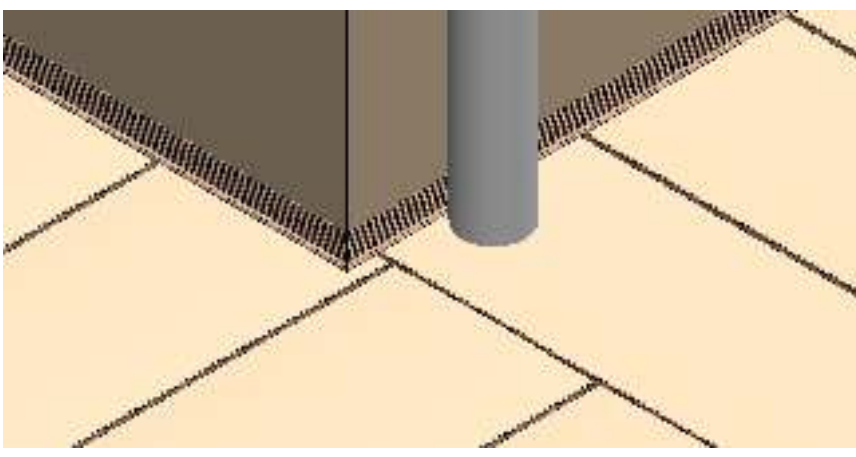
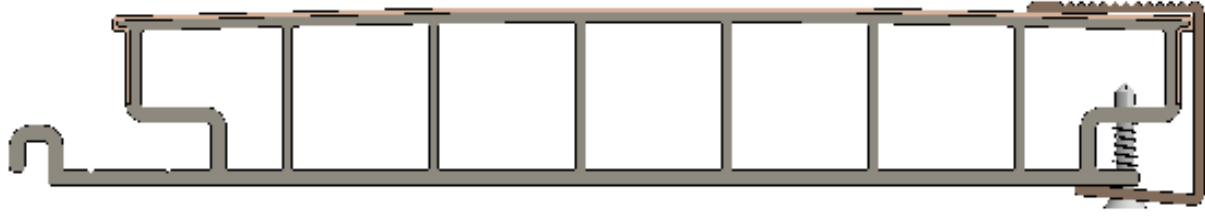
Paperwork Required:

Deck Board Layout Drawing

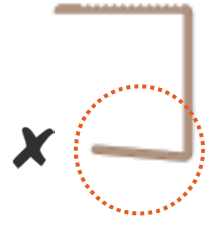




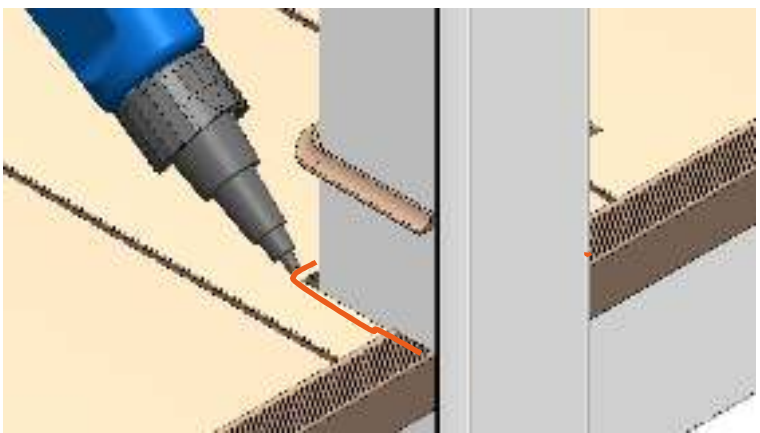
The trims are screwed into place if possible from the underside using LDH048. On areas susceptible to traffic, it is worth also using the adhesive to also hold in place. This will normally be around the step/entrance area.



Any u-channel trim on the caravan side of the decking requires the underside leg to be removed and to be glued into place. The ends may need to be mitred at the corners.



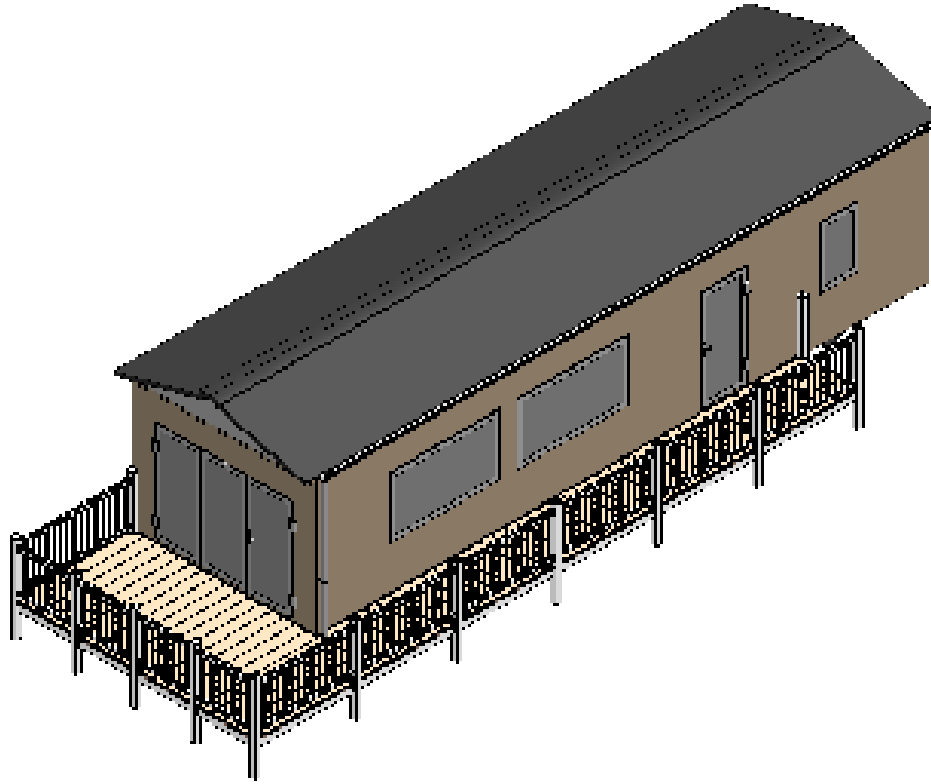
The post shrouds can be fixed in place using 'LBP0202' adhesive.



Cut the shrouds down to accommodate corner posts.

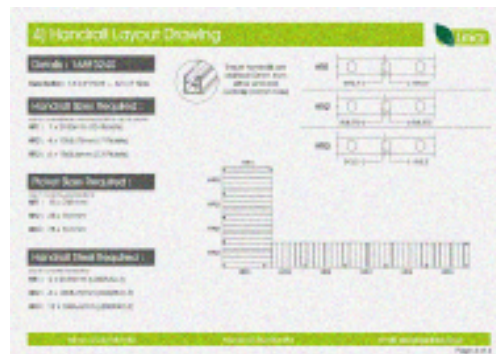
Handrail Installation

All handrails are now ready to be installed onto the deck.



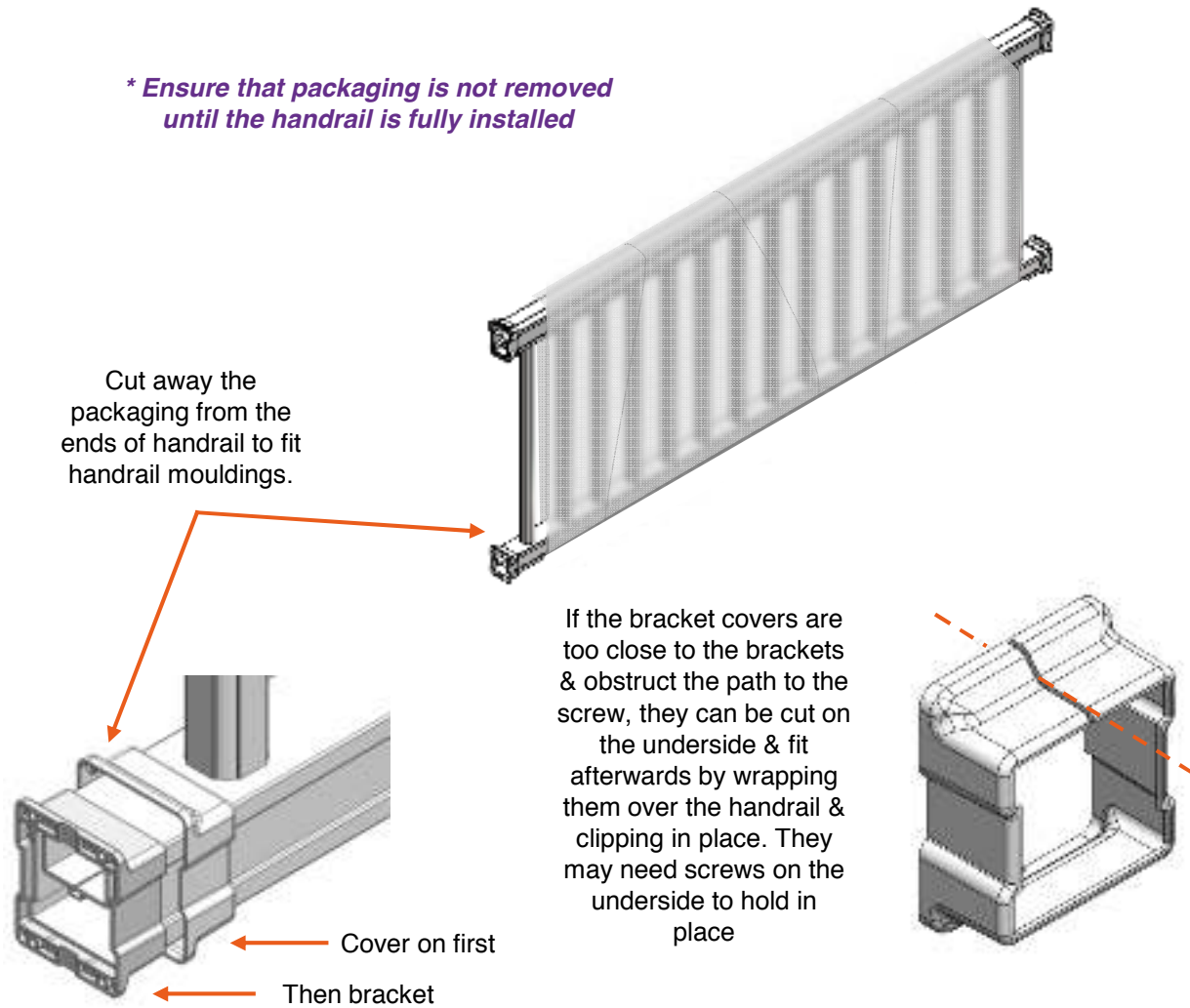
Paperwork Required:

Handrail Layout Drawing



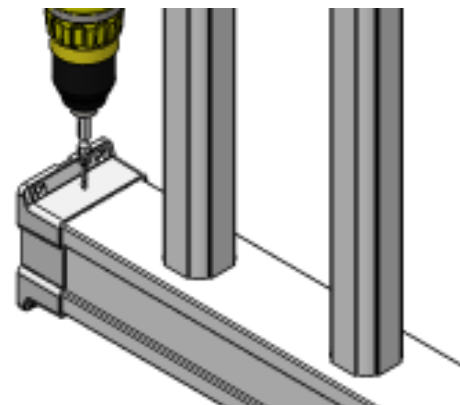
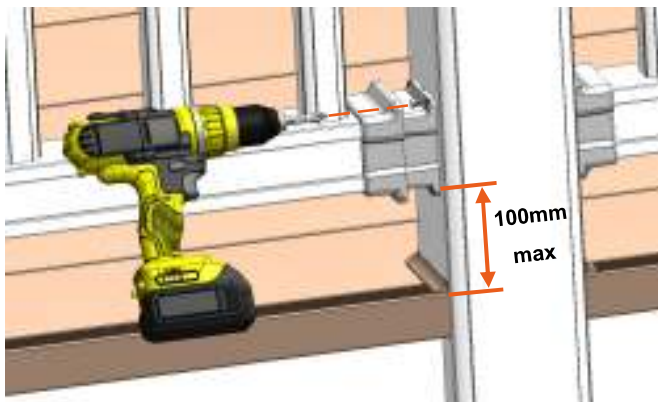
All of the hand rails come fully assembled & wrapped together. They are also fully drained on the bottom rail.

** Ensure that packaging is not removed until the handrail is fully installed*



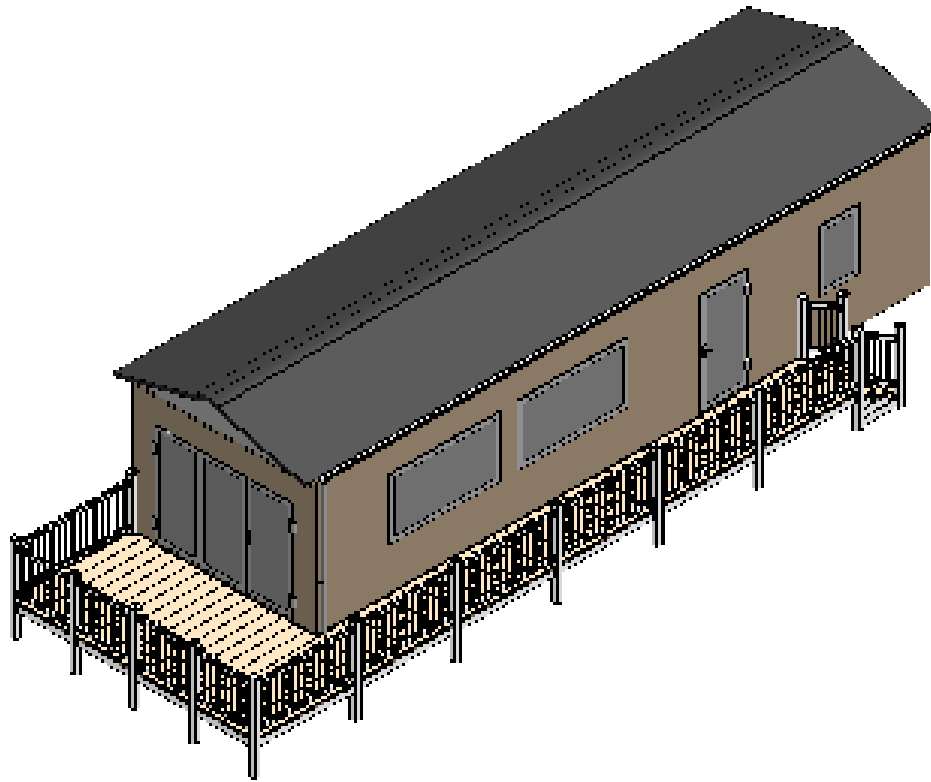
The bottom rail should be no greater than 100mm away from the deck boards.

A counter sunk fixing can be used on the brackets to hold the handrails in place. This will also help with the levelling of posts and keep them fixed.



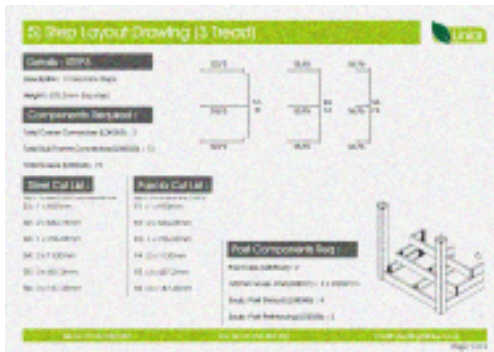
Step Installation

The steps are now ready to be installed. There are separate worksheets supplied for the steps.

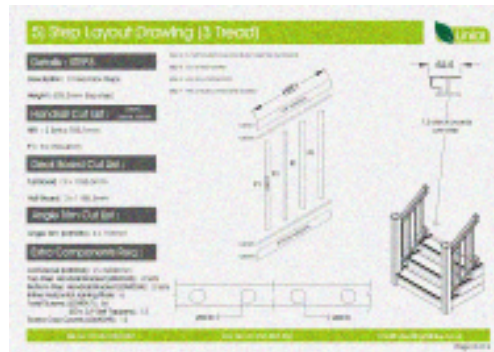


Paperwork Required:

Step Layout Drawing 1

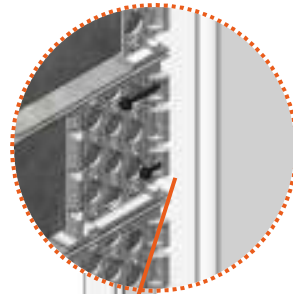


Step Layout Drawing 2

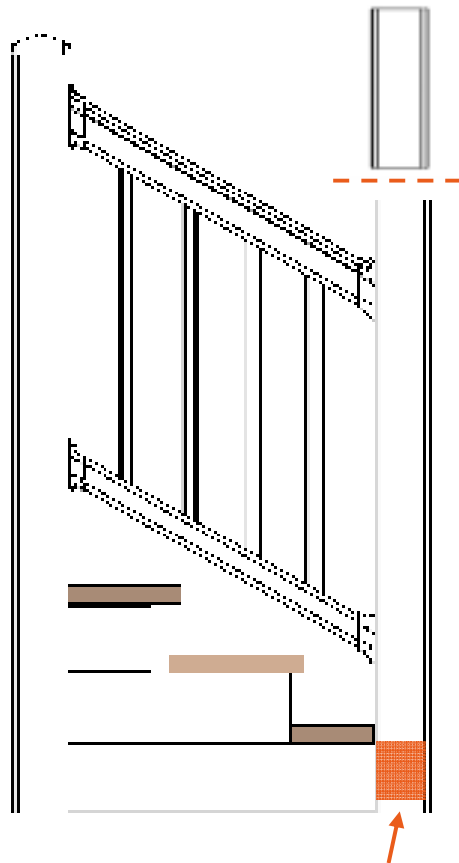


The steel will come pre-assembled. Firstly fit all the fascia to the step sub-frame, as per the worksheet. Remember to remove fixings in the mouldings to avoid damage to the fascia.

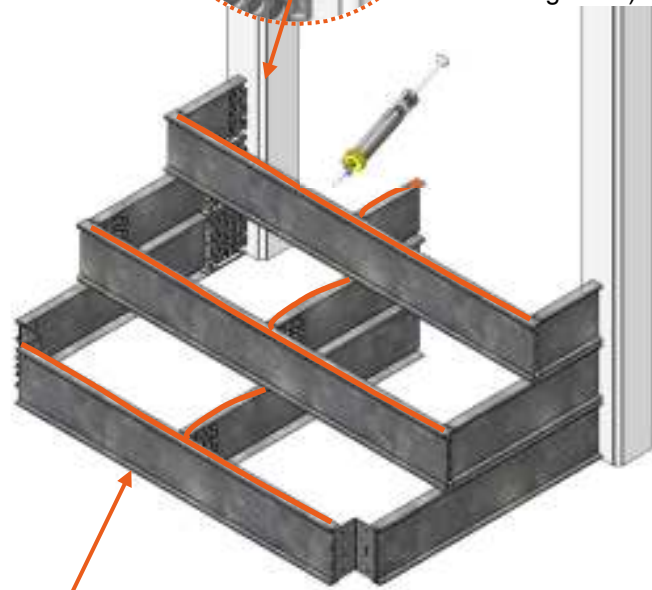
Cut the post to size. Use the step handrail as a guide.



Screw the steps to the centre of the post (No internal post steel is required as all the load is transferred into the ground)

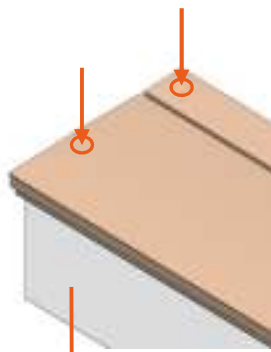
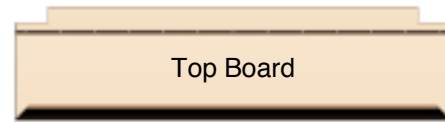


Fix the posts into position, ensure LDS056 is fit at the bottom of the end step posts. This helps to keep the end post straight and rigid.



The boards will come supplied with the u-channel trim attached to the front.

When placing the boards down, start with the top and work your way down. The boards will need to be notched into the posts on the top and bottom.



To fix the boards, firstly use the LBP0202 on the areas shown above. Then the boards can be placed into position and final fixed at the ends. Drill clearance holes at the board ends, ensuring the u-channel trim will cover these. Then fix the boards down using LDH048.

Once all the boards are fixed into position, the final trims can be fastened. The u-channel trim running down the sides needs the back leg breaking off so it can be glued into position as a right angle.

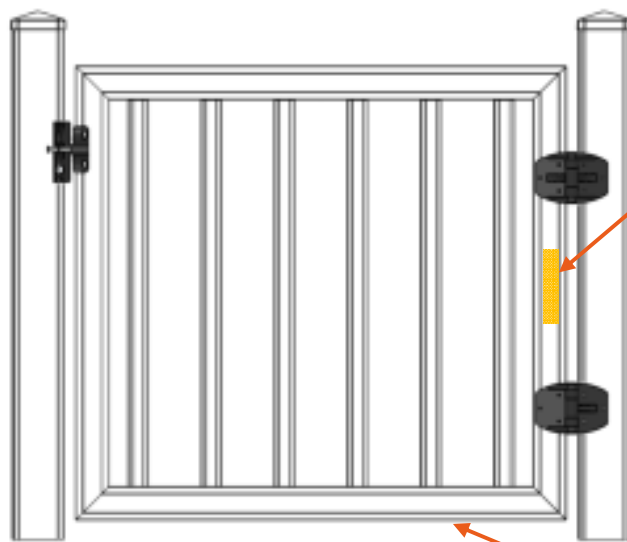
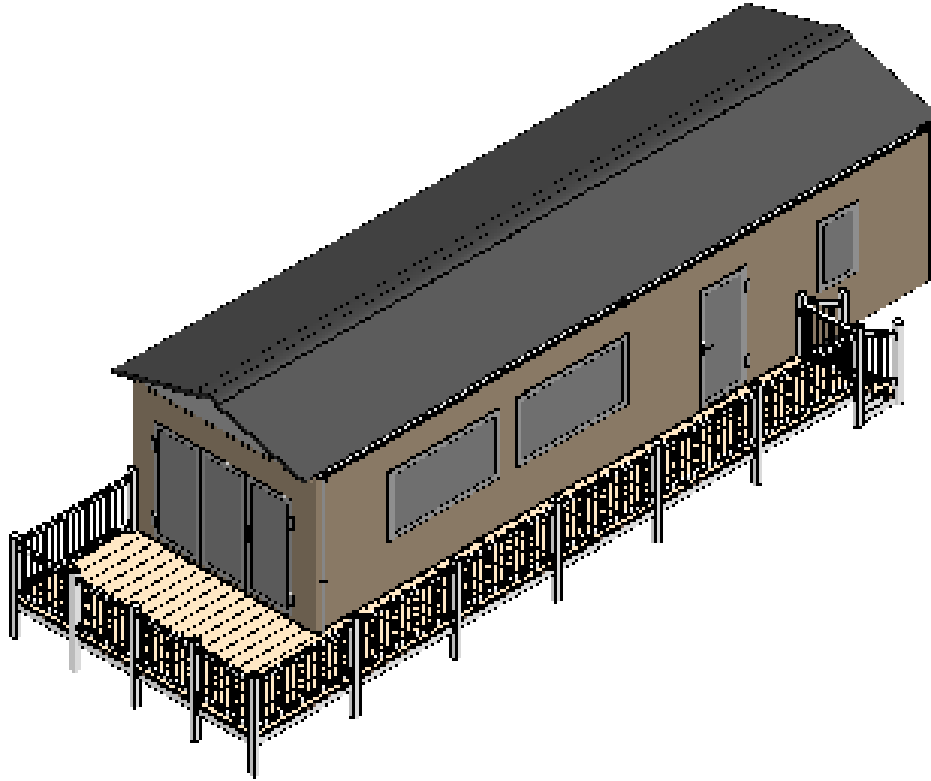


The open ends of the steel are finished with a right angle trim that is again fixed in place with the LBP0202.



Gate Installation

The gate comes pre-assembled. Before fitting, ensure that none of the hardware interferes with the handrail and handrail brackets, so place accordingly.

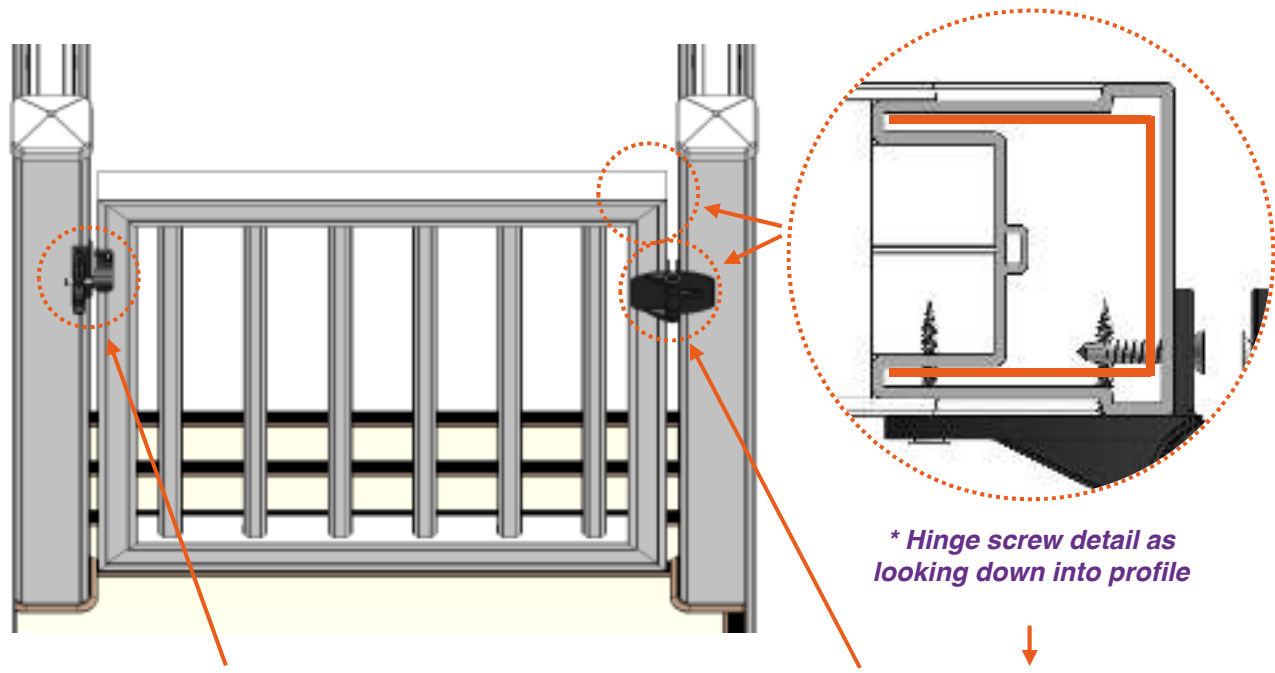


The hinges are to be fitted to the side with the hinge label as this side is reinforced with steel.

Ensure the drainage holes are positioned to the bottom of the gate.



Fix the gate to the decking posts as follows. Ensure the hinges and latch are fixed to the gate beforehand.

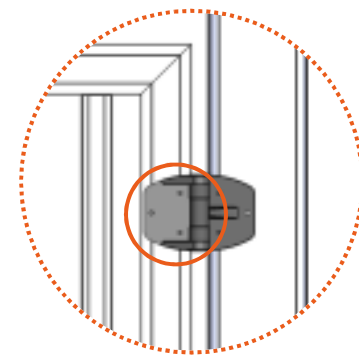
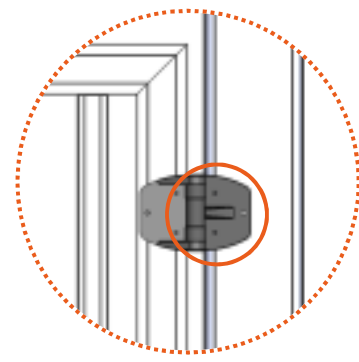
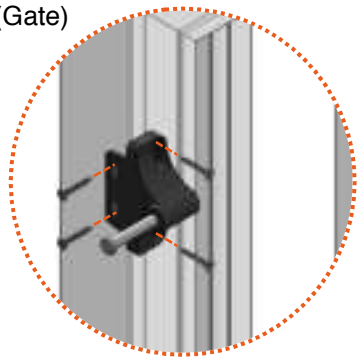


Use 4 x LDH047 to fix the latch onto the gate and 4 x LDH047 for the latch receiver onto the post.

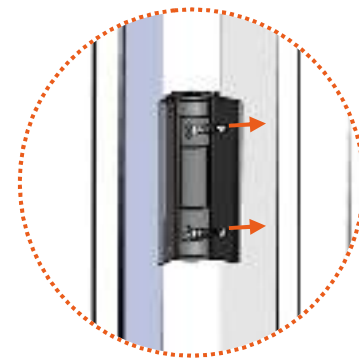
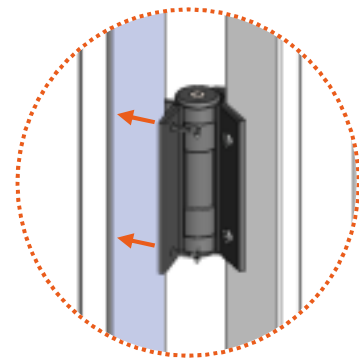
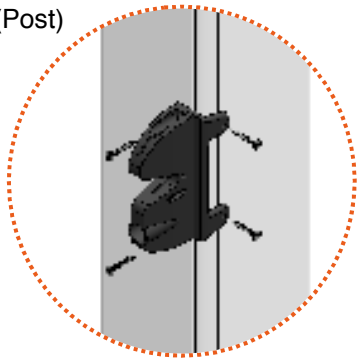
5 x LDH047 are used to fix the hinge to the posts from the front and through the side.

5 x LDH048 are used to fix the hinge to the gate, from both the front and the side.

(Gate)



(Post)



Repeat for the other hinge.

Accreditations and Testing

The Liniar decking system has been tested to the following standards

- **BS EN 660-2: 1999 – Resilient floor coverings. Determination of wear resistance. Part 2 Frick Taber test ⁽¹⁾(4).**

In accordance with the above standard and indicative results from BS EN 428: 1993 Liniar 225mm Deck Plank is classed as wear group P and achieved a Commercial Very Heavy and Light Industrial Heavy standard. The best in its class.

- **BS 7976: Part 2: 2002 – Slip resistance testing using the pendulum tester.**

In accordance with the above standard Liniar 225mm Deck Plank achieved low slip resistance when tested under dry conditions and low/moderate under wet conditions.

- **BS 476: Part 7: 1997 – Method for classification of the surface spread of flame of products.**

In accordance with the above standard Liniar 225mm Deck Plank achieved Class 1. The best in its class.

- **All components (except steel) are made in our own factory to ISO 9001:2008**
- **Tested to a loading in excess of 500kg/m²**

Maintenance



The following should be noted before maintaining your deck to help retain its appearance in optimum condition for many years to come.

Do

- ✓ Frequently wash the handrails and posts with a cloth using warm, soapy water and wipe dry
- ✓ Use a stiff bristled brush with warm, soapy water to clean the deck boards
- ✓ A jet wash may also be used to clean the deck boards

Don't

- ✗ Use glass cleaner on the deckboards or balustrade
- ✗ Use any type of bleach, solvent (e.g. white spirit, methylated sprits, nail vanish remover) or adhesives
- ✗ Use any abrasive papers, such as sandpaper

- We recommend that hot surfaces, such as barbeques, are not used in association with PVCu decking
- Please be aware that some rubber-backed mats can cause discolouration of deck boards over time
- For wood grained products, Liniair supplies matching RAL touch up pens to repair any scratches/marks
- Some brands of sun cream can permanently stain foiled balustrade finishes

Guarantee

Linlar profiles are manufactured using tried and tested formulations from approved suppliers and will not warp or split for 10 years from date of installation.

LINIAR 10 YEAR

COMPONENT PRODUCT GUARANTEE

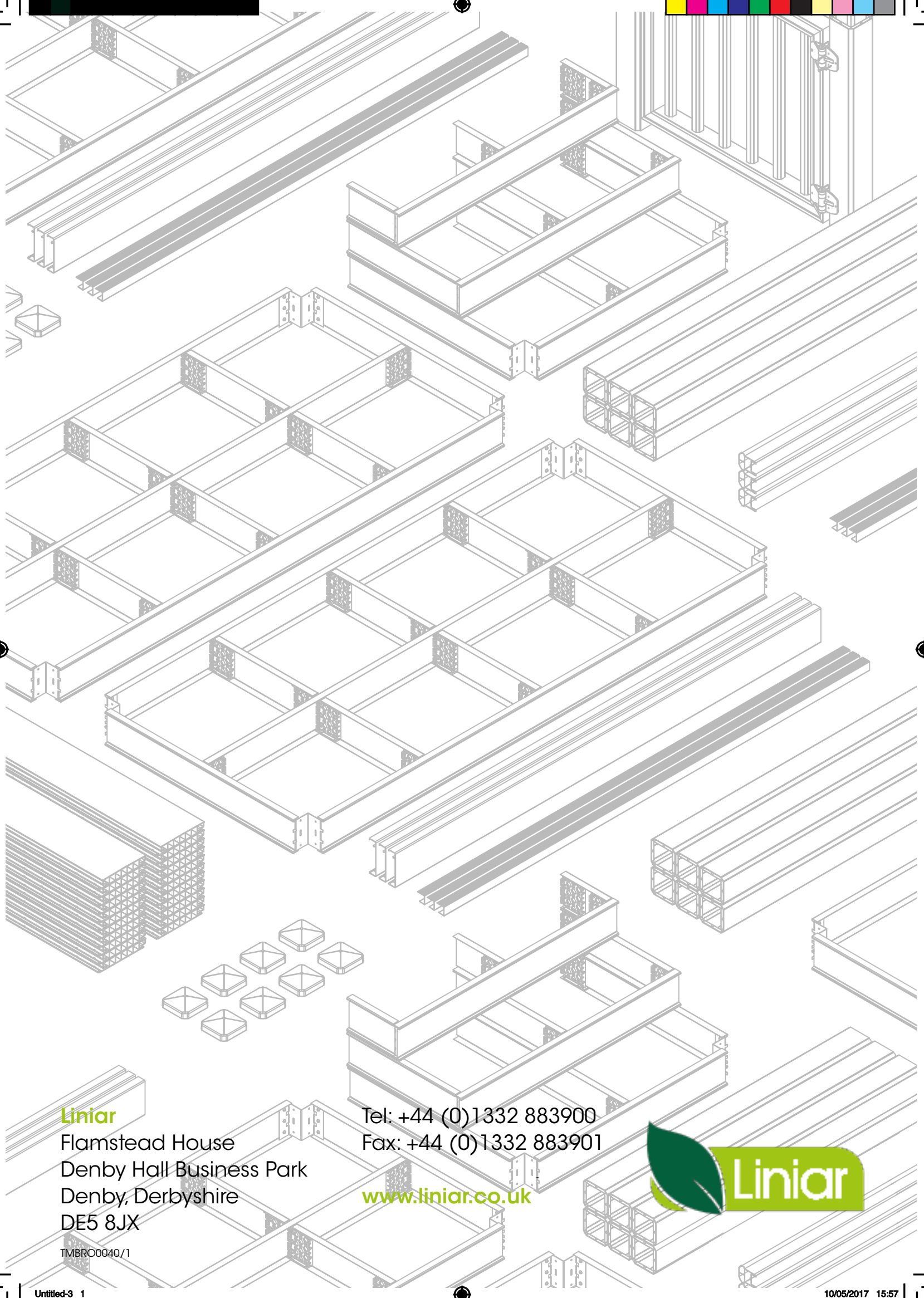
Linlar PVCu Products are manufactured using tried and tested formulations from approved suppliers. We guarantee they will not warp or split for 10 years from the date of installation providing they are installed by a Linlar-approved installer and maintained in line with our guidelines.

This guarantee is issued in association with our raw material suppliers and is based on proven technology for PVCu products. Further details can be supplied on request.

All products to be installed to Linlar recommendations







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