KRM S016
S016 HO Acrylic Silo Kit

Instructions for Construction.

Produced By

Keiran Ryan

Preface

Adding to the range of silo models from Keiran Ryan Models, this kit is the bigger brother of the S008 , the S016 Acrylic Silo Kit. This silo kit has a slightly longer footprint than the S008 Kit and has the addition of a larger bin on the left hand end of the silo.

This kit is an acrylic laser cut kit and consists of laser cut sections of 1.5mm clear acrylic that are tabbed and glued in place to form the basic structure which the modeller can then build upon.

There is no cutting or snapping required, and the modeller obtains a much more completed structure that is more consistent, squarer, and easier to work with. Thank you for you support in purchasing this kit, and I hope to be able to provide more kits of this type, not just for silos, but for other structures associated with model railways. (Any ideas would be appreciated).

These instructions, as you are now aware, are on a usb memory stick. The information on this Memory stick is Copyright protected, as are the photos. The modeller can certainly use the information for his or her own purpose, but they are forbidden to use the material to on-sell or trade or sell without the permission of the author of the memory stick. There are links in this document that will redirect you to the instructions in various formats, depending on your preference. There are also other plans and photos that can be accessed on the memory stick, which make this memory stick a one-stop shop, and great reference source. The basic instructions are also available on the Keiran Ryan Models web site if required.

Updated Kit

Important information

This kit has been modified using the continual improvement policy that Keiran Ryan Models operates under, and improvements have been made to this kit to benefit the modeller. This kit now has a range of 3D parts that gives better detail and assists in the construction of the base of the silo.

Rather than laminating many small pieces of 1.5 mm acrylic, than having to fill and clean up, the 3D parts can be sanded lightly and located directly in place, saving many hours of work.

Happy Modelling Regards Keiran

Introduction to this Kit

Disclaimer

This silo kit is NOT a complete kit.

It is an easy starter kit for modellers who prefer to have a model silo for their layout, with the detail work being assisted by using the original article in the Australian Model Railway Magazine Issue 170 in October 1991.

The material used in the construction of this kit is 1.5mm clear acrylic and can be very brittle. You will need to be very careful with the material in the process of construction, and to also be careful with thin sections of the material, as they can easily be broken. If you do break a piece, it will glue back together using Dichloromethane, or supa glue.

If you find that the tabs and slots are a little tight, just file them slightly to fit. As the material is a cast material, and variations in thickness can occur. If you find that the variations are much too great, contact me so that we can resolve the problem.

MEK will **NO**T bond this material.

Health Warning

The following is a warning for using **Dichloromethane:**

Principal hazards

*** Dichloromethane is harmful if you swallow or inhale it.
*** It may act as a narcotic, so inhaling it will make you feel unwell.
*** Like many small hydrocarbons that contain halogen atoms, dichloromethane is a suspected carcinogen. It is unlikely to be strongly carcinogenic, but it is important to reduce your exposure to the lowest level possible.

Safe handling

Wear safety glasses. Work in a well-ventilated area. Avoid repeated or long-lasting exposure.

Emergency

Eye contact: Immediately flush the eye with water. If irritation persists, call for medical help.
Skin contact: Wash off with soap and water.
If swallowed: Call for medical help.

Disposal

Store for later disposal as chlorinated waste solvent.

Protective equipment

Safety glasses.

KRM S016 - HO S016 Acrylic Silo Kit

The parts in this kit make up into sub-assemblies as per the bags that they were packed in. Parts have been checked when packed, but please check all parts in the bags with the check list provided, and if any parts are missing let me know and I will have them replaced.

- 8 Gig USB Stick.
- 4 Rubber Bands and 4 x 50 mm Conduit.
- The Silo Base.
- The Base Filler Pieces.
- The Sub-Frame.
- The Cupola.
- The Small Bin Roof.
- The Annex.
- Rear Road Support.
- Rear Road.
- 1.2 mm Twist Drill.
- 1 x 300 mm length of 1.2 mm Brass Wire.
- 1 x 100 mm length of 16 mm Conduit.
- 50 mm length of Special Shapes H4 H Pattern Brass.
- 3D Parts include ---- Drainage System, Out loading Platform, Spoil Bin, Wagon Shed Footings, Weighbridge Scale, Bin Roof Supports.
- **Please Note that on each of the instruction slides, the parts required are displayed in purple on the top left or right to assist you in progress of this kit.**

Instructions

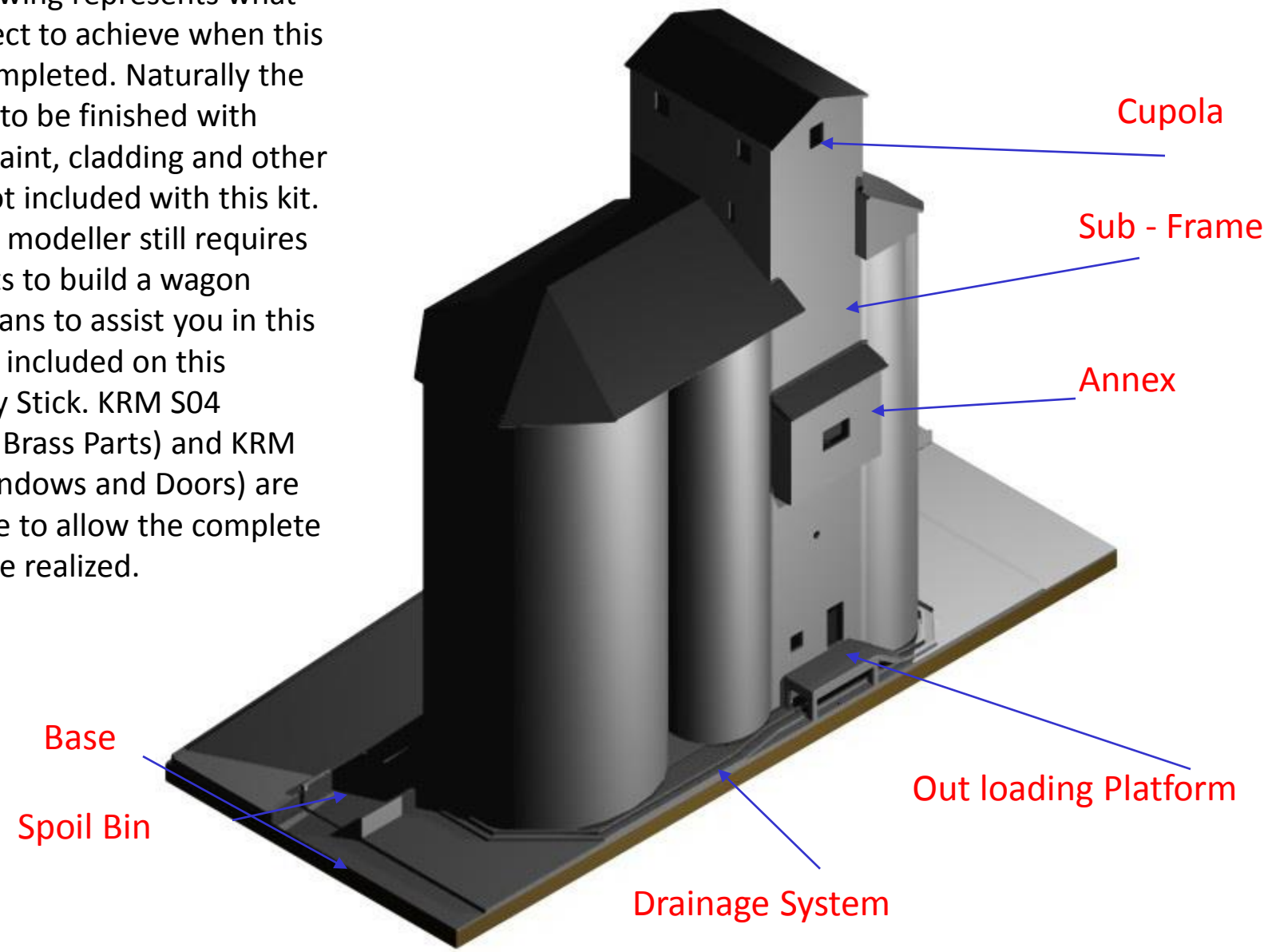
- **Please ensure that you read the instructions 3 times before you make a start on this kit** -------- (I Know----I hate reading them also, but it helps with getting the kit right).
- Keiran Ryan Models does have a breakages policy, which states, that if you break a part in this kit, it will be replaced once, but only once, so be very careful.
- This is a simple step by step process.
- The parts in purple are the new parts to be fitted.
- The parts in grey are the parts already fitted.
- Identify parts before committing them to the location, remove the paper/plastic backing before fitting.
- **DON'T force the parts, as they are brittle and WILL BREAK if forced**.
- The acrylic glue that has been suggested, is used by placing the parts together and then running the glue between the parts, using capillary action to bond the parts together, and holding them for 10-20 seconds.
- If you find that the tabs are tight into the slots, just file the slots and the tabs until they are a better fit.
- DON'T glue parts until all parts of the sub-assembly are in place, and ensure that they are the correct part, and in the correct orientation.
- There are parts that will need to be clad in corrugated iron (e.g. Campbell's aluminum) and other parts that will need to be painted. The acrylic takes acrylic paint very easily, but do use an undercoat.
- Have fun, as this kit is very easy to build. And I would appreciate your feedback!!!!!

Extra Work Needed to Complete the Silo

- Gutters (1.5mm Evergreen Styrene C channel) .
- Downpipes (1mm Brass Wire – Part - KRM Misc 008).
- Astragals (Supplied in KRM S04 Etch Parts Kit).
- Wagon Shed (Frame in Brass - special shapes – H4 or styrene H beams and flat brass – Drawing plans supplied)
- Weighbridge, Ladder , Ladder Safety Guard, Rear Road Partitions, Silo Rear Door, Pulley and Winch (In KRM S04 Etched Parts Kit) (0.4mm wire required for ladder – KRM Misc 007)
- Doors and Windows (Supplied in KRM S05 Casting Kit)
- Corrugated Iron (I prefer Campbell's Corrugated Aluminum – 12 foot packets)
- There are parts that will need to be clad in corrugated iron (e.g. Campbell's aluminum) and other parts that will need to be painted. The acrylic takes acrylic paint very easily, but do use an undercoat.
- Brass tube for Out loading Chute and pipe from Cupola to large bin (Plan drawings on CD)
- Paint, fillers, sand paper, and all the usual tools including various number/metric drills.
- I also use 0.5mm Rivets (KRM Misc 024) for locating the Astragals – downpipes to the silo. However brass wire will do the job.

The Outcome

This drawing represents what we expect to achieve when this kit is completed. Naturally the silo has to be finished with fillers, paint, cladding and other parts not included with this kit. And the modeller still requires the parts to build a wagon shed; plans to assist you in this task are included on this Memory Stick. KRM S04 (Etched Brass Parts) and KRM S05 (Windows and Doors) are available to allow the complete silo to be realized.



Are

You

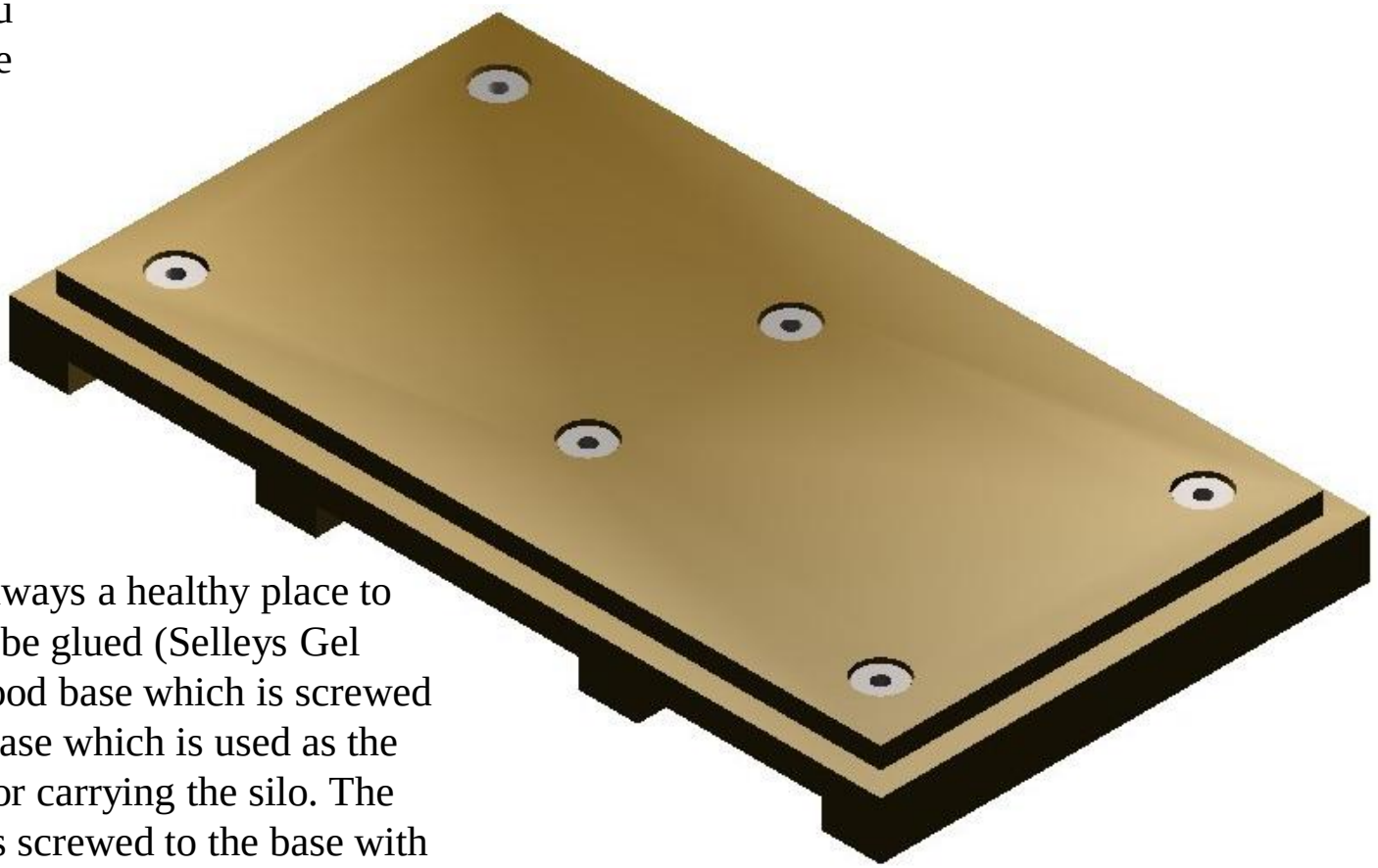
Ready

To

Model??????

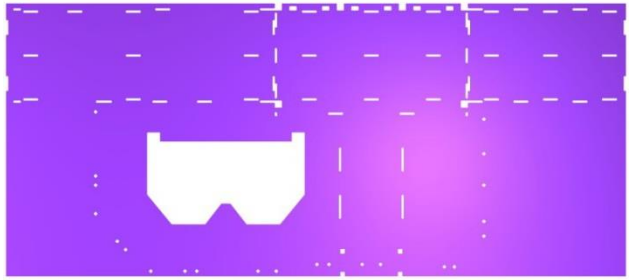
A Good Foundation

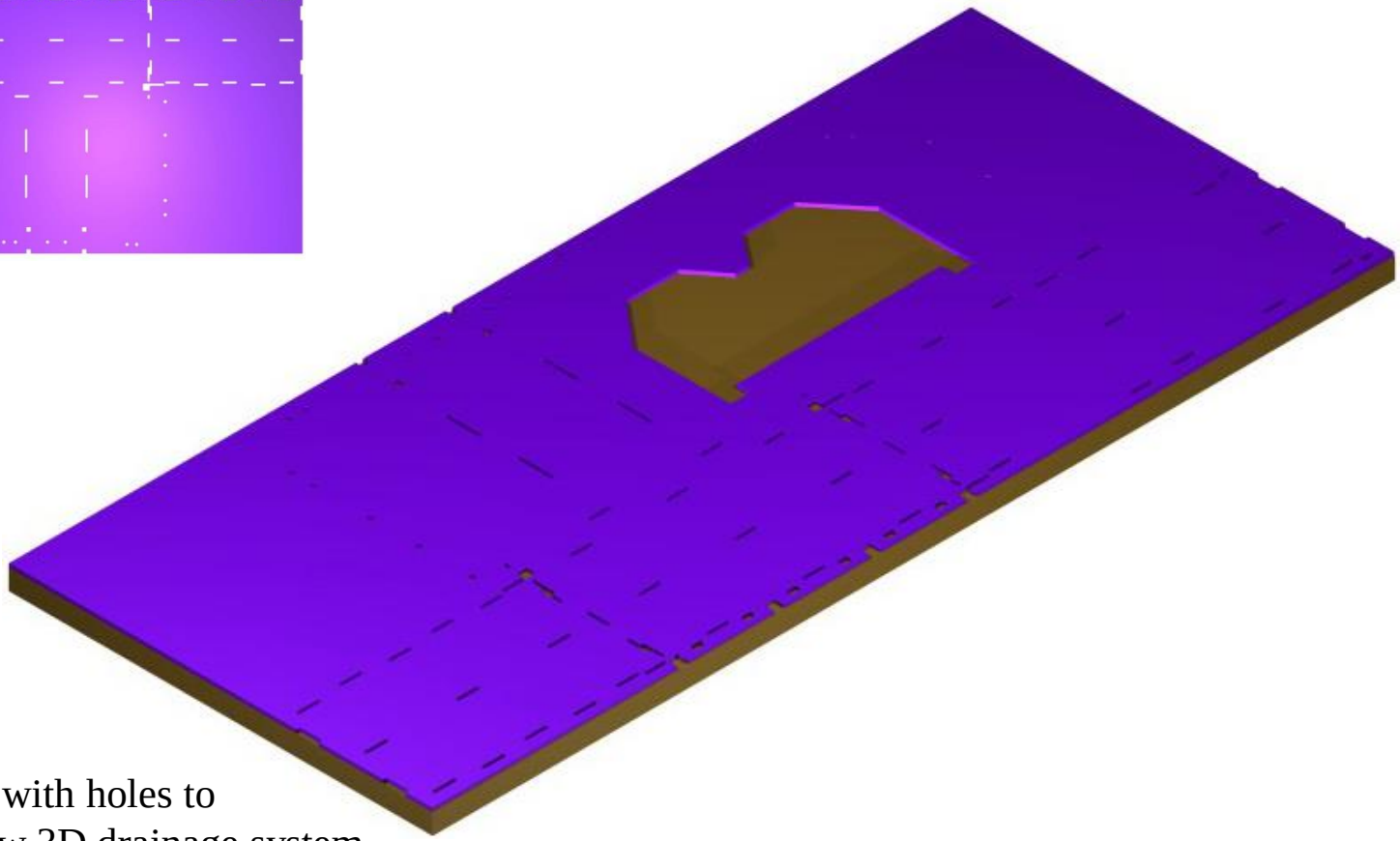
If you are supplying you own base, simply use the acrylic base as a template, it is that simple.



A good foundation is always a healthy place to start. The silo base can be glued (Selleys Gel Grip) to a 9mm craftwood base which is screwed to a 12mm craftwood base which is used as the floor to a storage box for carrying the silo. The foundation of the silo is screwed to the base with 6 x ¼" "T" Nuts and 6 x ¼" ¾ brass cheese head screws. The 9mm bases with ¼" "T" Nuts fitted, are available from K R M for $30.00 + postage, or simply make your own to the template of the Silo Base.

The Silo Base - Step 1

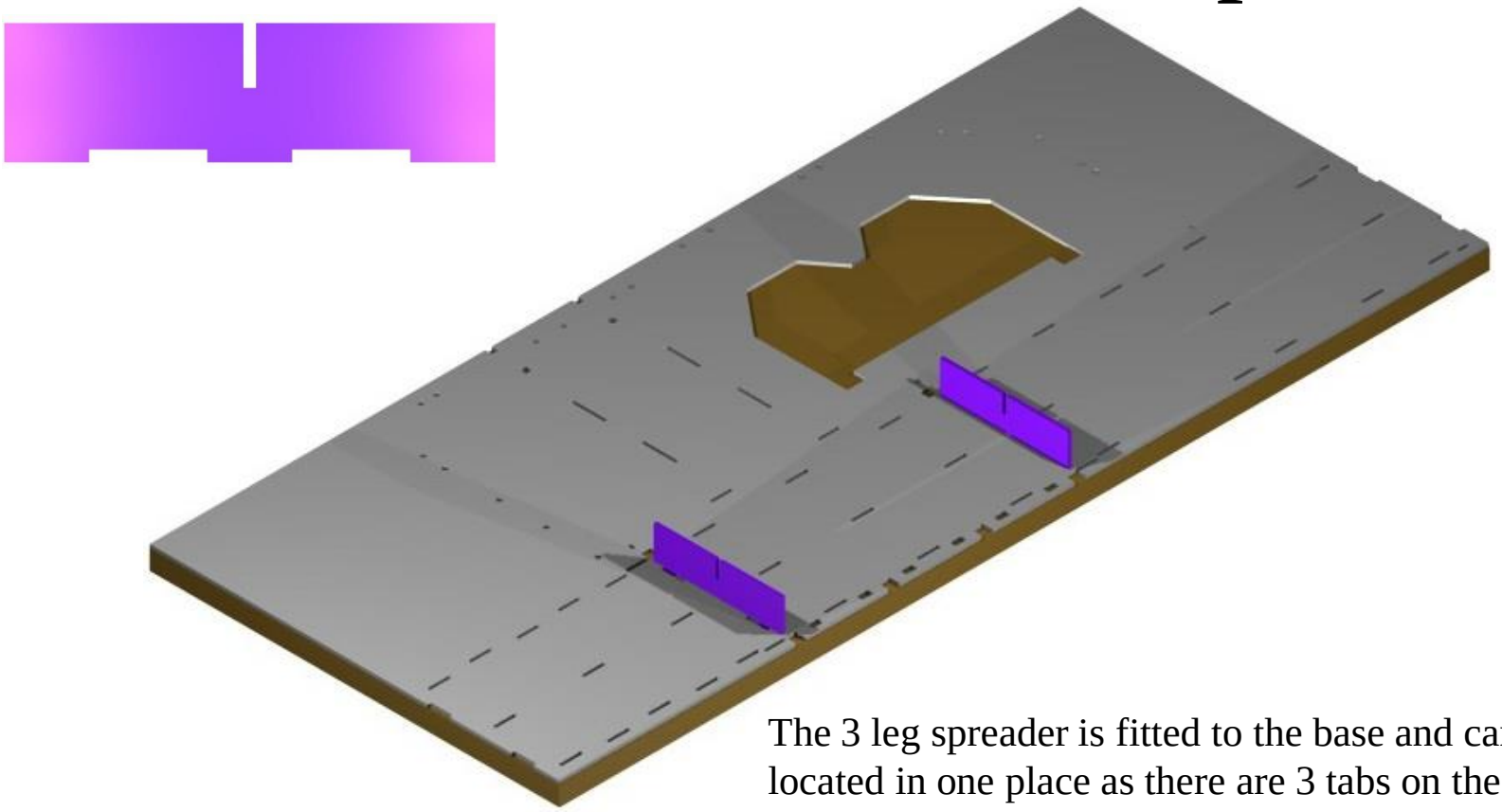




This is the new base with holes to accommodate the new 3D drainage system. The other large hole is for the bin roof piece, that was cut from this location to maximize the acrylic material. This cut out will not affect the silo base

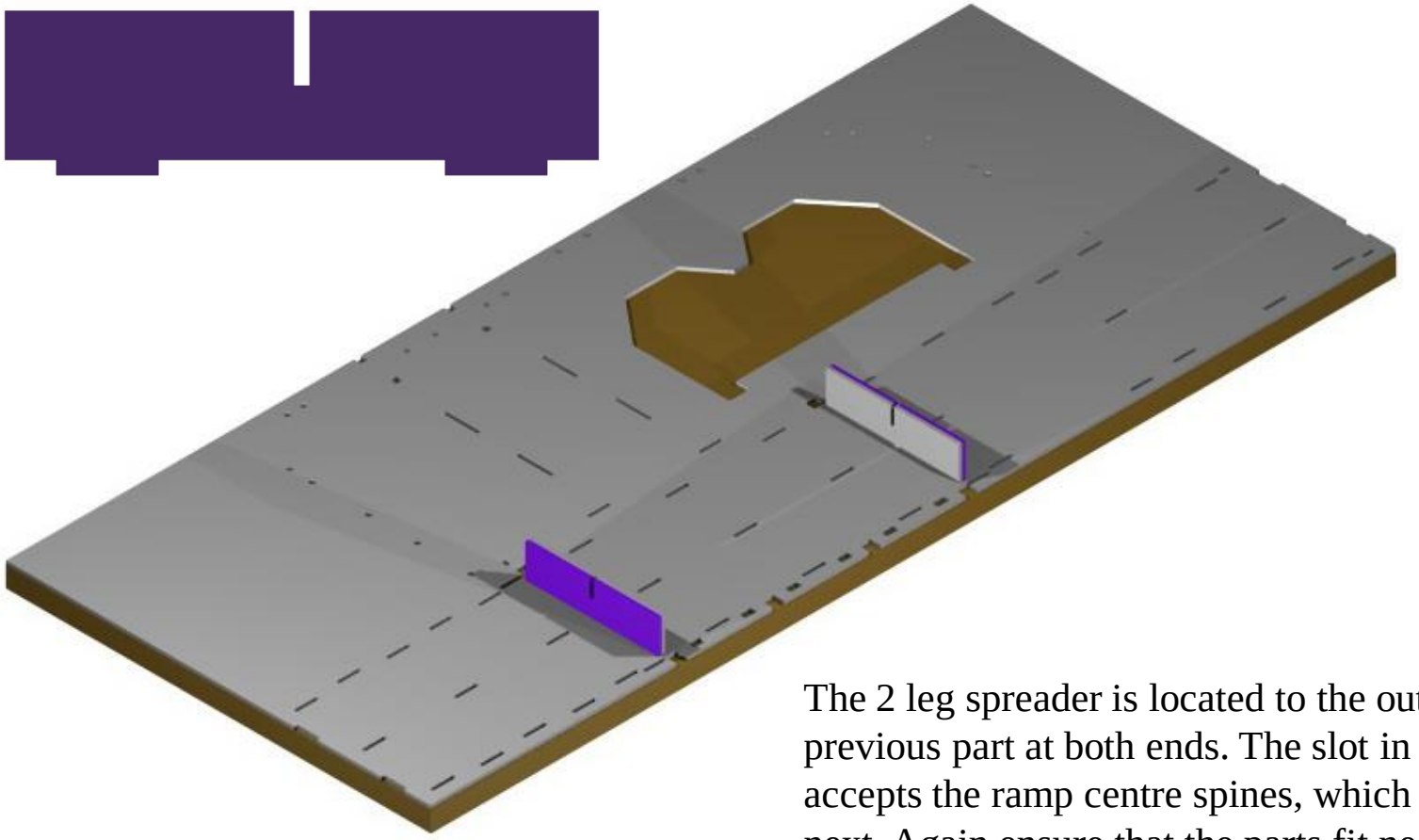
If you are gluing the base to a craftwood foundation, be careful not to fill the slots in the acrylic with Gel Grip. As an alternative, you could use a permanent spray adhesive.

The Silo Base - Step 2



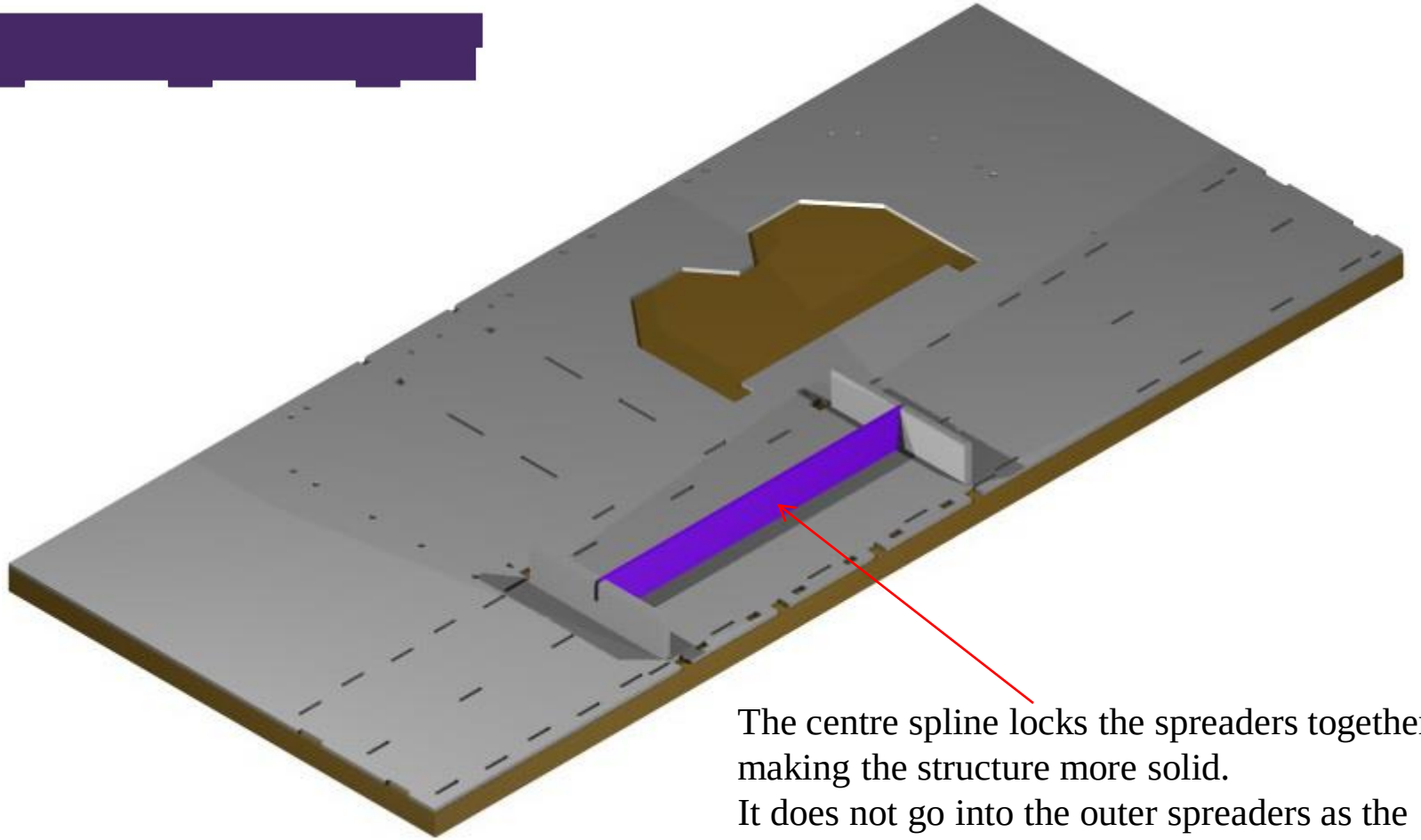
The 3 leg spreader is fitted to the base and can only be located in one place as there are 3 tabs on the base of the piece. It does have a 2 legged friend that will fit next to it on the outside (see the next slide). The slot in the top accepts the centre spine fitted later.

The Silo Base - Step 3



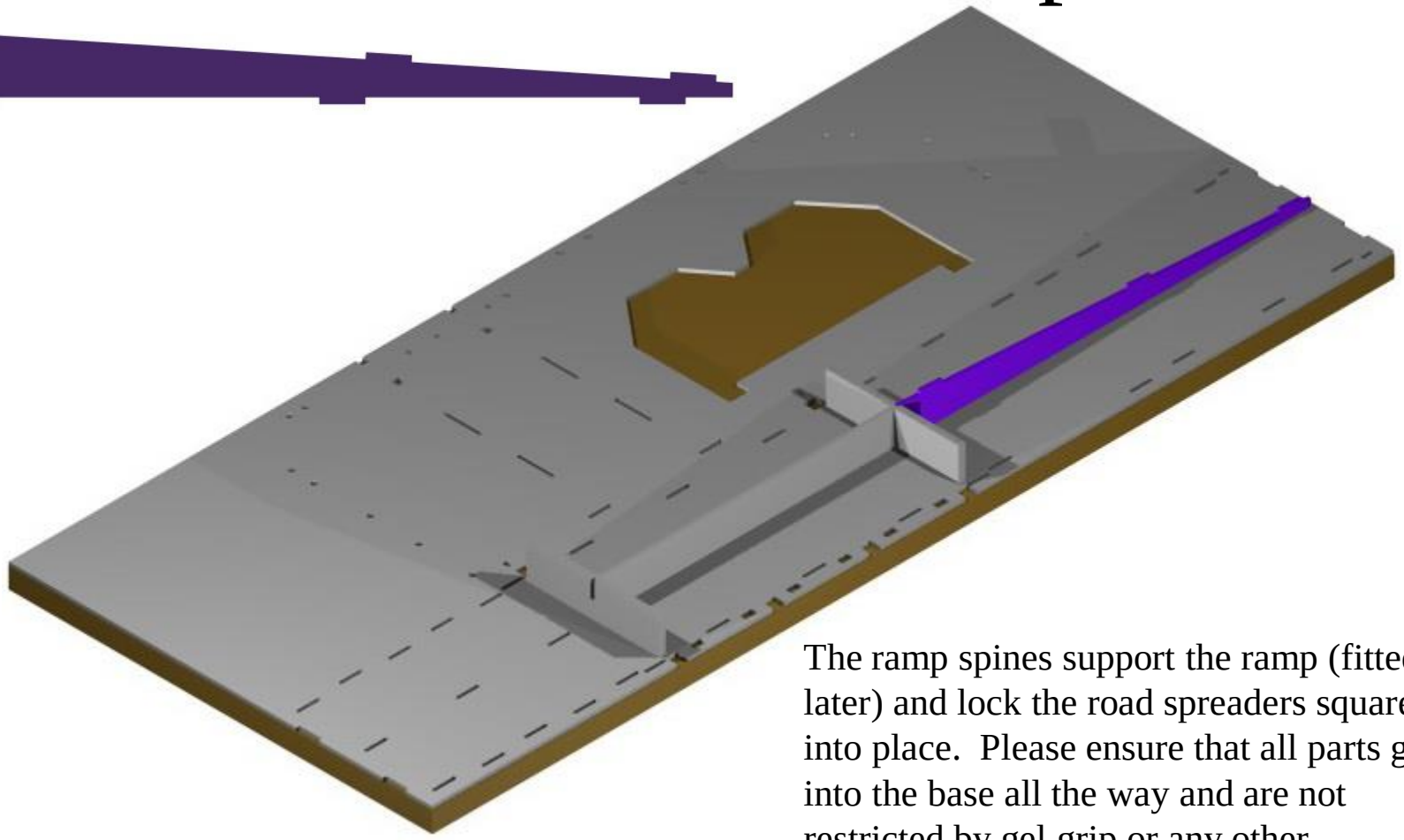
The 2 leg spreader is located to the outside of the previous part at both ends. The slot in this part accepts the ramp centre spines, which will be fitted next. Again ensure that the parts fit neatly before any gluing of the base.

The Silo Base - Step 4



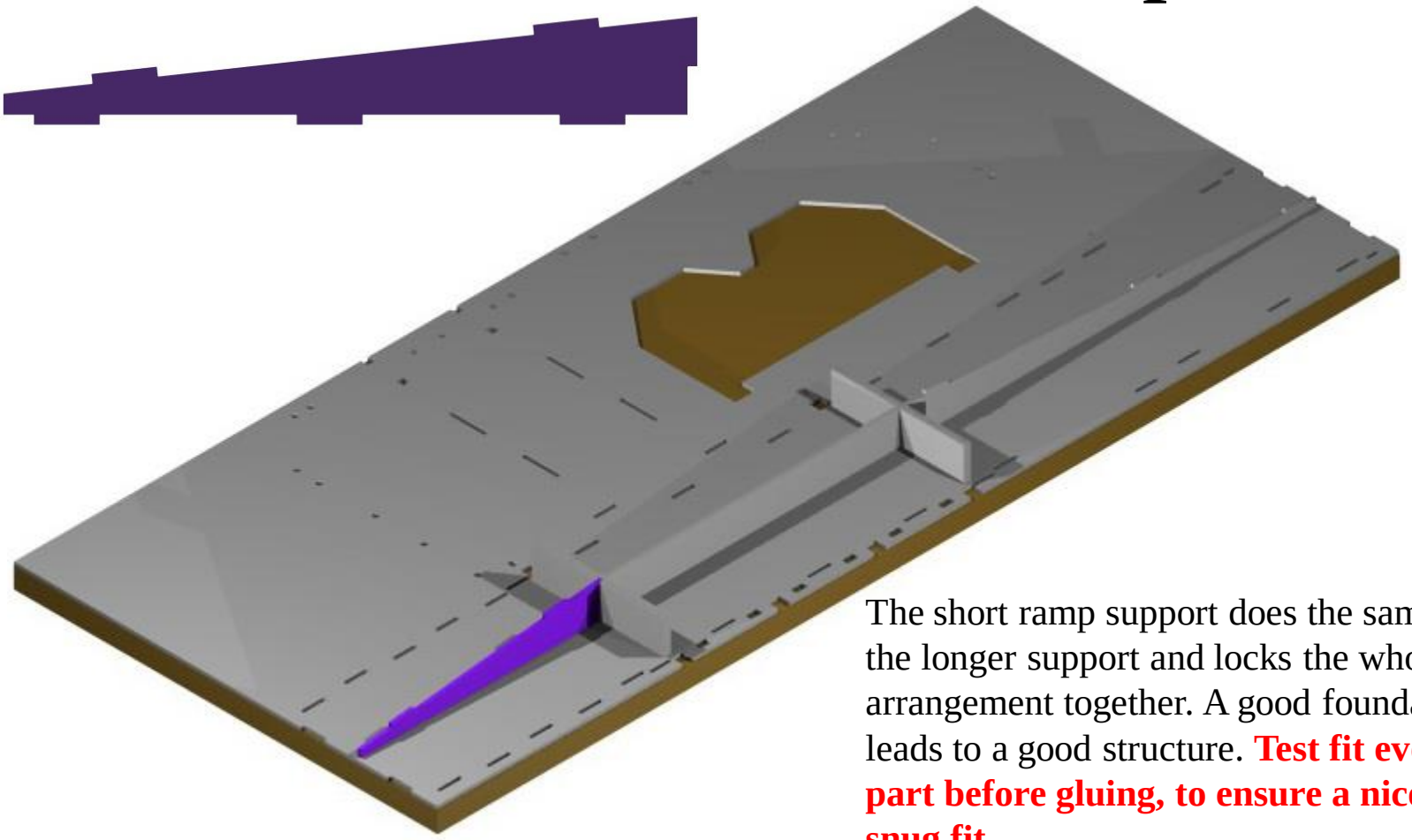
The centre spline locks the spreaders together, making the structure more solid.
It does not go into the outer spreaders as the ramp spines will need to be fitted into them.

The Silo Base - Step 5



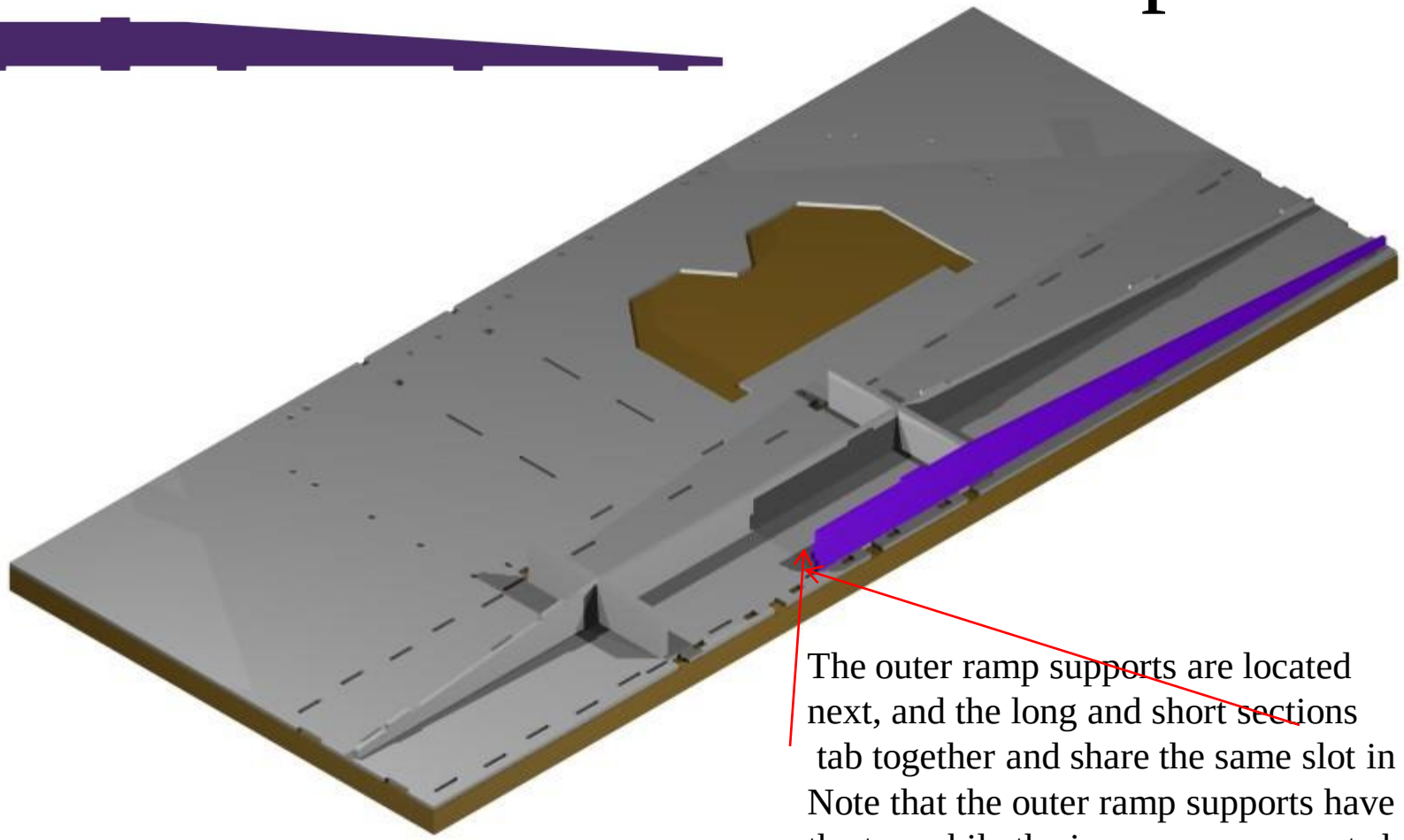
The ramp spines support the ramp (fitted later) and lock the road spreaders squarely into place. Please ensure that all parts go into the base all the way and are not restricted by gel grip or any other impediment.

The Silo Base - Step 6



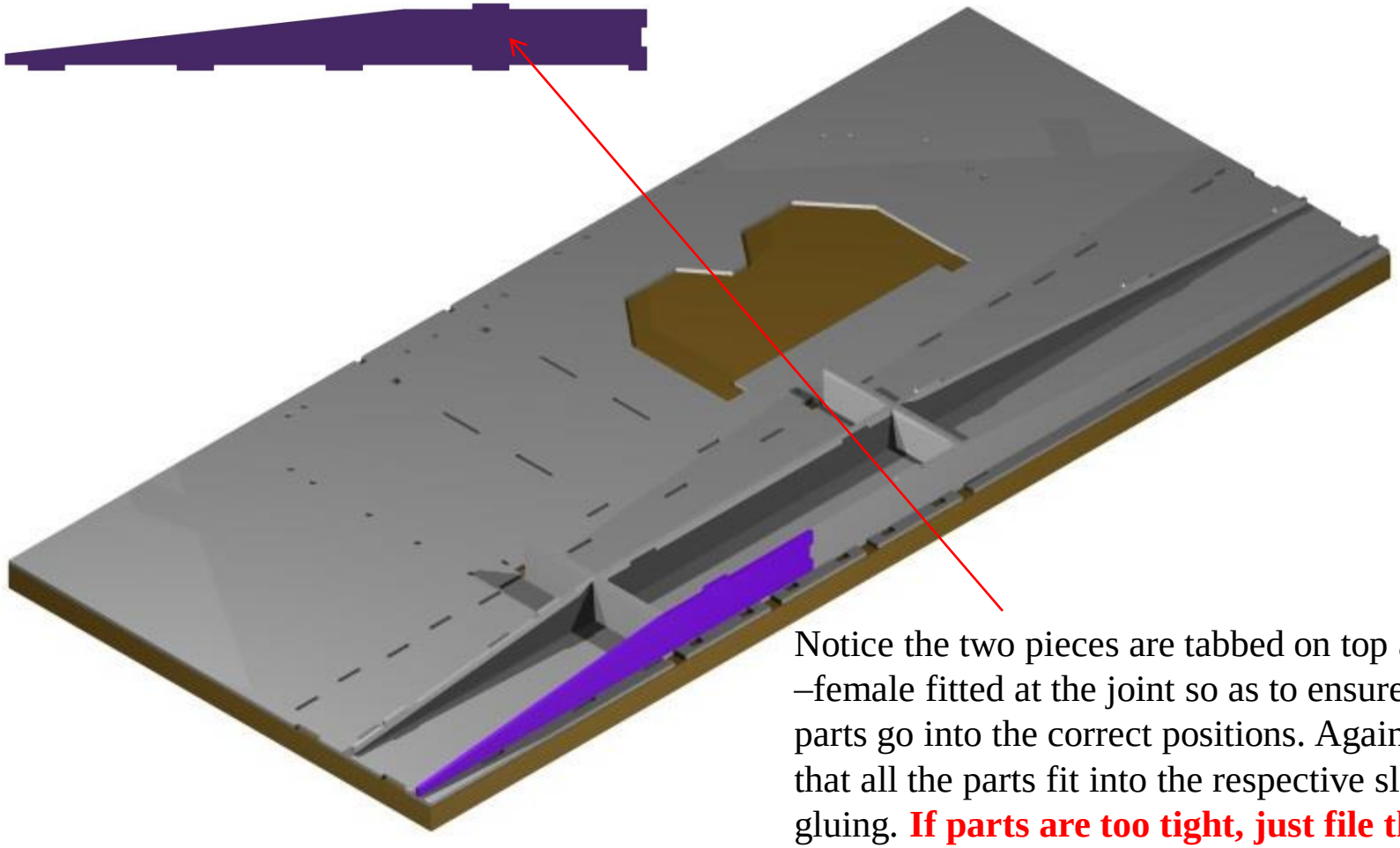
The short ramp support does the same as the longer support and locks the whole arrangement together. A good foundation leads to a good structure. **Test fit every part before gluing, to ensure a nice snug fit.**

The Silo Base - Step 7



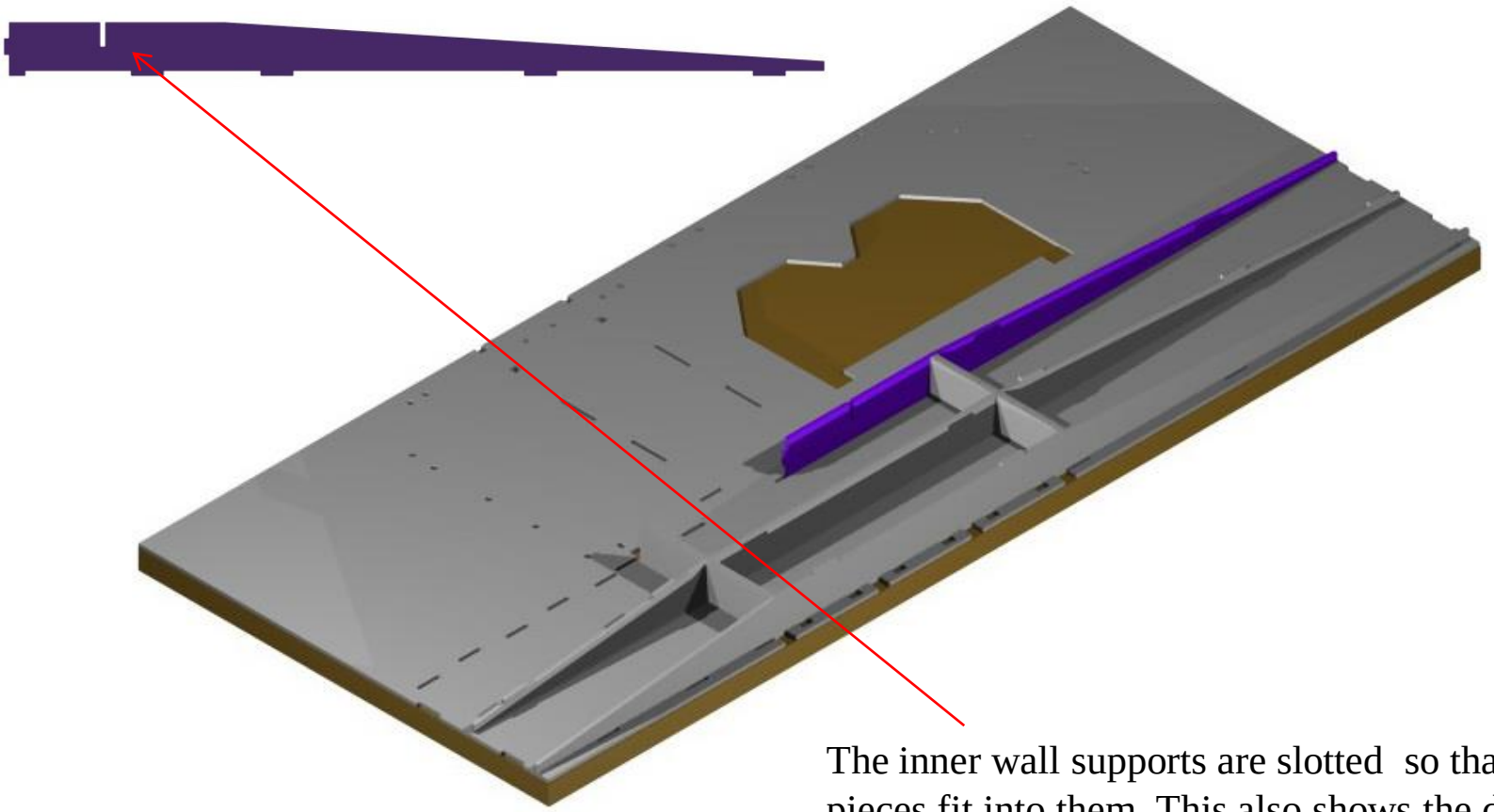
The outer ramp supports are located next, and the long and short sections tab together and share the same slot in the base. Note that the outer ramp supports have a tab at the top while the inner ramp supports have a slot in them.

The Silo Base - Step 8



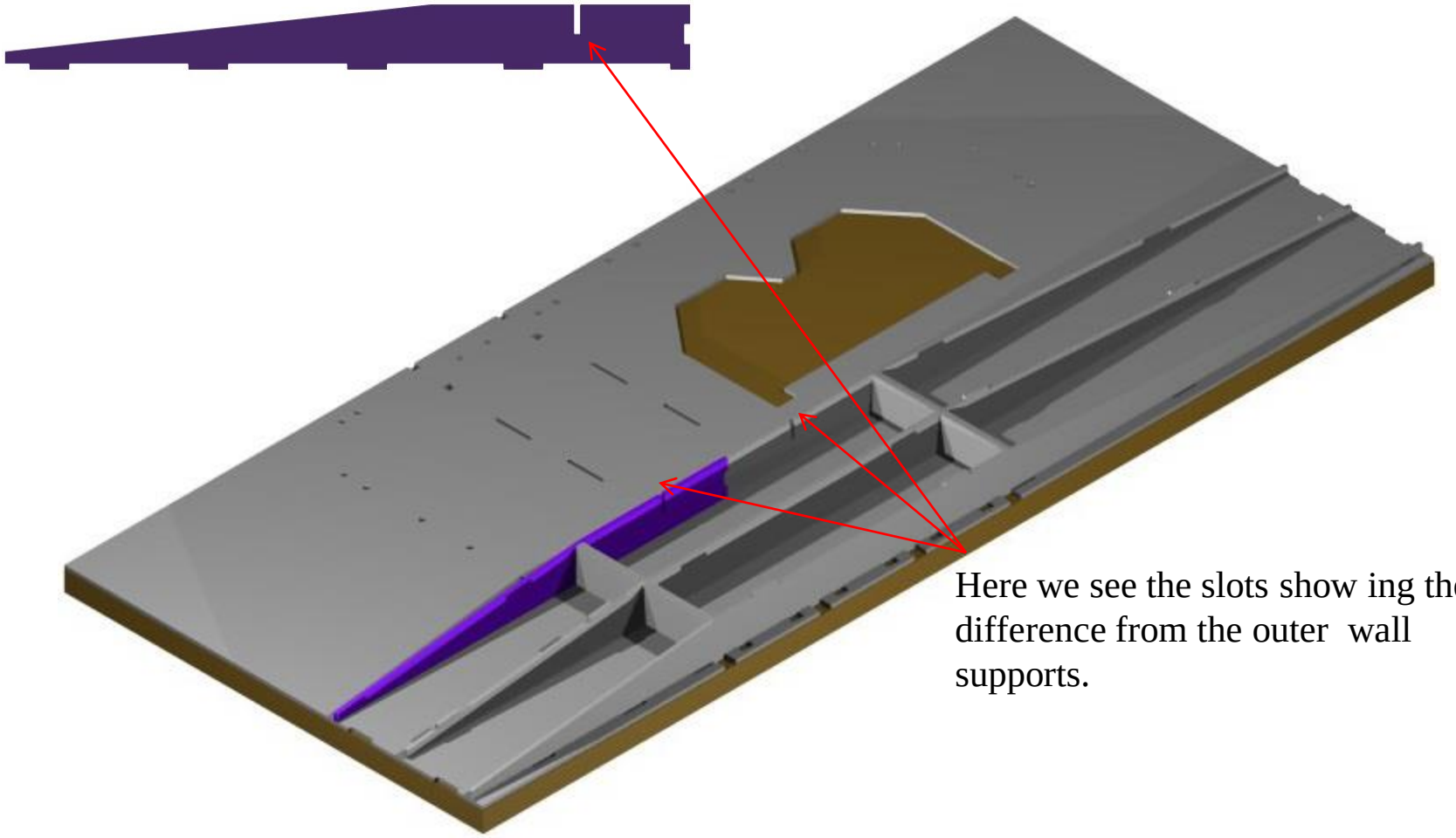
Notice the two pieces are tabbed on top and are male –female fitted at the joint so as to ensure the correct parts go into the correct positions. Again make sure that all the parts fit into the respective slots before gluing. **If parts are too tight, just file them back until they fit neatly**.

The Silo Base - Step 9



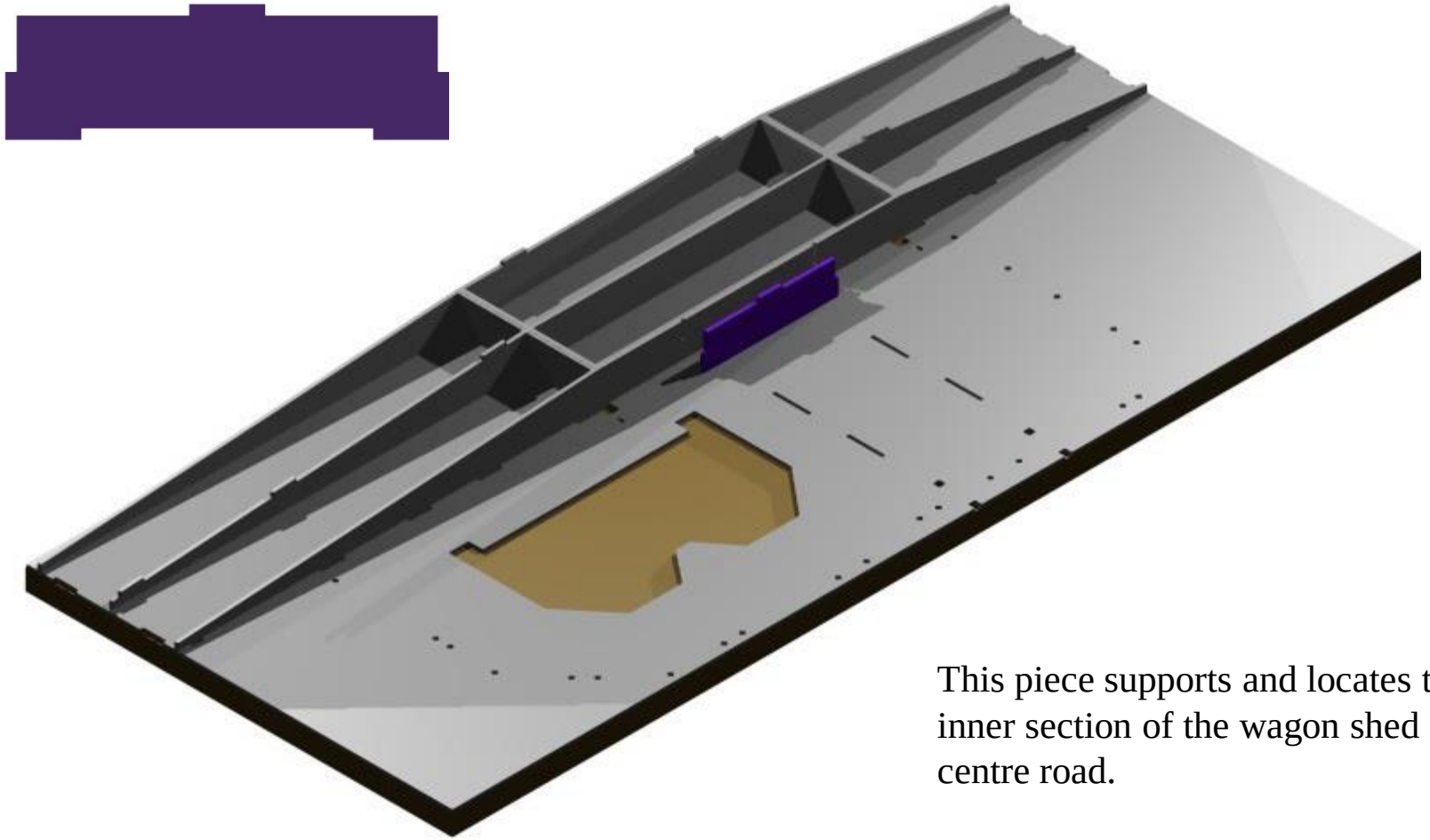
The inner wall supports are slotted so that other pieces fit into them. This also shows the difference from the outer wall supports.

The Silo Base - Step 10



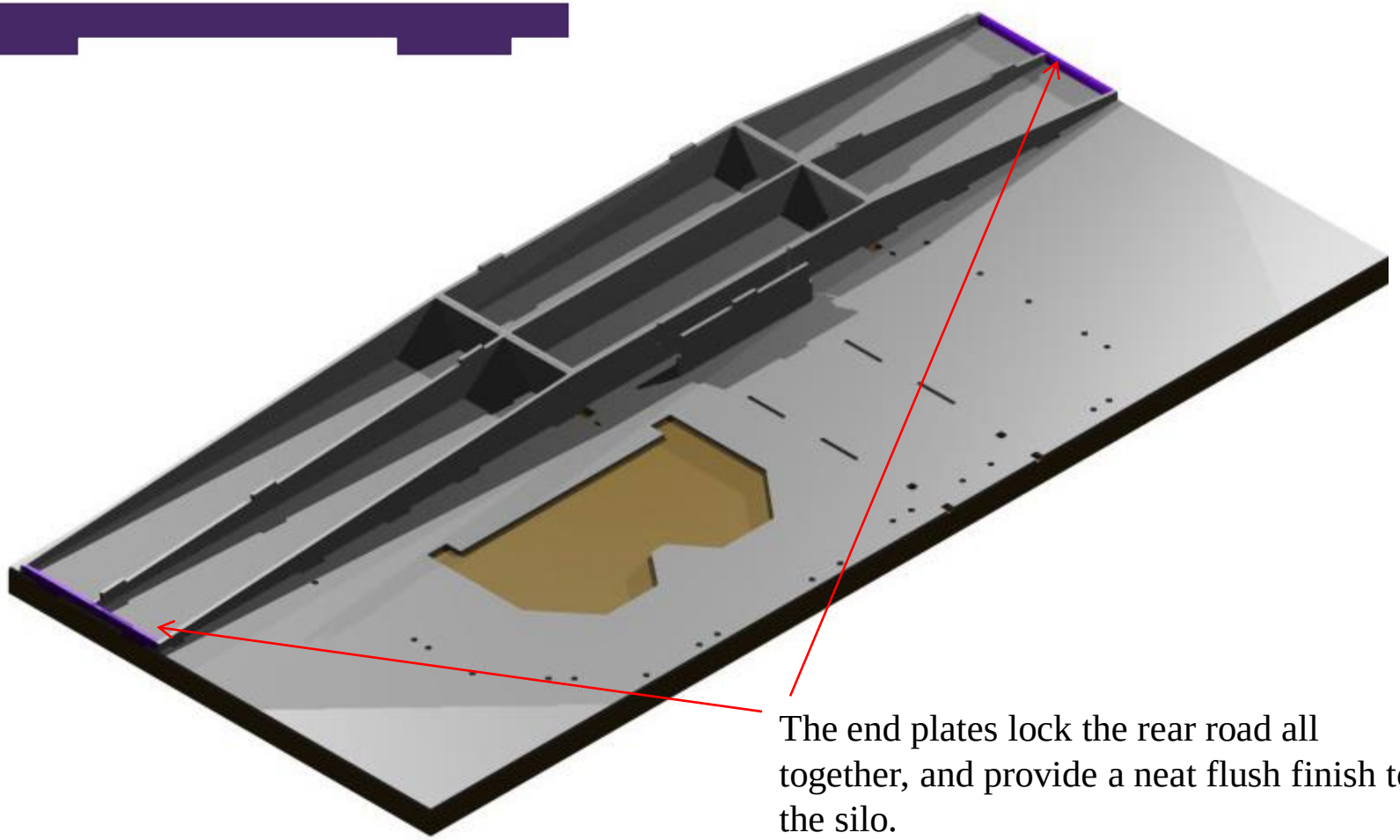
Here we see the slots show ing the difference from the outer wall supports.

The Silo Base - Step 11



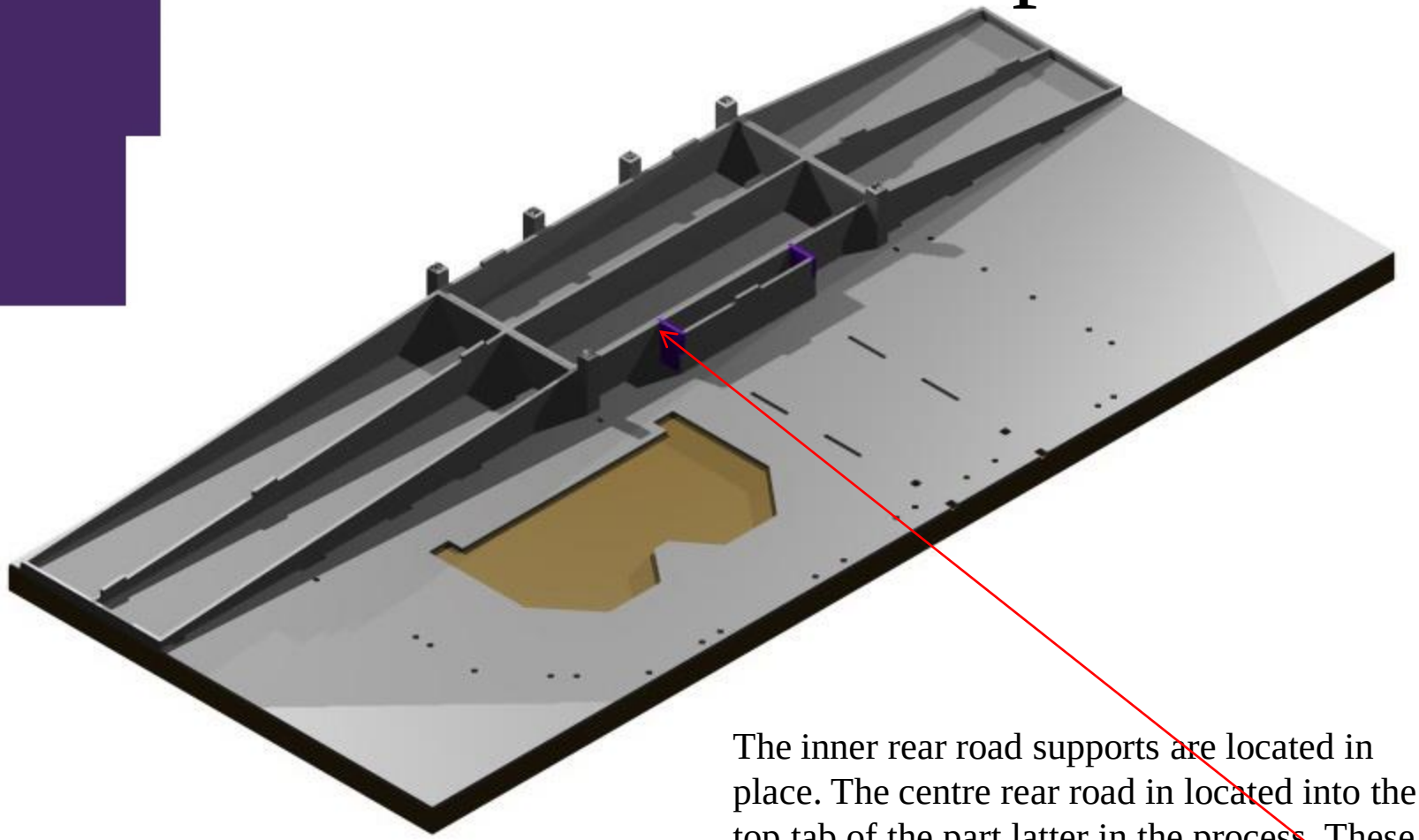
This piece supports and locates the inner section of the wagon shed centre road.

The Silo Base - Step 12



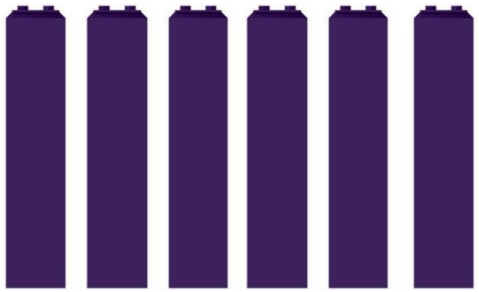
The end plates lock the rear road all together, and provide a neat flush finish to the silo.

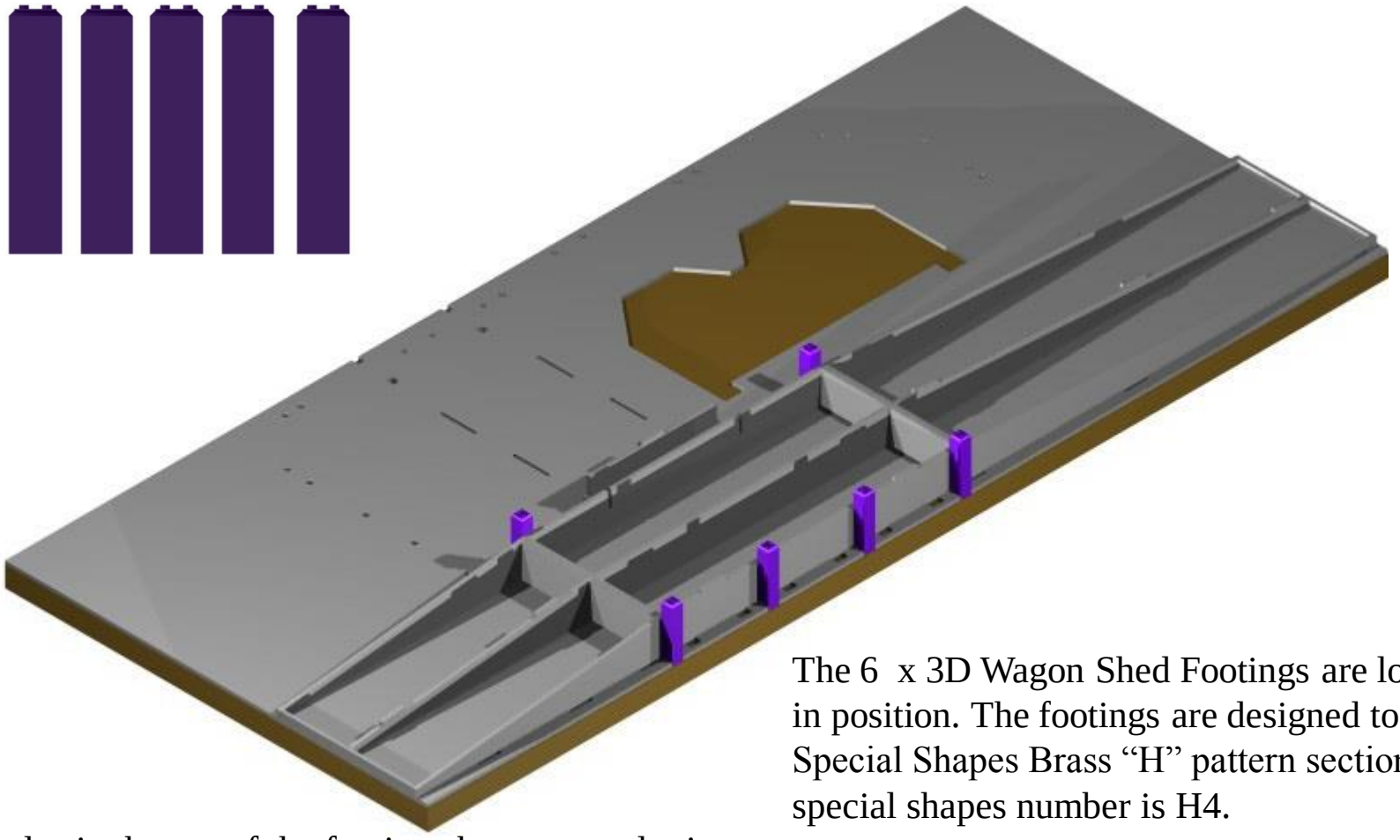
The Silo Base - Step 13



The inner rear road supports are located in place. The centre rear road in located into the top tab of the part latter in the process. These pieces are the ones that fit into the slots previously mentioned.

The Silo Base - Step 14

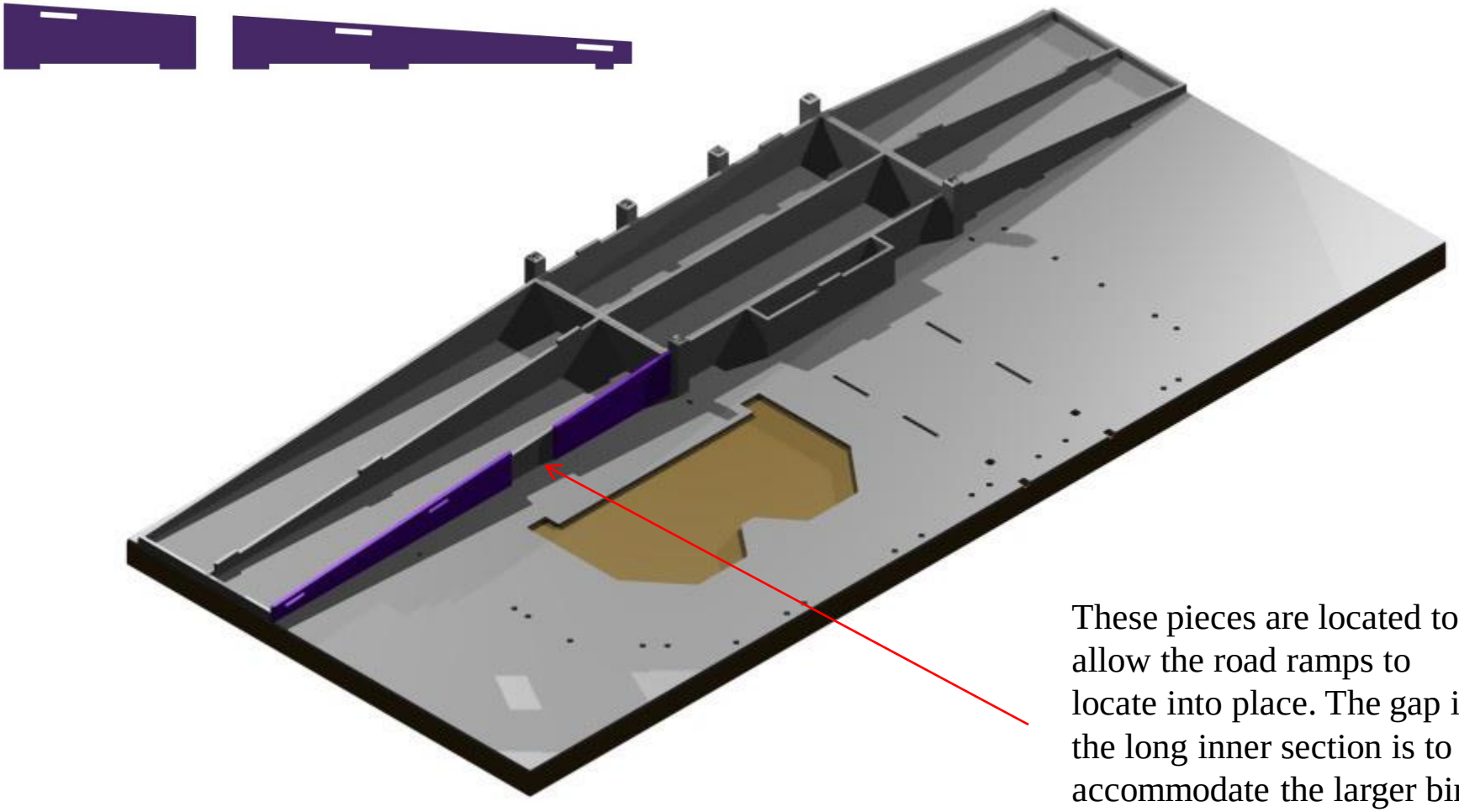




The 6 x 3D Wagon Shed Footings are located in position. The footings are designed to accept Special Shapes Brass “H” pattern section. The special shapes number is H4.

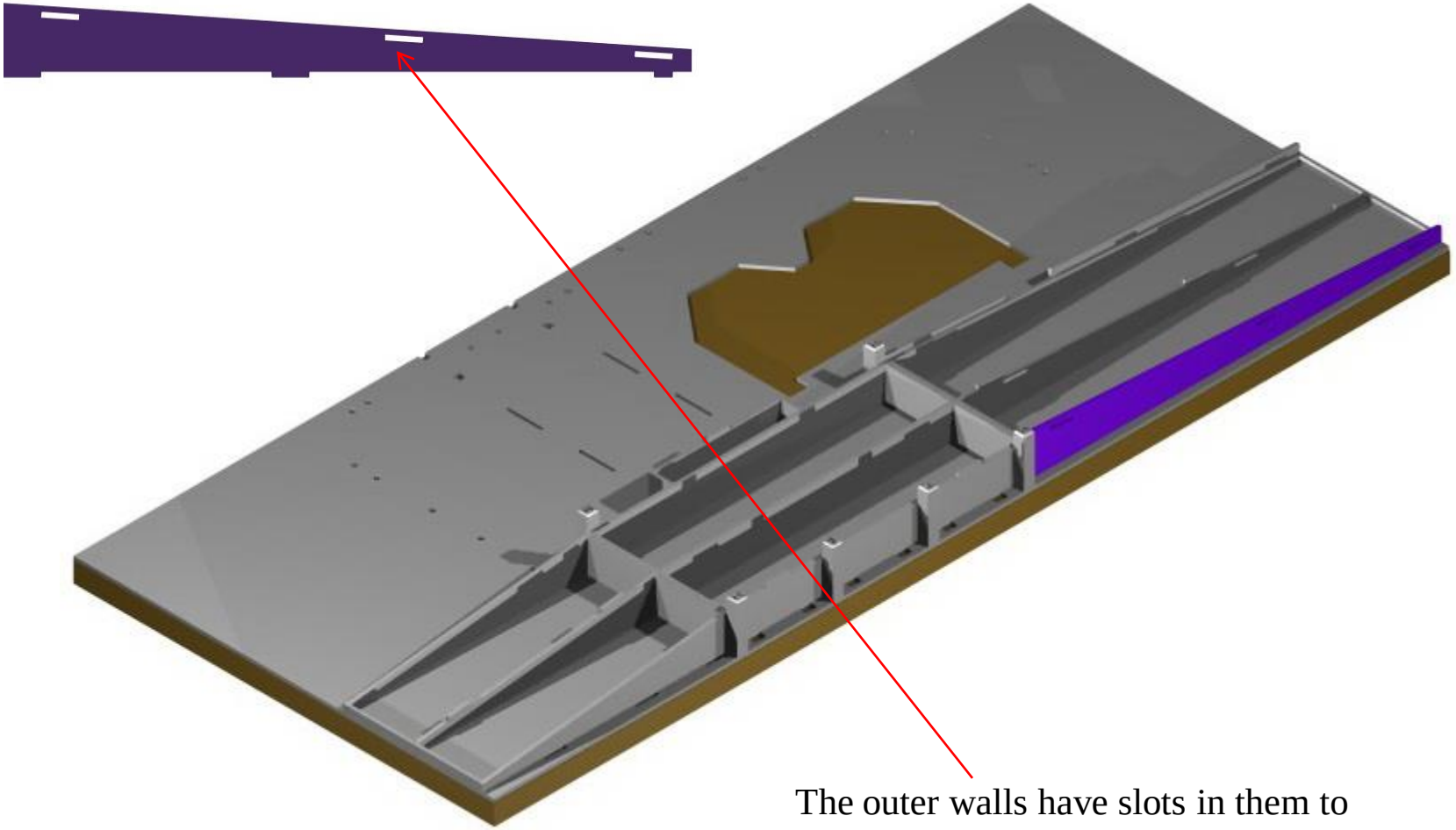
The holes in the top of the footings have a powder in them from the 3D process, and it needs to be removed before installing them. This is so that the H Beam can be fitted into the footing. Use a small drill or thin pin to dig out the powder.

The Silo Base - Step 15



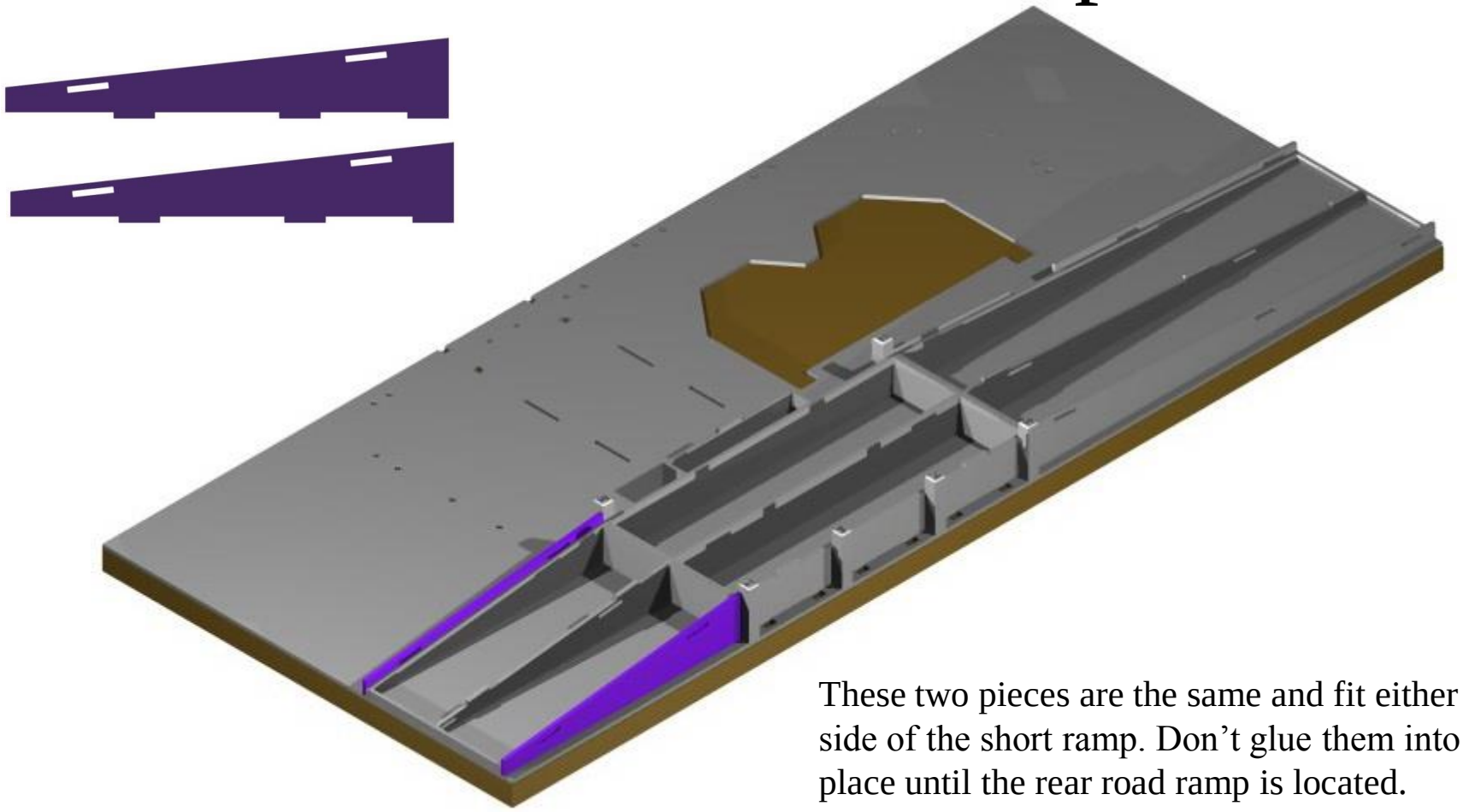
These pieces are located to allow the road ramps to locate into place. The gap in the long inner section is to accommodate the larger bin, when it is finally fitted.

The Silo Base - Step 16



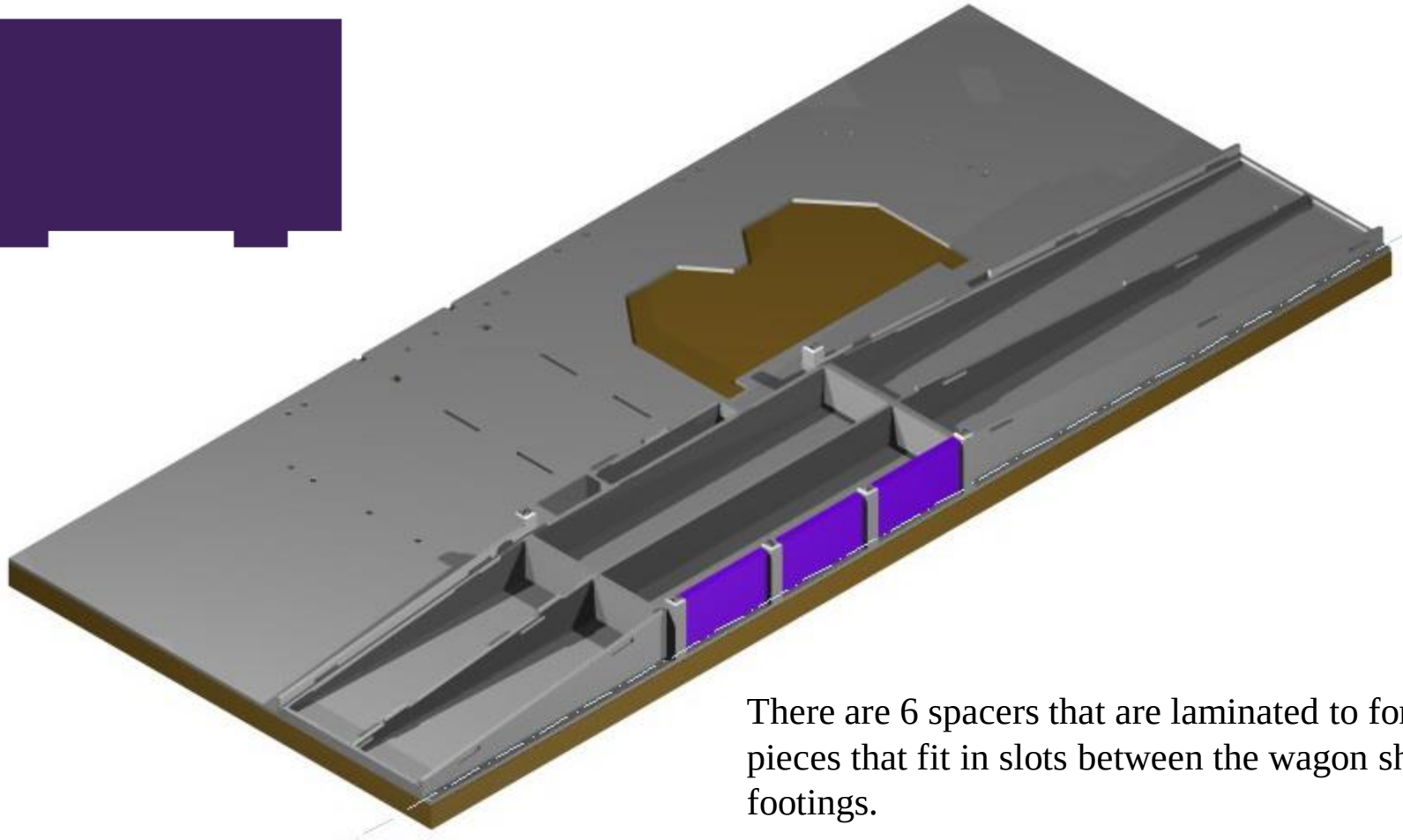
The outer walls have slots in them to accommodate the rear road ramps. Do not glue them in place yet, as the rear road sections will need to fit into them.

The Silo Base - Step 17



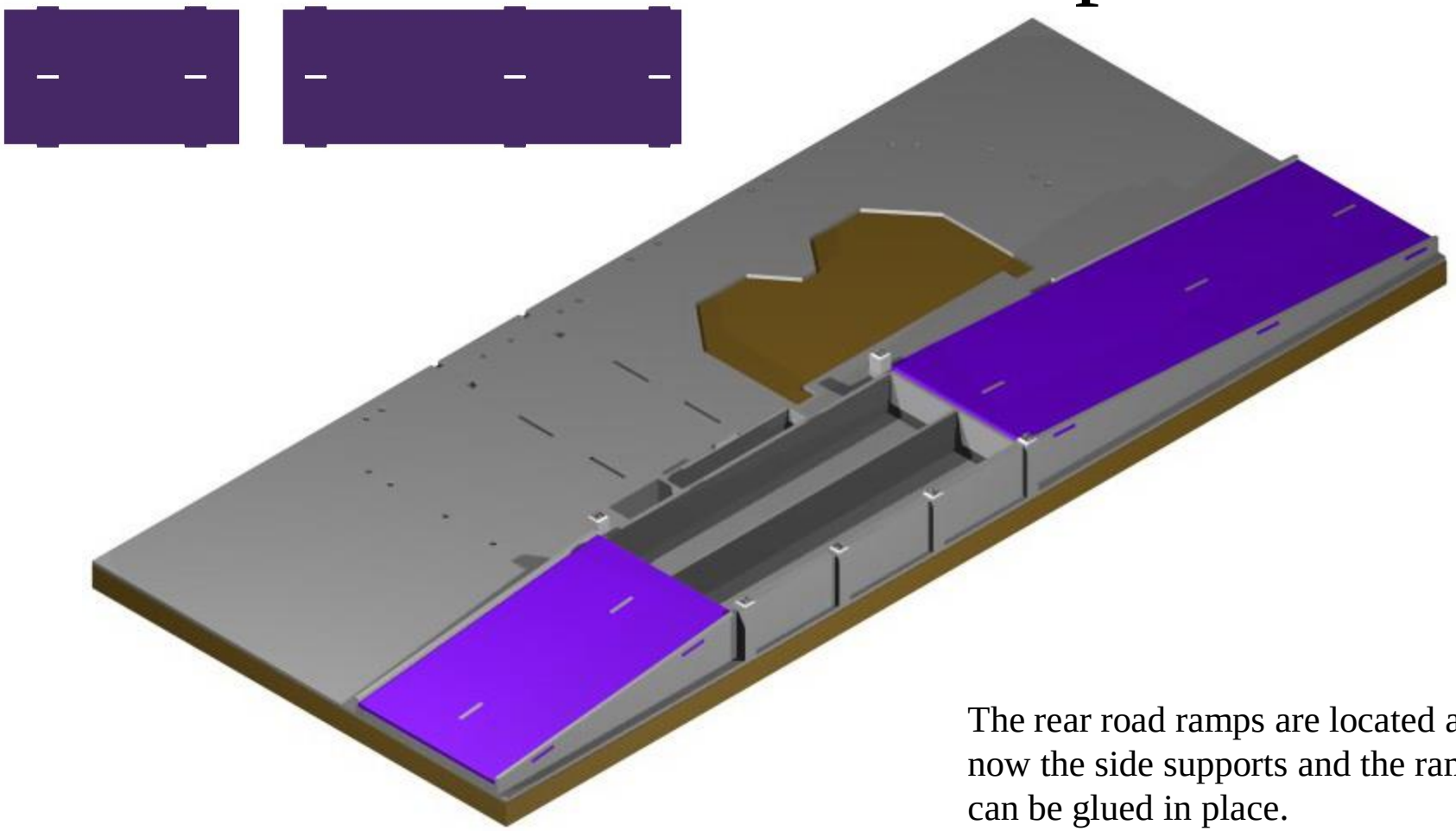
These two pieces are the same and fit either side of the short ramp. Don’t glue them into place until the rear road ramp is located.

The Silo Base - Step 18



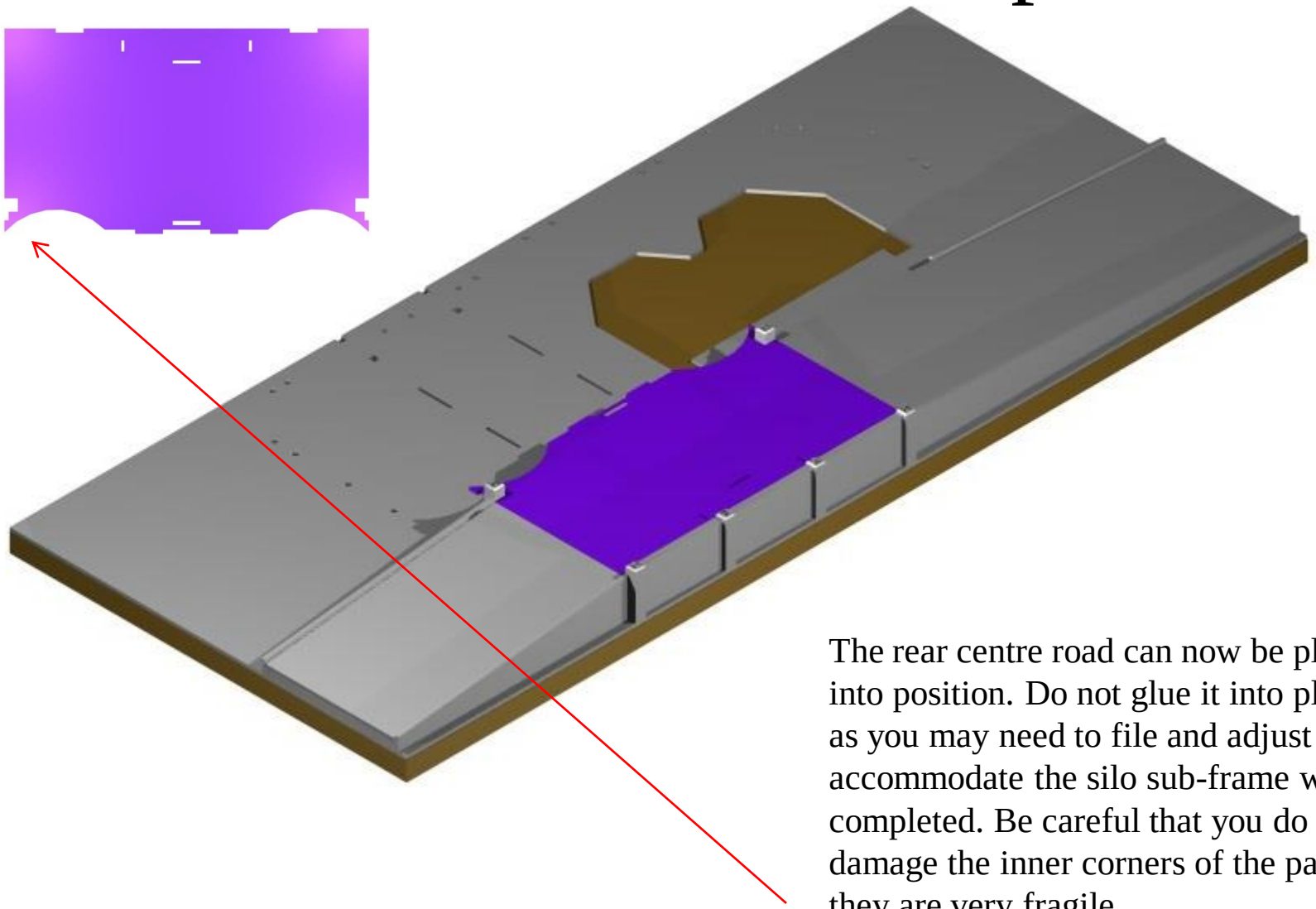
There are 6 spacers that are laminated to form 3 pieces that fit in slots between the wagon shed footings.

The Silo Base - Step 19



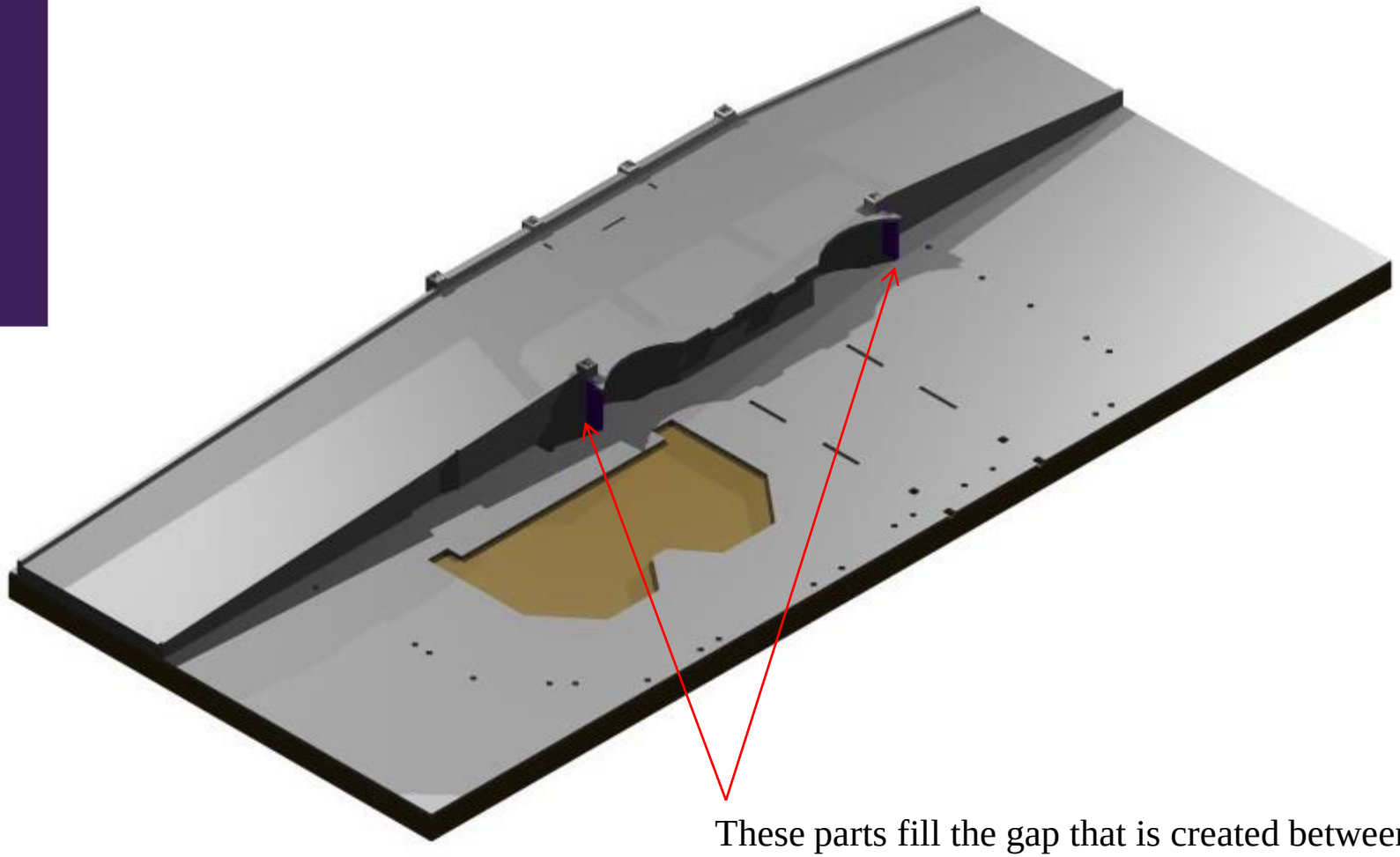
The rear road ramps are located and now the side supports and the ramps can be glued in place.

The Silo Base - Step 20



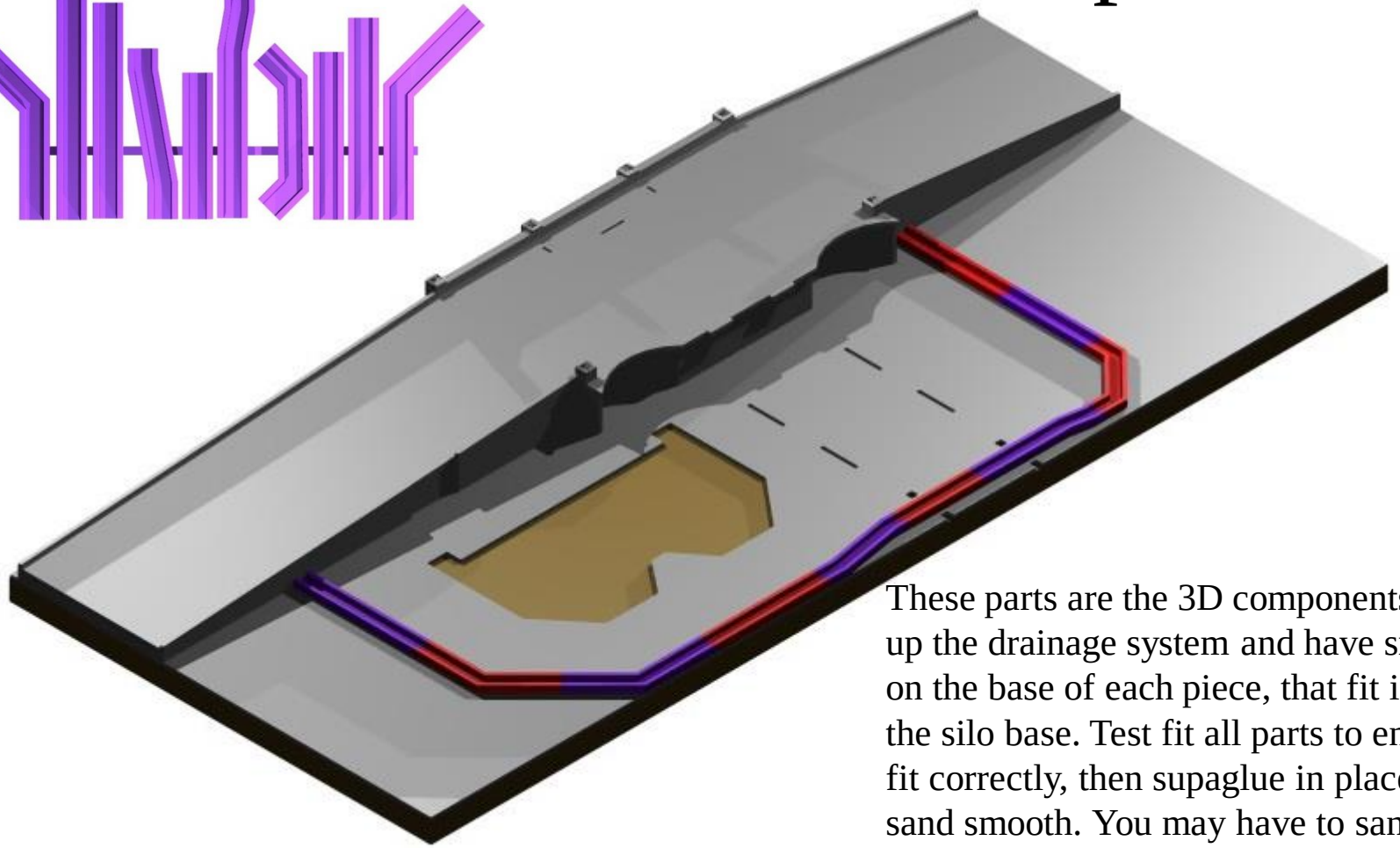
The rear centre road can now be placed into position. Do not glue it into place yet as you may need to file and adjust it to accommodate the silo sub-frame when it is completed. Be careful that you do not damage the inner corners of the part as they are very fragile.

The Silo Base - Step 21



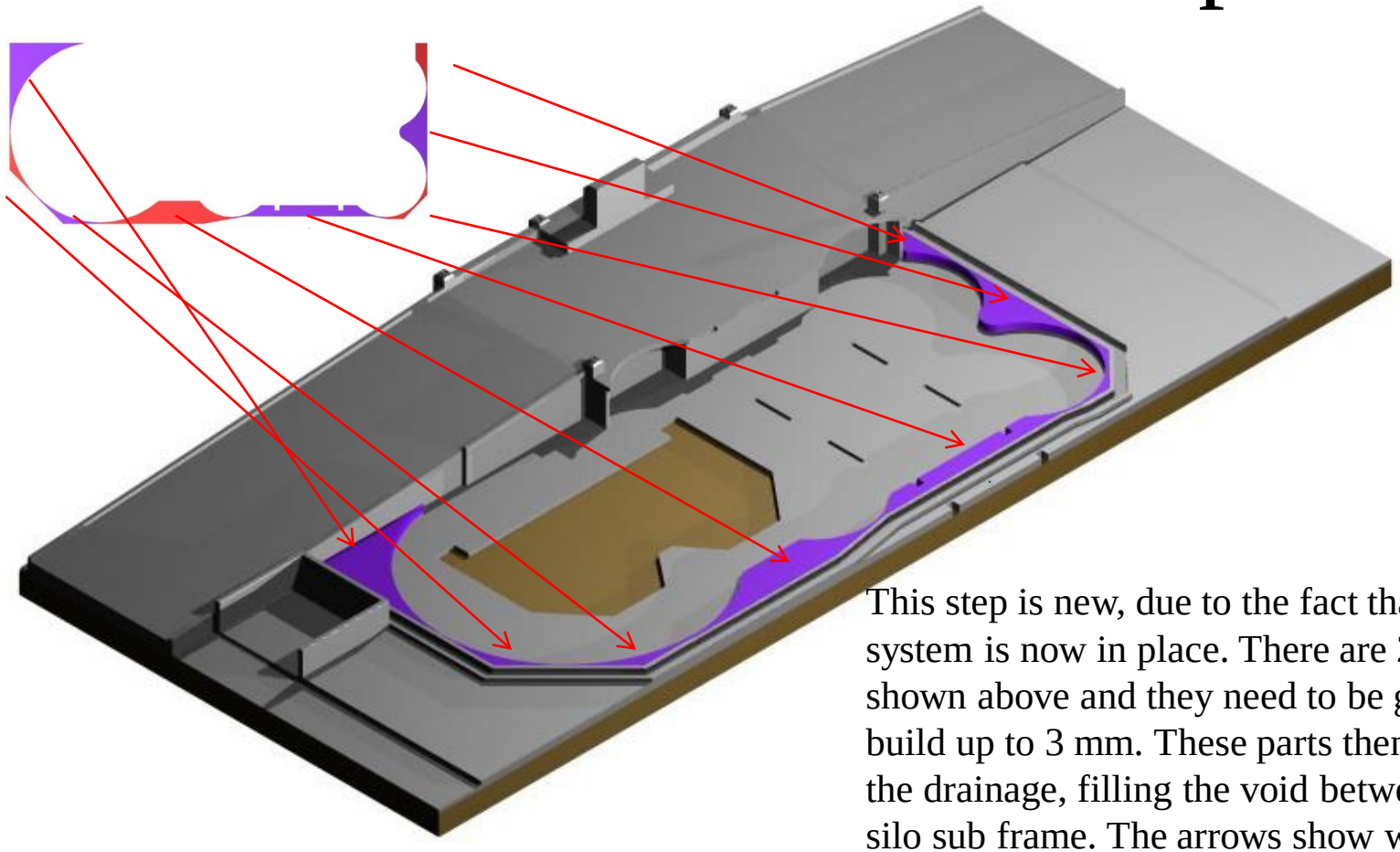
These parts fill the gap that is created between the silo sub frame and the rear road and can be glued into place after they are checked for fit.

The Silo Base - Step 22



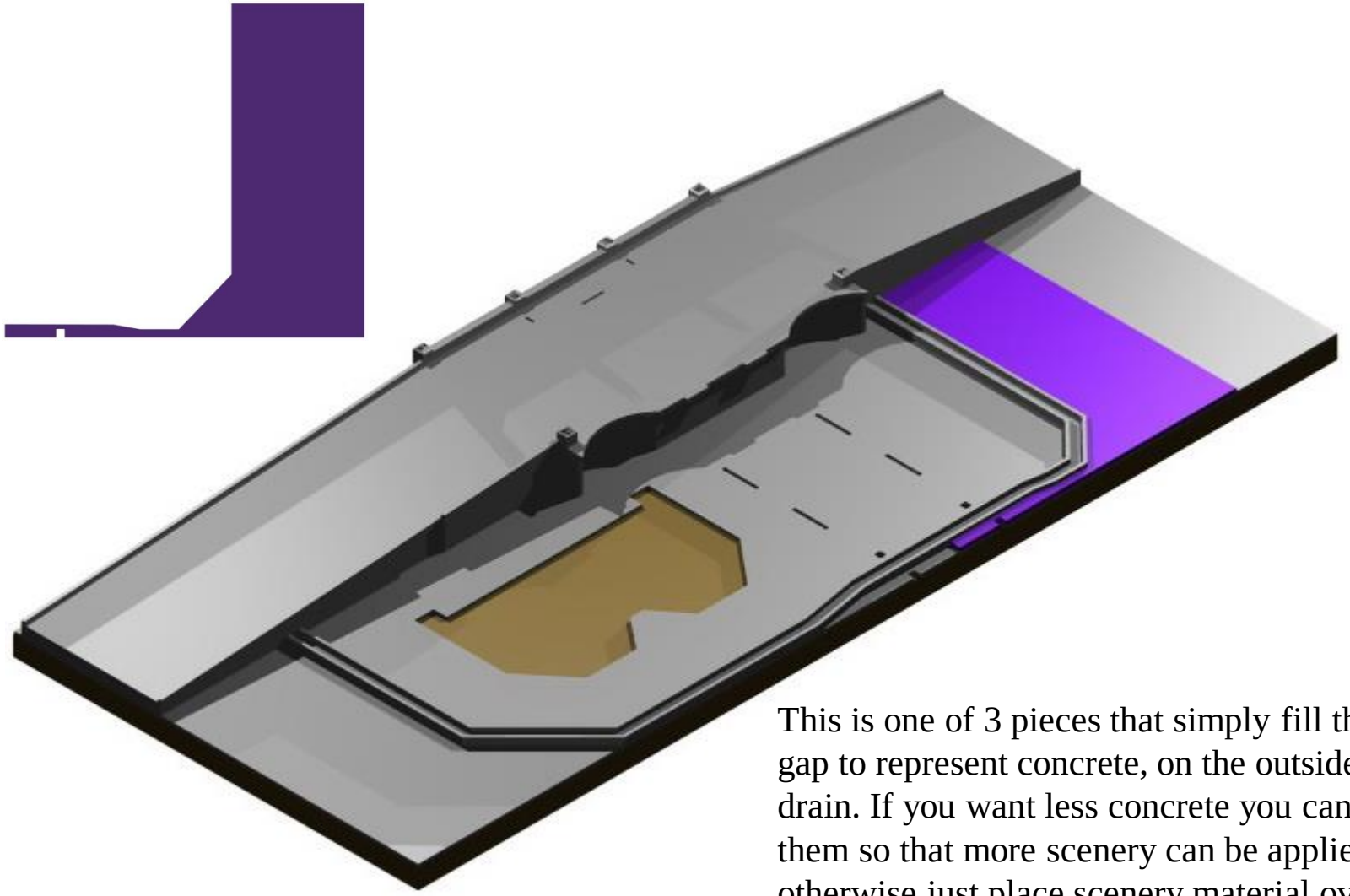
These parts are the 3D components that make up the drainage system and have small squares on the base of each piece, that fit into holes in the silo base. Test fit all parts to ensure that they fit correctly, then supaglue in place, fill and sand smooth. You may have to sand the ends slightly, if they are tight where they join together. Ensure that the drainage pieces all line up straight, if they don't, you may need to file or sand the small squares on their base.

The Silo Base - Step 23



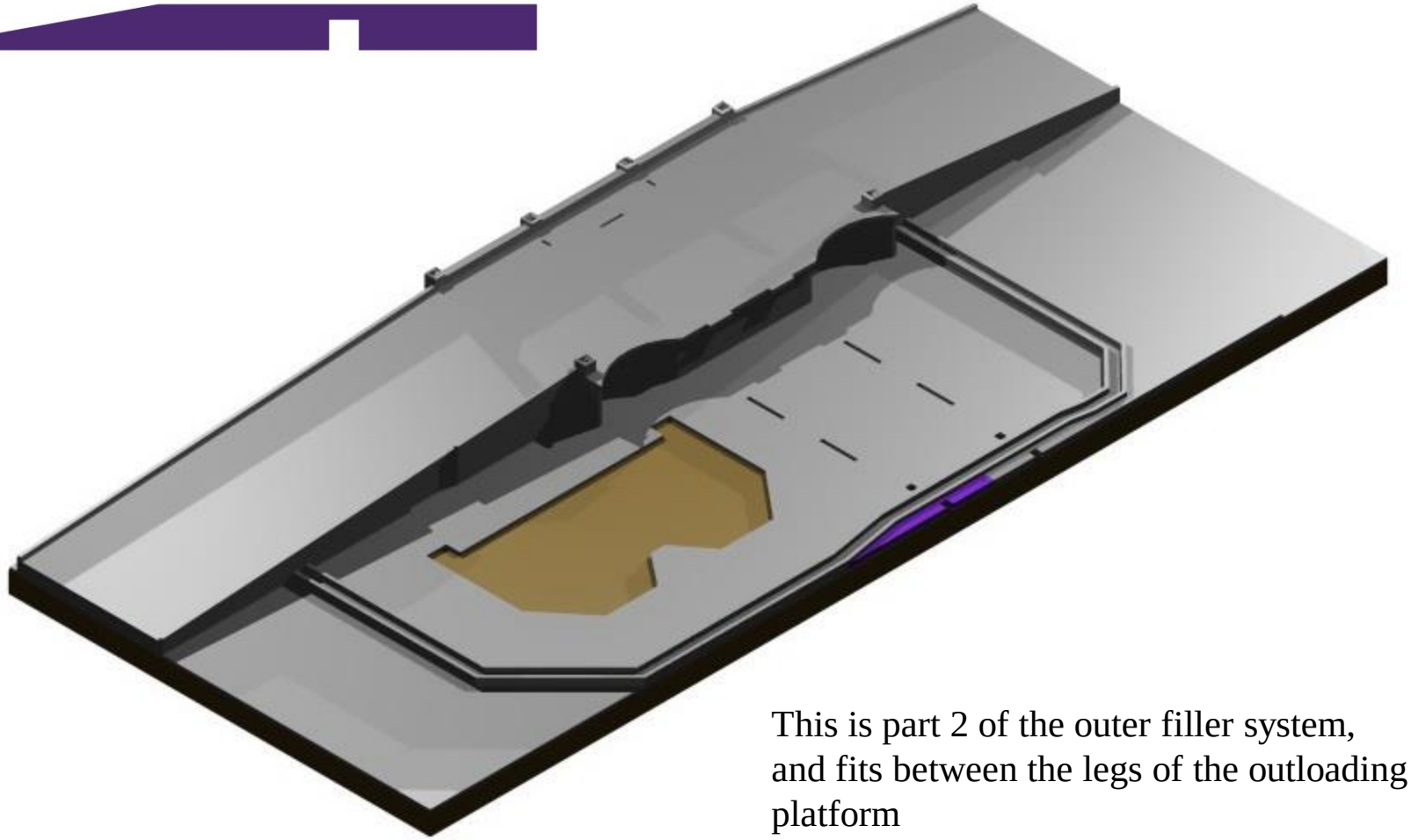
This step is new, due to the fact that the 3D drainage system is now in place. There are 2 of each parts shown above and they need to be glued together to build up to 3 mm. These parts then are located inside the drainage, filling the void between the drain and the silo sub frame. The arrows show where the parts fit and you will need to test fit and file or sand each section to fit. Use the silo sub frame when completed to check for a good fit. The sub frame should fit snug but easily. When happy with the fit, use filler to fill and sand smooth.

The Silo Base - Step 24



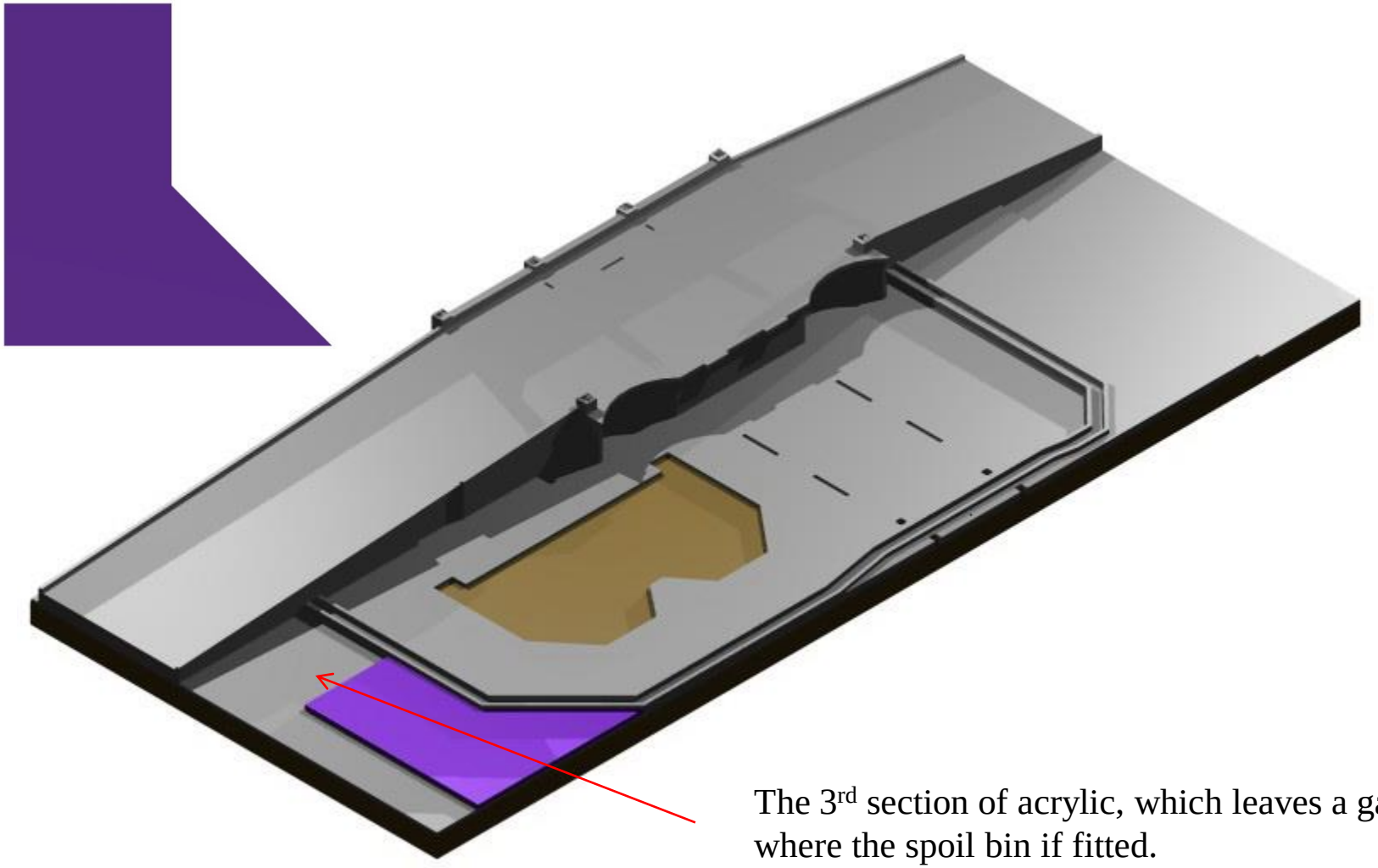
This is one of 3 pieces that simply fill the outer gap to represent concrete, on the outside of the drain. If you want less concrete you can trim them so that more scenery can be applied, otherwise just place scenery material over the acrylic.

The Silo Base - Step 25



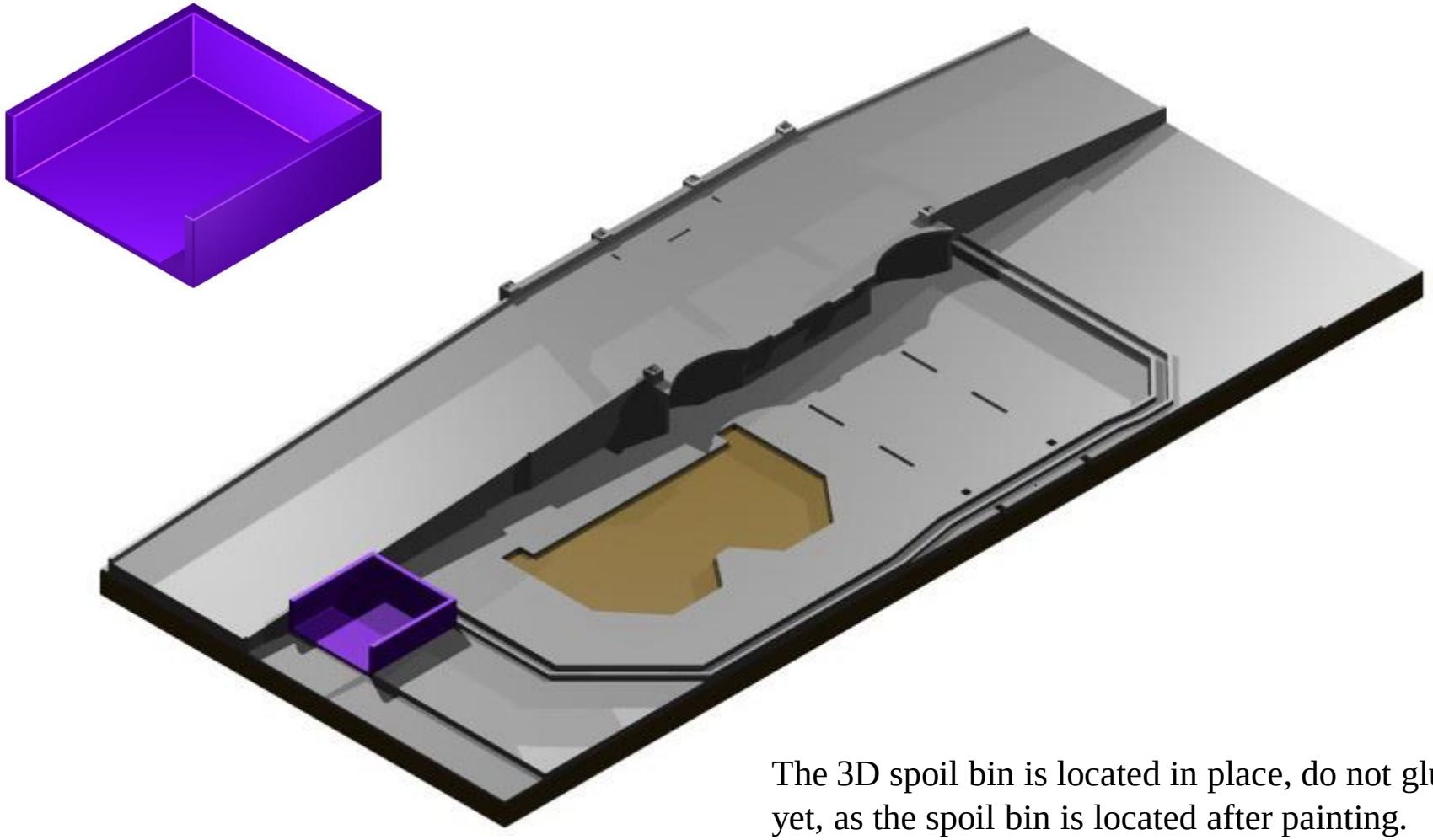
This is part 2 of the outer filler system, and fits between the legs of the outloading platform

The Silo Base - Step 26



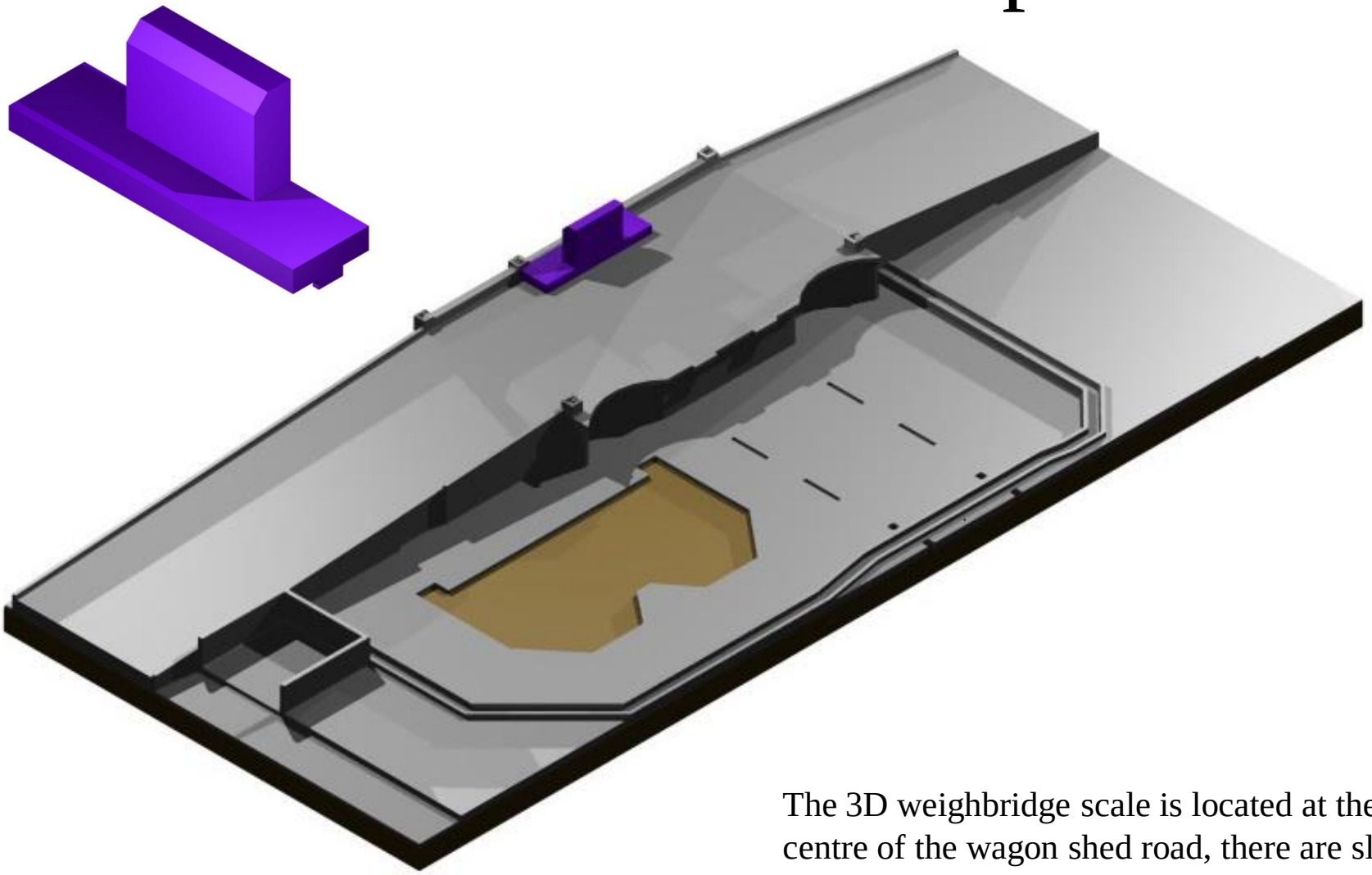
The 3rd section of acrylic, which leaves a gap where the spoil bin if fitted.

The Silo Base - Step 27



The 3D spoil bin is located in place, do not glue yet, as the spoil bin is located after painting. Just make sure it fits, and adjust as necessary.

The Silo Base - Step 28

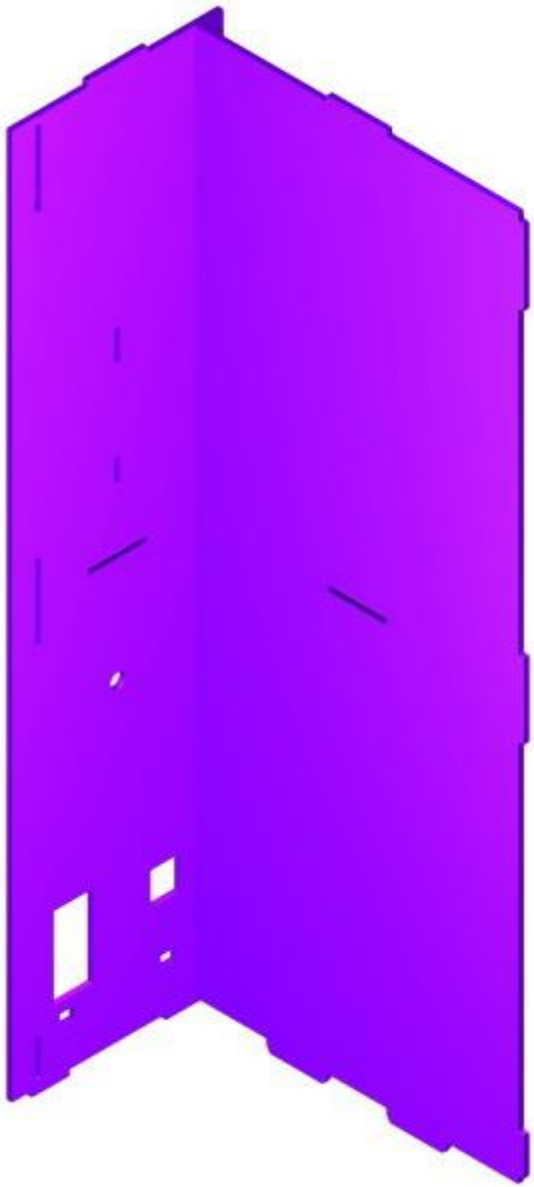


The 3D weighbridge scale is located at the rear centre of the wagon shed road, there are slots in the road to locate it. Do not fit at this stage, but fit and paint when silo nearly complete

So Far, So Good!!!!!!

- Now if you have got this far without any problems, the hard bit is done - only kidding there are plenty of hard bits to go (joking).
- The base is now all glued together (there is more work to be done on it - but more about that later) and can be set aside to dry, while you proceed with the next sub assembly ---- the Silo Sub-Frame.
- There has been a change from the original S008 silo kit, which makes the silo sub frame and roof much easier to construct.
- The top plate now has slots cut out of it at the short end to accommodate the short roof supports. This make it a simple matter of straight forward construction of the sub-frame.
- The only problem that you may encounter is possible dipping of the top plate in the larger bin. If this dipping or sinking occurs, you will need to adjust the roof end supports to accommodate, so that the roof section end up square and level.
- Another hint I would advise is to drill the top and base of the silo bins through the acrylic, using a 1mm drill and insert 3 x 1mm sections of wire into the bins (both top and bottom) through the acrylic to assist in giving the bins a more permanent location. You can then flood the joints with glue and allow to dry.

Silo Sub Frame - Step 1

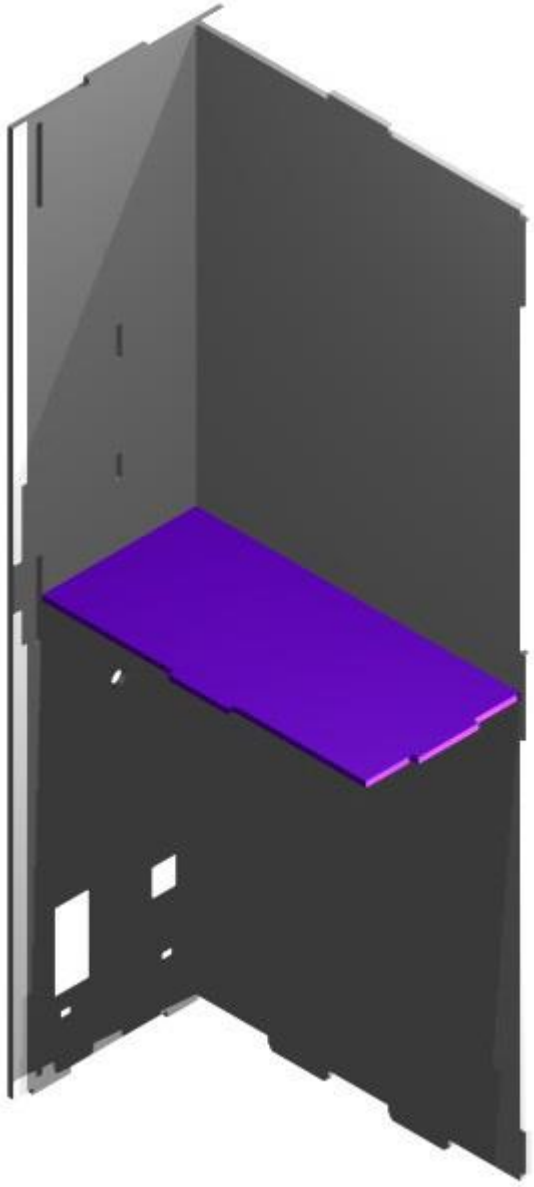


Please test fit all of the panels before gluing together. When you are happy with the fit, you can then proceed.

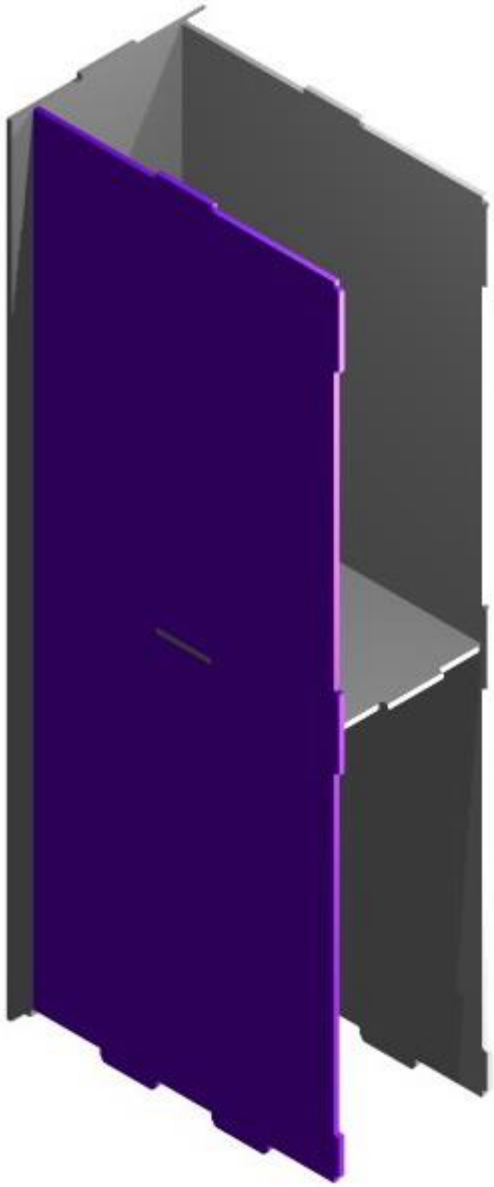
The front panel and one side panel are fitted and glued. The centre brace is then glued in place.

Note that the side panels can only be fitted one way as the bottom tabs are smaller. However the front panel can be reversed, so be careful.

Ensure that all parts sit absolutely flush , and run glue between parts allowing capillar action to work the glue into the joints, when the sub frame is complete.



Silo Sub Frame - Step 2



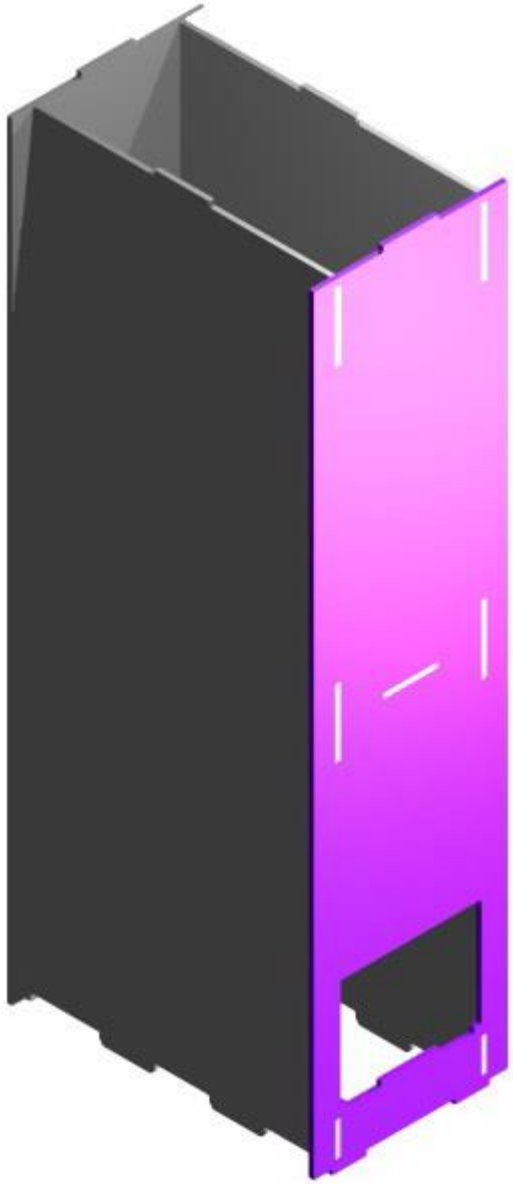
The other side panel is located and then the back panel.

When you have all of the parts in place, use elastic bands to hold the sub frame together, and run glue between the joints.

Do not allow glue to touch the elastic bands.

Set aside to dry before proceeding.

NOTE that this completed frame has to be joined to the top and bottom plate of the substructure in the correct orientation, more about this next.



Silo Sub Frame - Step 3

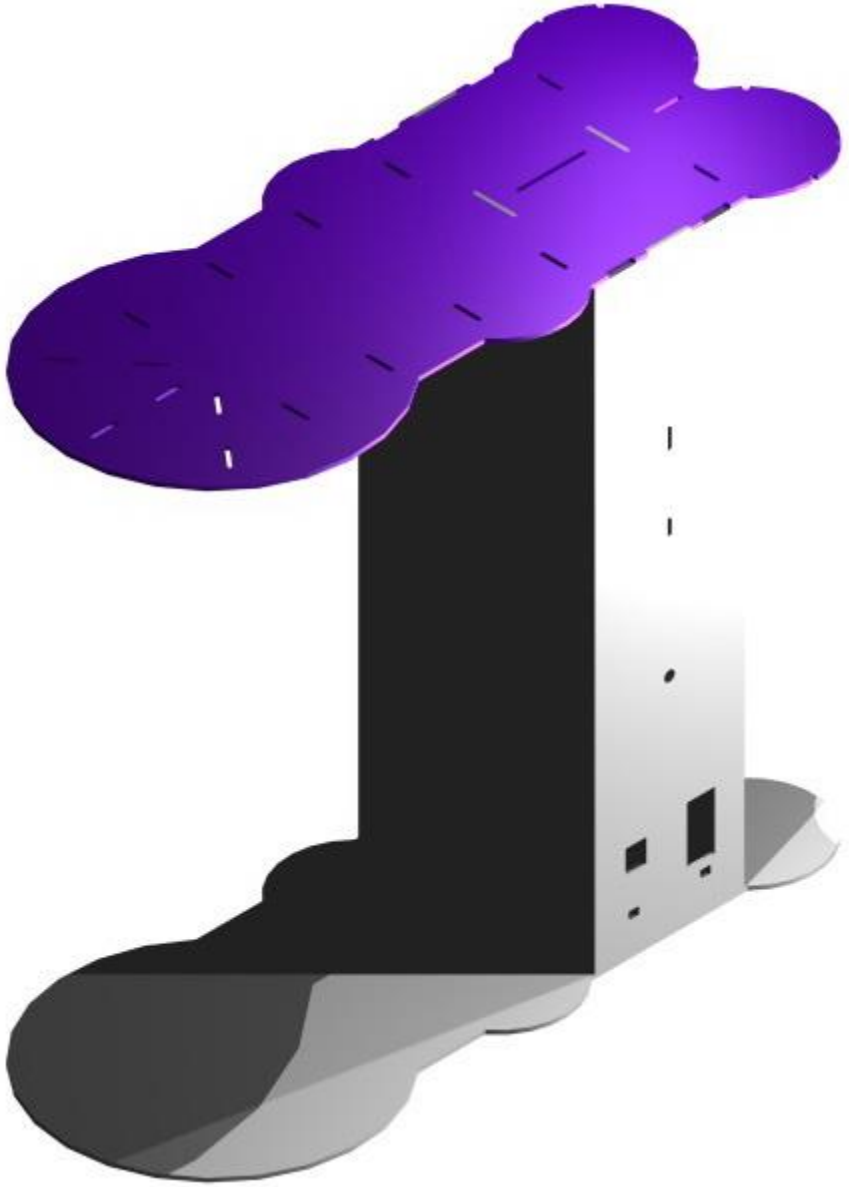
IMPORTANT

The base is fitted to the sub-frame in such a way that the door and vent opening (Front of Silo) is located with the large bin on the left side. Of all of the S016 silos in NSW, there is only one silo (Wargin) that has the large bin on the right side of the workhouse.

Test fit the bottom plate before fitting and clean up any slots and tabs that are tight.

The bottom tabs will protrude through the base of the silo to allow location of the sub-frame into the previously made base.

Silo Sub Frame - Step 4



Test fit the top plate before fitting and clean up any slots and tabs that are tight.

Check the fit of all the parts that will be located into the top plate before gluing it into place.

Be very careful how you handle the structure at this stage as the parts have no support at the large bin end and they can be easily broken by a simple over zealous push when trying to locate a stubborn tab.

Remember to treat it carefully. If it breaks the part can be butt glued, but it then becomes a much more difficult task to complete.

Silo Sub Frame - Step 5

The next step is to fit the small bins.

The 50mm electrical conduit should fit neatly to the outer edges of the top and bottom plates. If for some strange reason they don't, you can file a flat on the inside of the conduit to allow the conduit to sit back toward the middle of the silo.

If you have located the conduit into the correct location, and it is too tight - file it down. If it is too lose, you may need to pack it with thin styrene. (If anything the conduit should be tight)

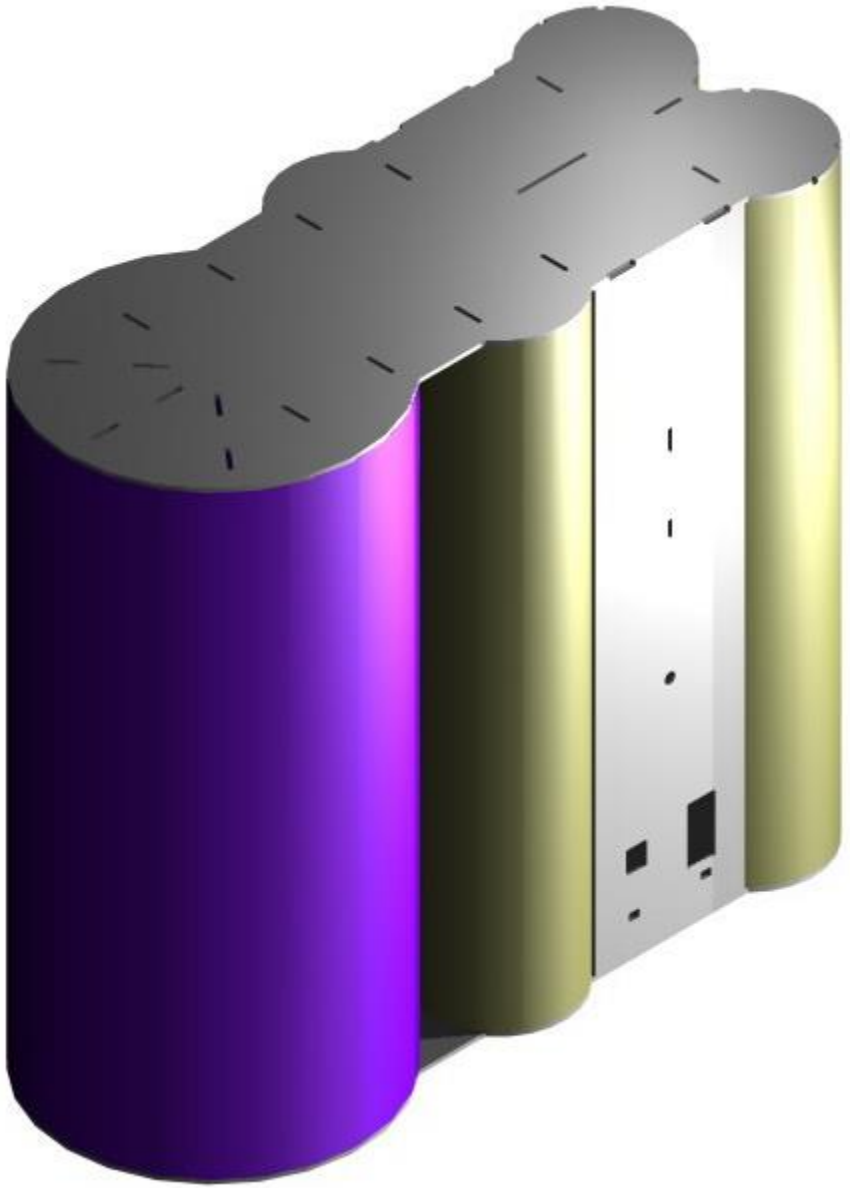
To provide an absolute location for the conduit, drill and fit 3 lengths of 1mm brass wire (approx. 6 mm into the conduit – centred in the wall of the conduit), both top and bottom then run the glue into the joint. Due this to all pieces of conduit.

Silo Sub Frame - Step 6

The same method applies to the location of the large bin. The 110mm sewer pipe supplied can be trimmed or adjusted with styrene if necessary.

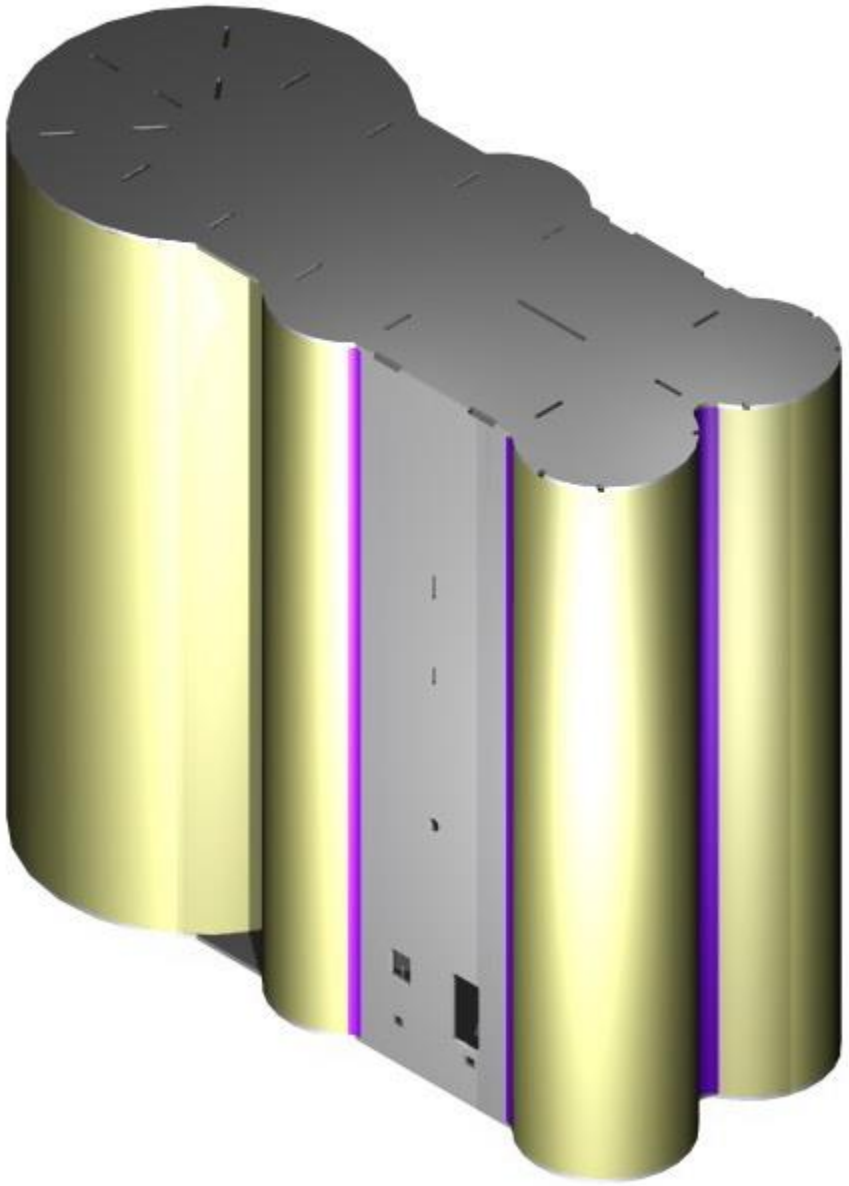
1mm wire can also be use to locate the conduit in place before flooding with glue. Remember to locate them both top and bottom.

When fitted and glued, file the 1mm wire down flush with the acrylic.



Silo Sub Frame - Step 7

The sub-structure now needs to have the joints filled and smoothed. This can be done with 2 part auto body filler, mixed in small batches, and applied with a 16 mm piece of conduit supplied with the kit, clean up the surface to ensure that the filler is laid on smoothly. The filled joint can be sanded smooth and coated with a final coat of Tamiya or your favorite filer. The joint between the bins at the large bin end, does not require filling, as it is not seen. You will also need to fill and sand the tabs showing through the front and rear silo faces.

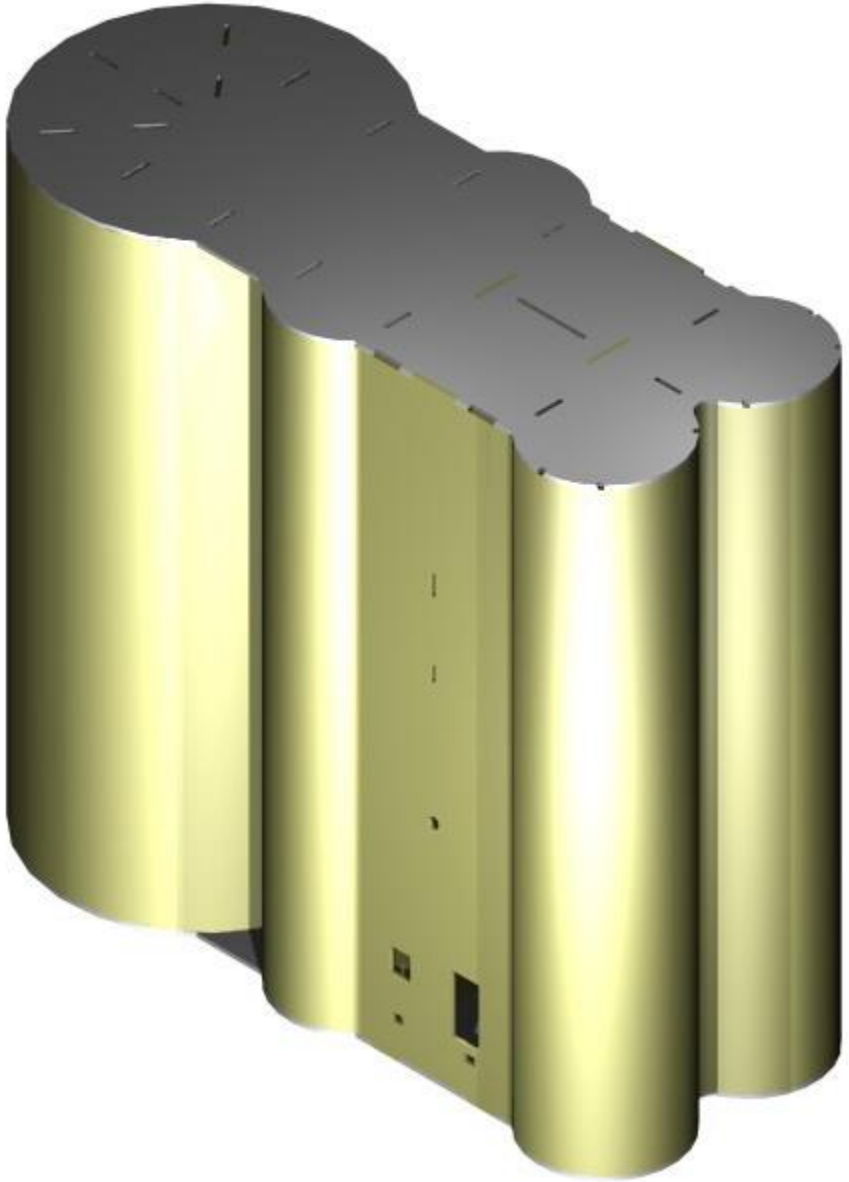


Silo Sub Frame - Step 7

The substructure now needs to have the holes for the doors and vents, located in place, and this really needs to be done with the use of photos, as each silo is slightly different, and this is one way of individualizing you silo. However you will need to know window, vent and door sizes, to ensure that the holes are the correct size for each opening.

When cutting the holes out of each bin, mark and name of each door/vent/window with a name so that they can be placed into the correct location when finished.

You can now use the sub frame to set and adjust the filler pieces inside the drain on the silo base.



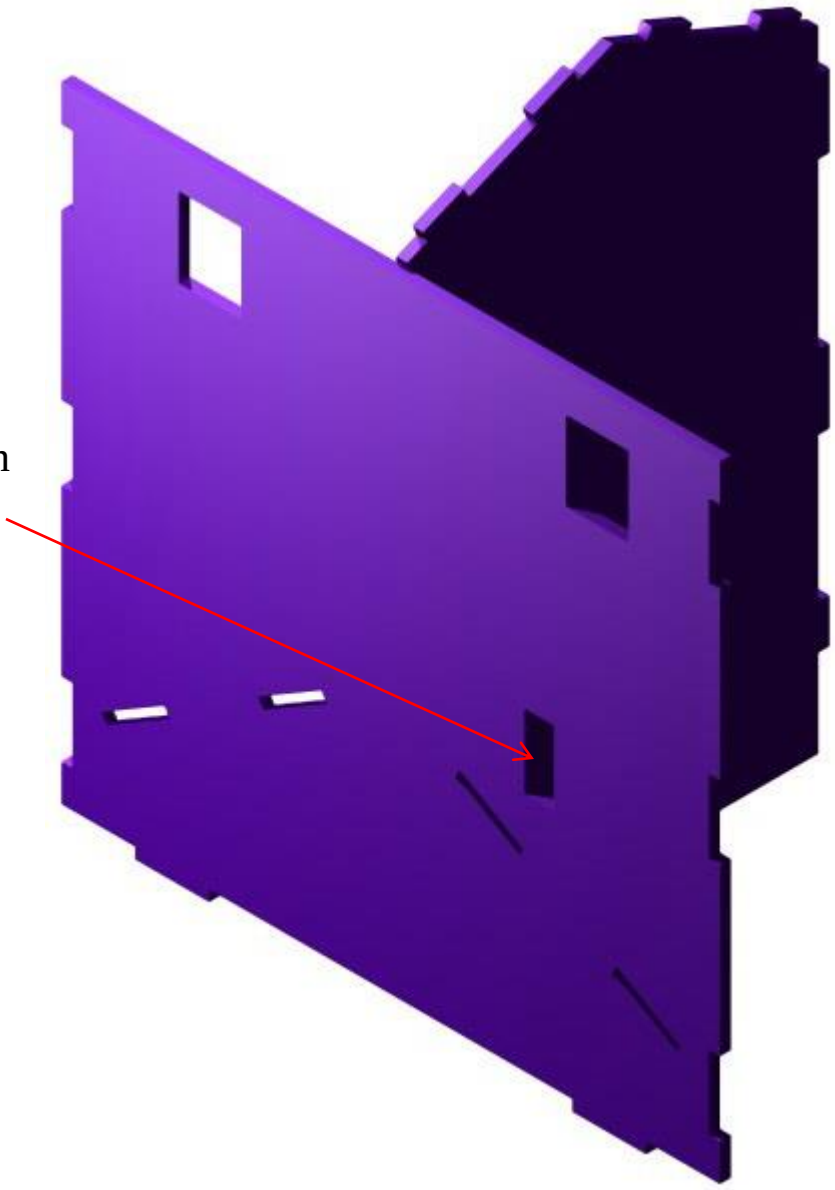
Onward, and upward

- The next step is the construction of the Cupola and Bin Roof.
- A fairly straightforward process, as we can continue the construction method by just adding parts to the parts we have already built
- Let’s proceed to the Cupola and Bin Roof
- Firstly the Cupola.

Silo Cupola - Step 1

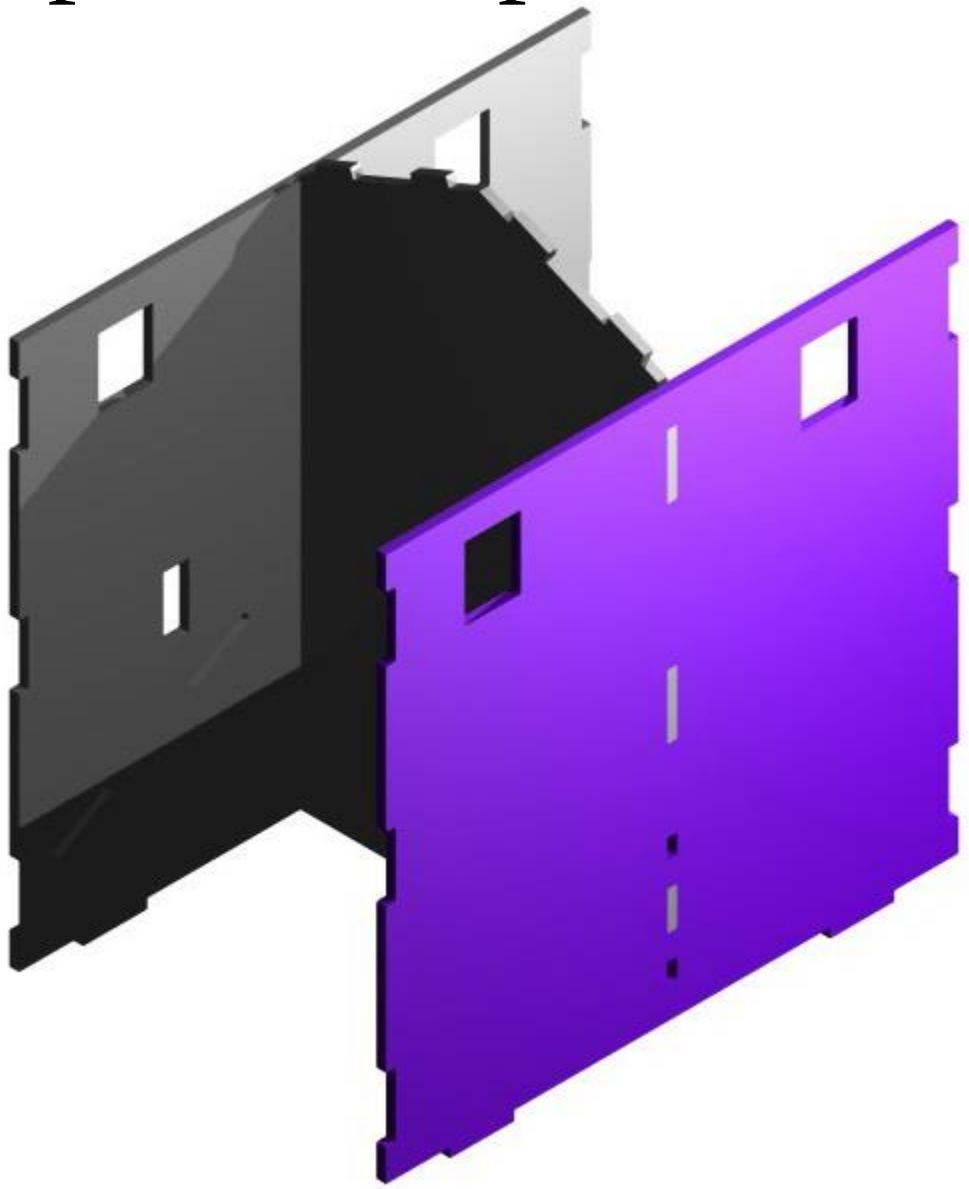
Please note.

The cutout for the pipe from cupola to large bin is located at the front of the silo. So make sure that the parts are orientated as per the diagram.



Silo Cupola - Step 2

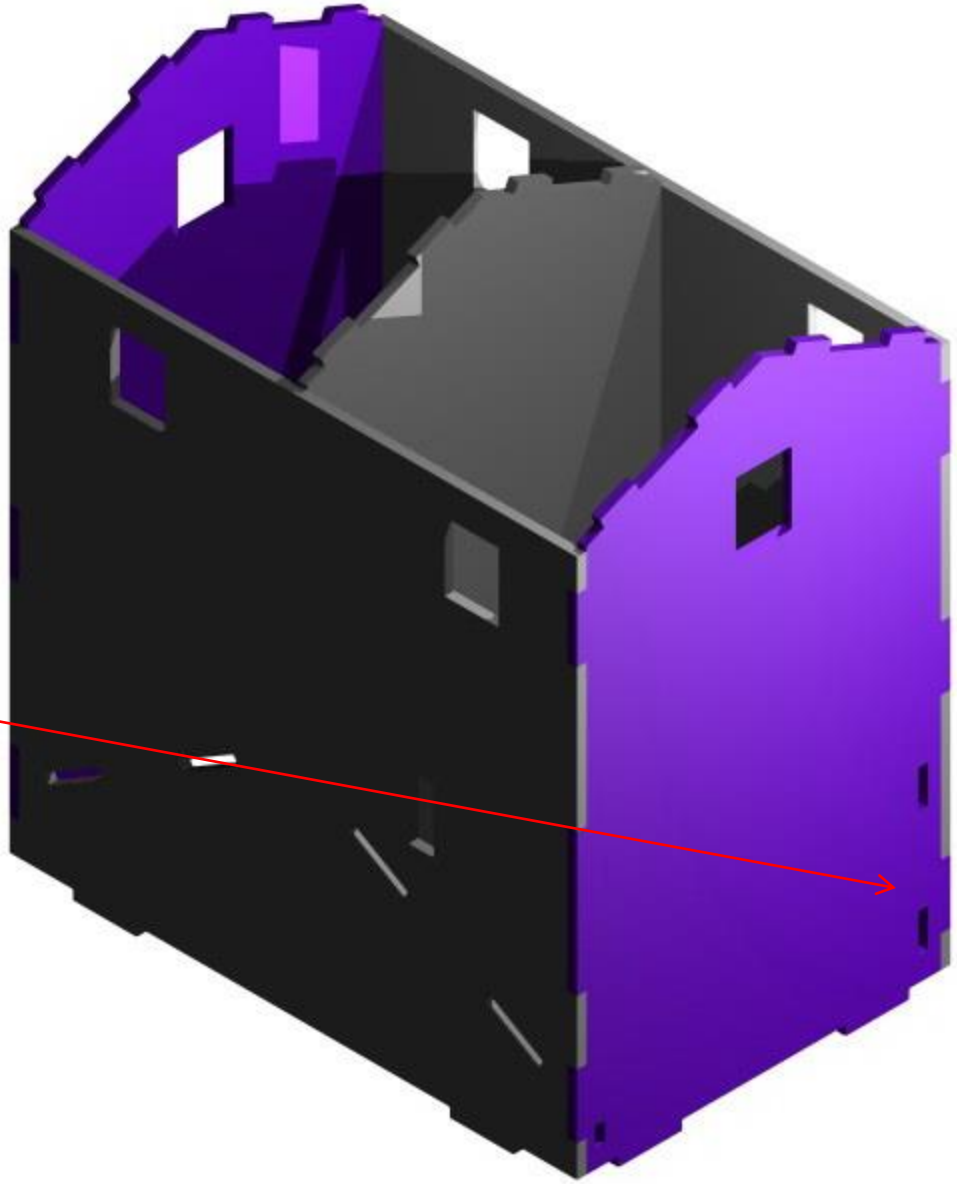
At this stage the structure is a little wobbly. But it will strengthen up in the next couple of steps.



Silo Cupola - Step 3

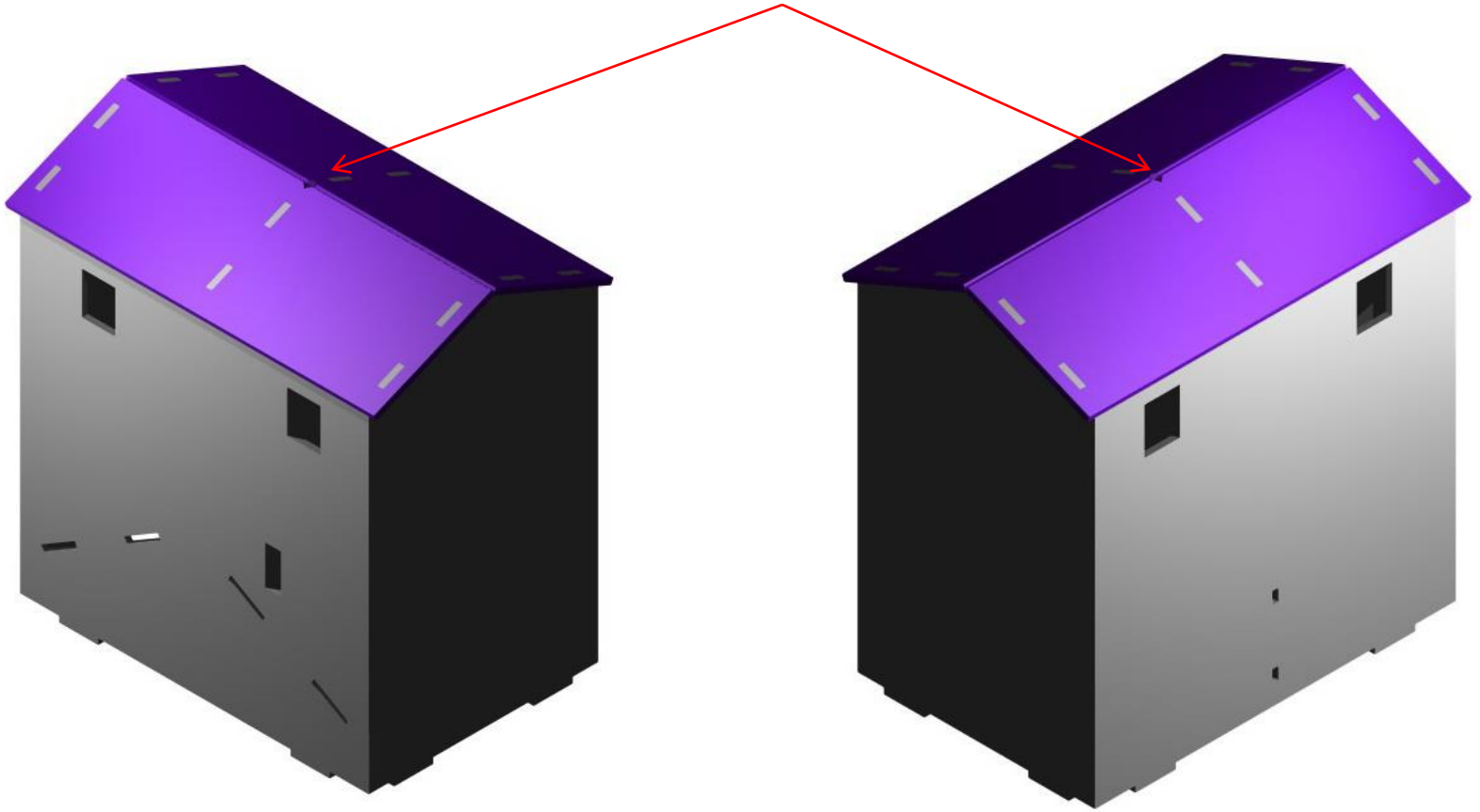
The cupola should be self squaring as the slots and tabs are a neat fit. It is important to have the ends of the cupola in the correct orientation ,with the 2 larger slots to the right hand end (Small Roof End)

Use Rubber bands (supplied) to secure the structure until dry.

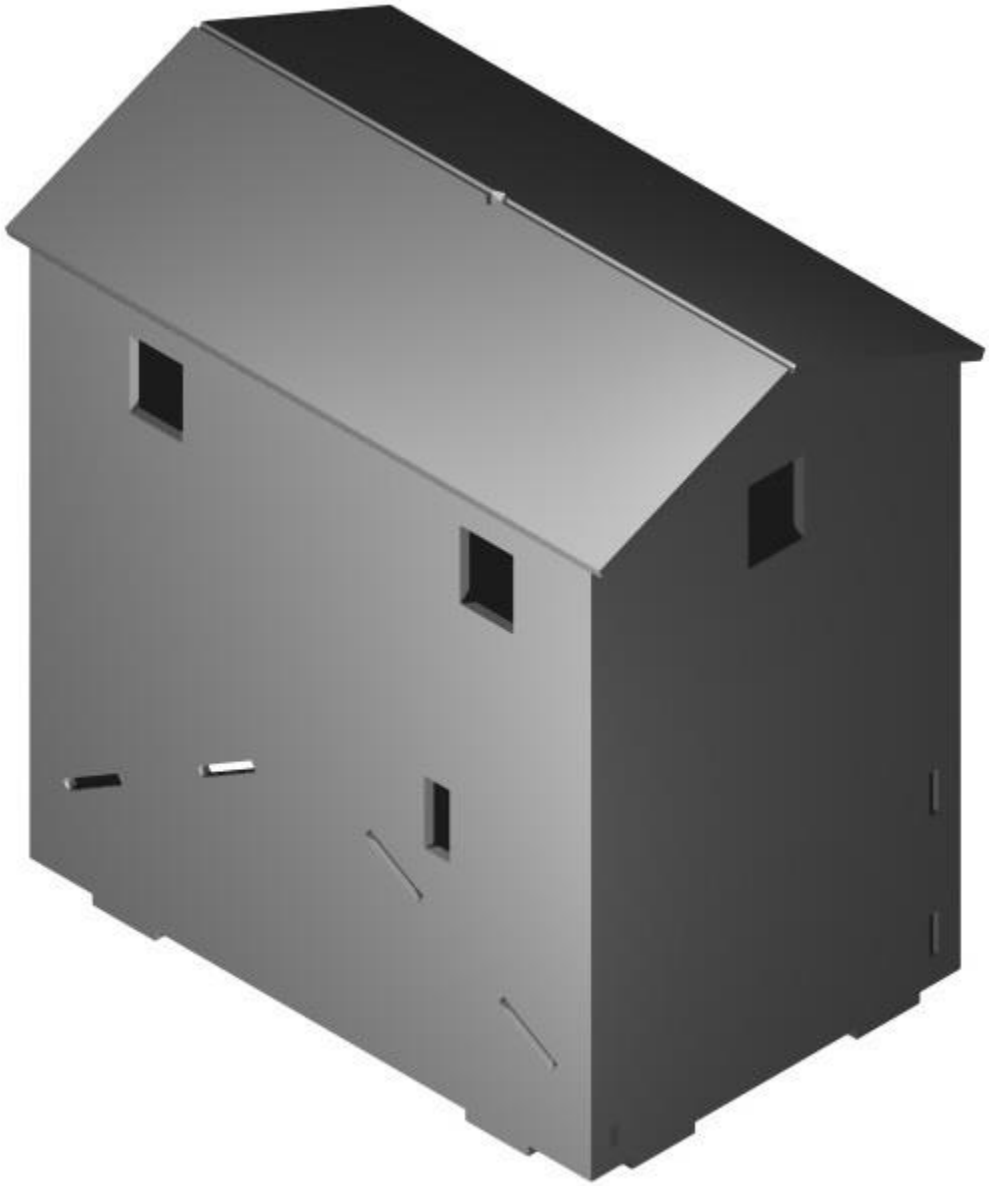


Silo Cupola - Step 4

The roof sections bring the whole structure together, and square it up nicely. Please note that there is a small notch in the middle of the roof sections. These notches go to the top centre of the roof, as the roof sections are slightly offset



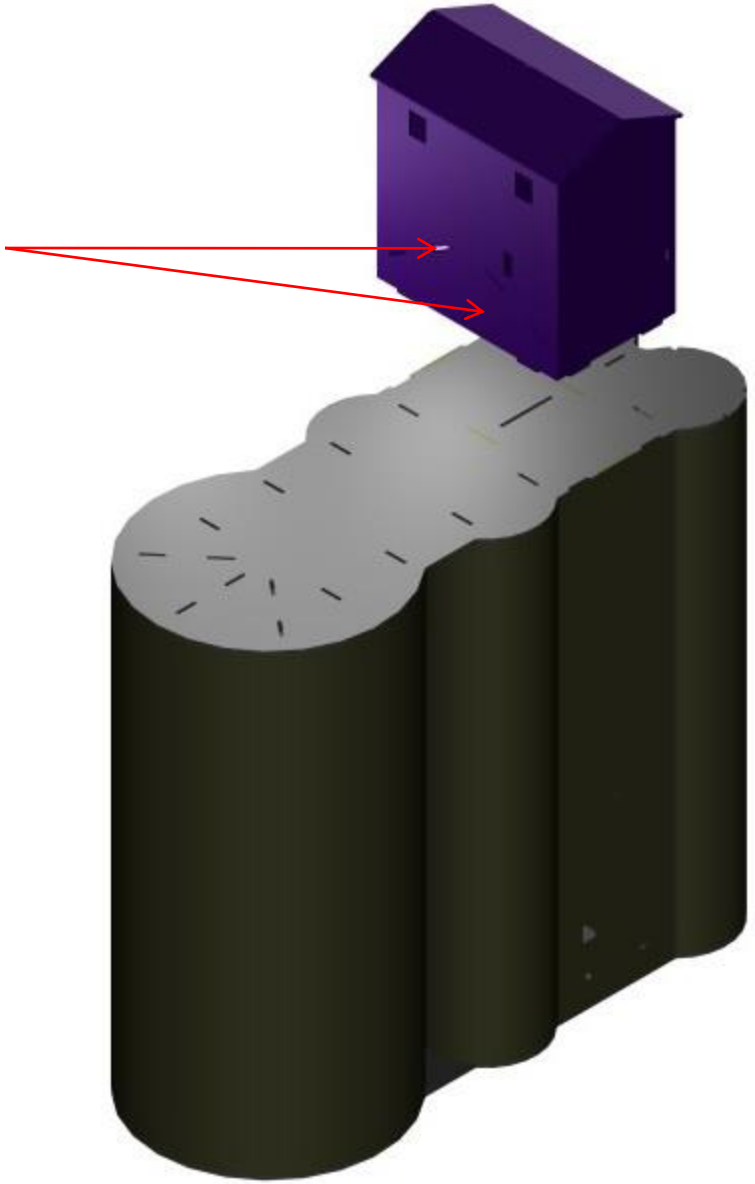
Silo Cupola - Step 5



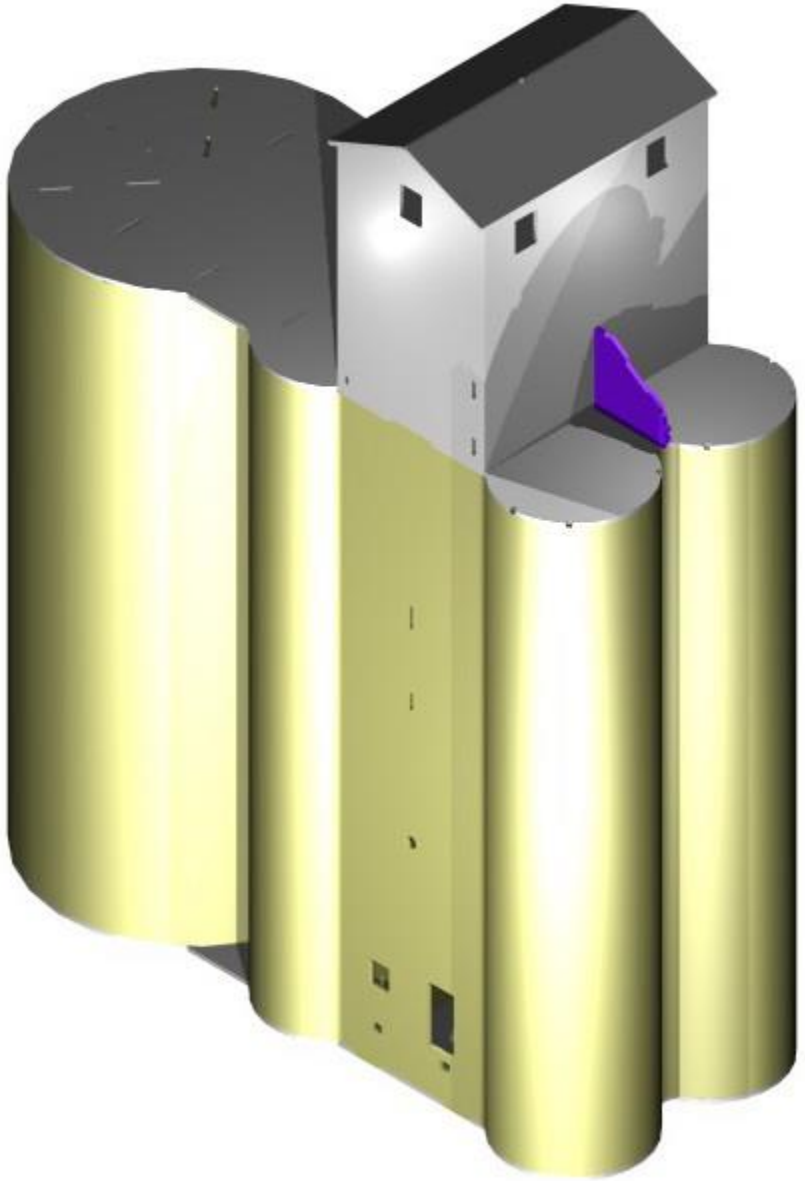
The completed cupola, ready to be placed onto the top of the Sub-frame, the two roofs are totally different on this silo, and the positioning of the cupola onto the sub structure is very important. The side with the angled slots is the side of the large roof which is situated over the large bin.

Silo Cupola – Install Step 1

The cupola can be located either way so please take notice that the sloping slots face the long roof end of the silo.

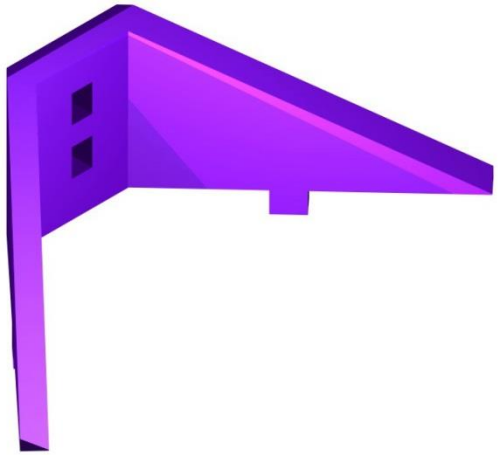


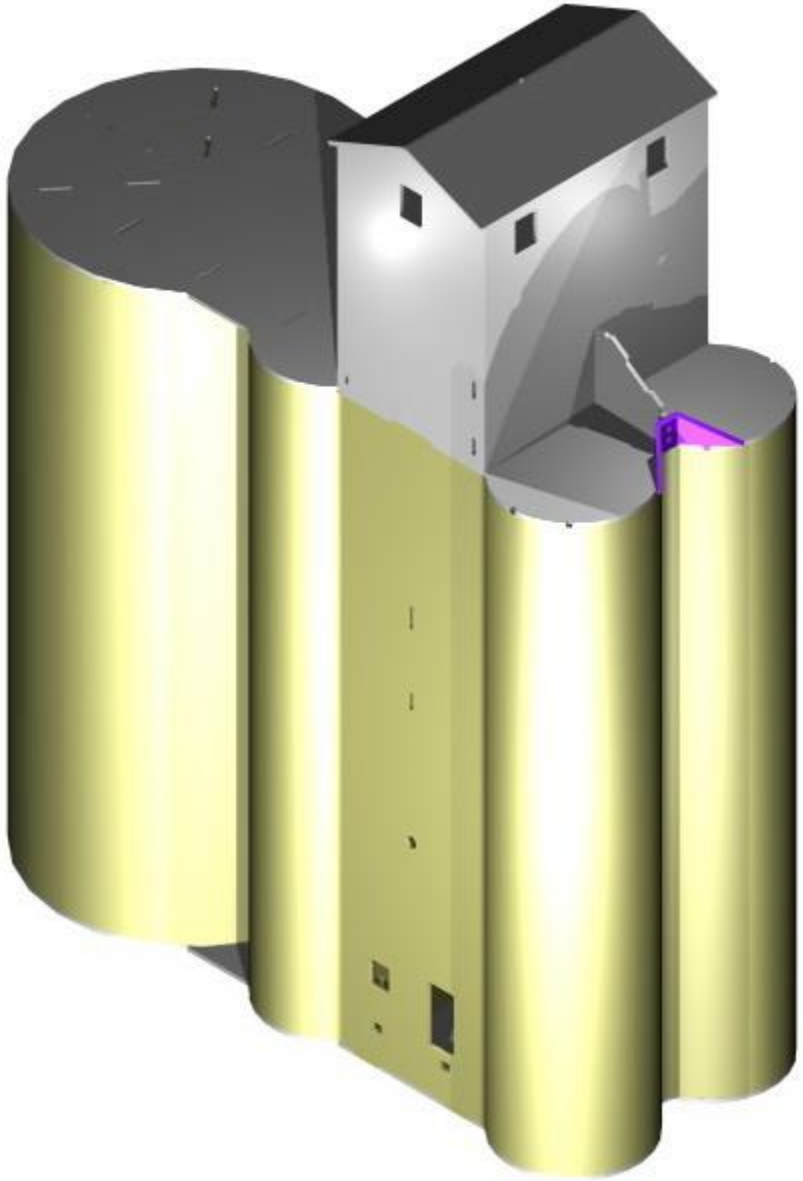
Silo Cupola – Install Step 2



This centre support fits in the middle of the small roof to support the centre of the roof. The small extrusions on the front of the piece accommodate one of the 3D parts included in this kit. The centre return.

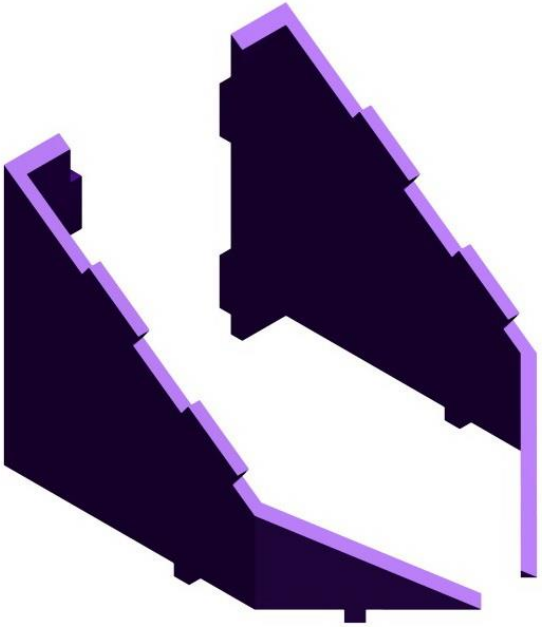
Silo Cupola – Install Step 3

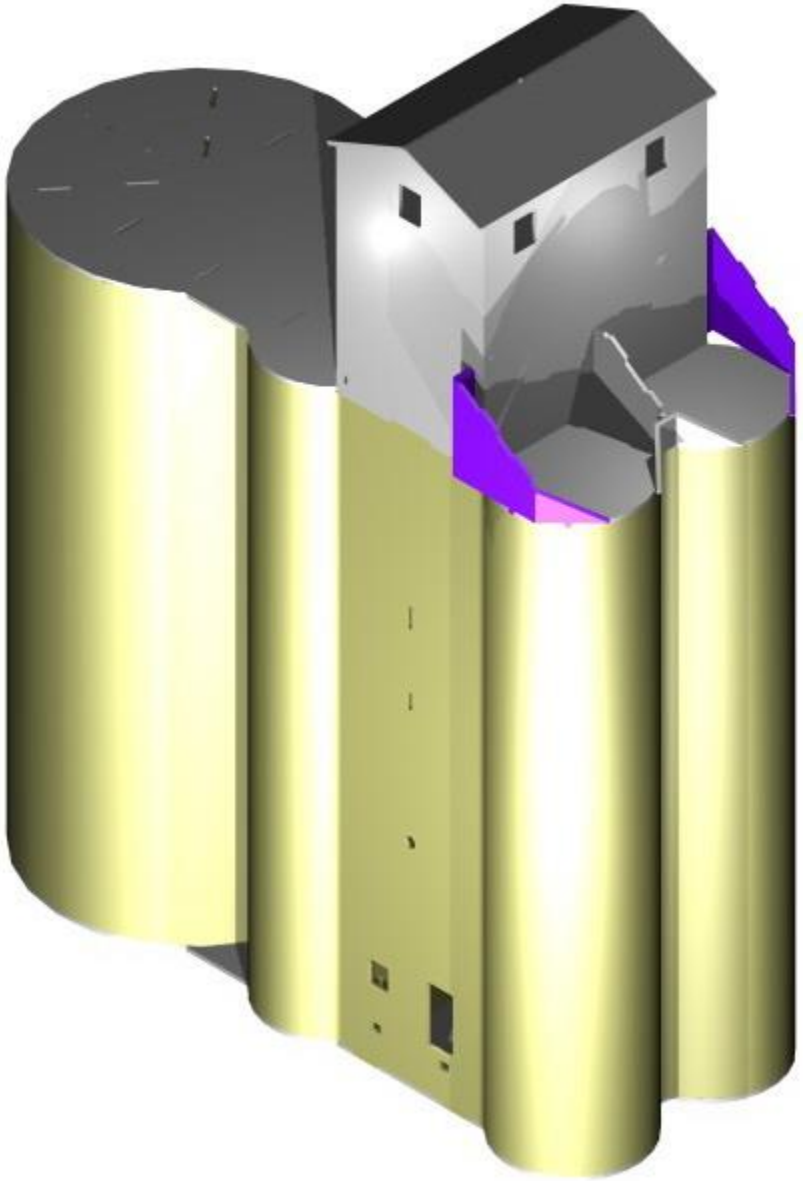




Roof Centre Return, replaces a few small hard to work with acrylic parts and minimises the time taken to build up the roof support. The top of the substructure now has slots cut into it to accommodate this support piece as well as the out roof returns. Use supaglue to glue this part in place.

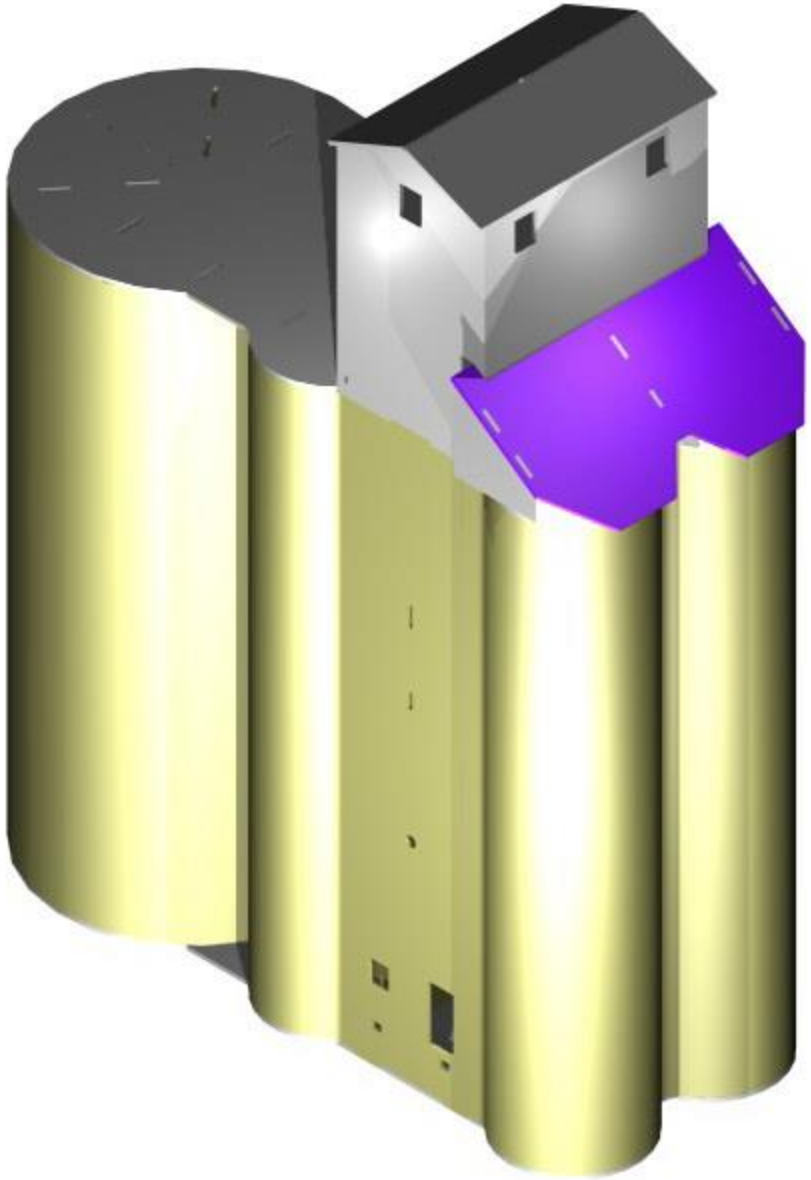
Silo Cupola – Install Step 4





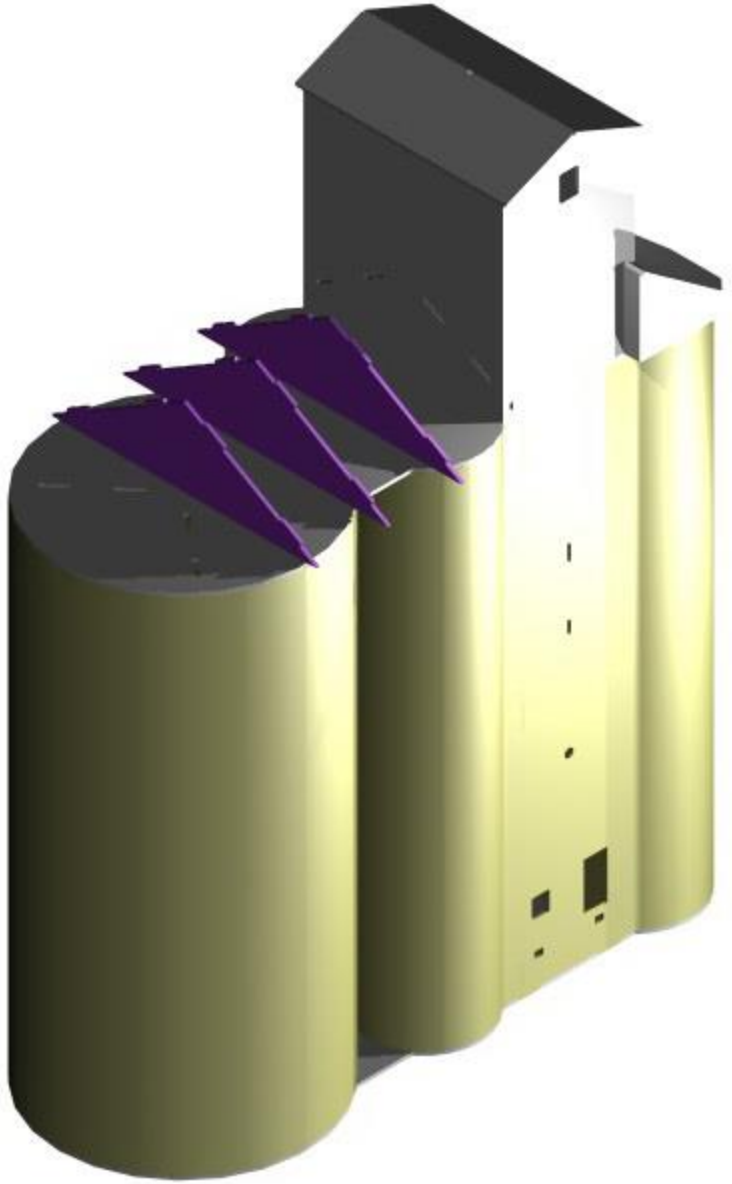
The Outer Returns are 3 D and are designed to make the construction of the silo roof much easier for the modeller. They are also located into slots cut into the substructure. Cut the tab joining the parts together and clean away any tab remains, and sand smooth. Use supaglue to glue the parts in place.

Silo Cupola – Install Step 5



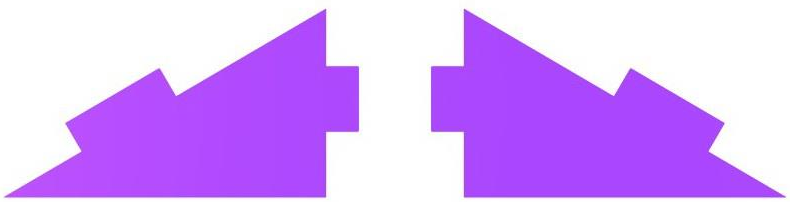
The small roof section should be located onto the supports and fit neatly against the cupola wall.

Silo Cupola – Install Step 6

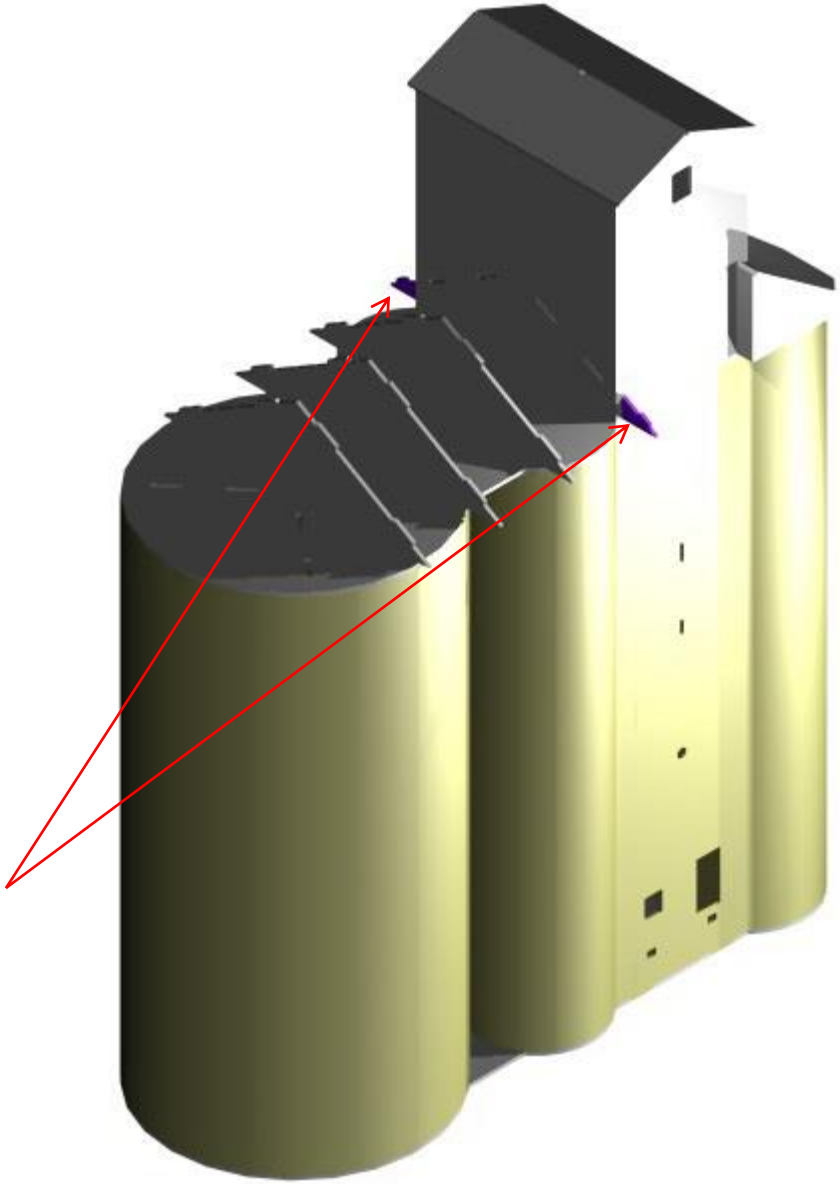


These 3 roof parts fit into tabs on the substructure top, and support the roofs on the long roof of the S016 silo.

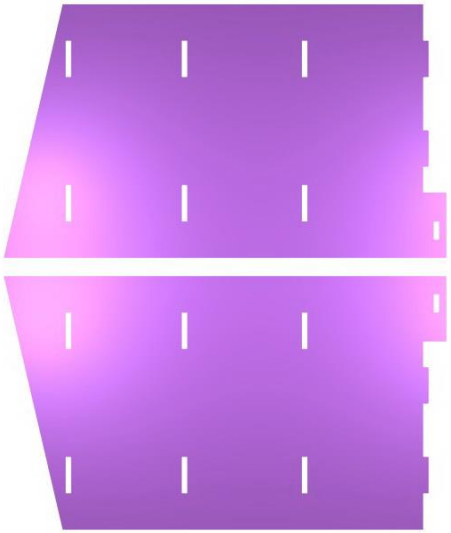
Silo Cupola – Install Step 7

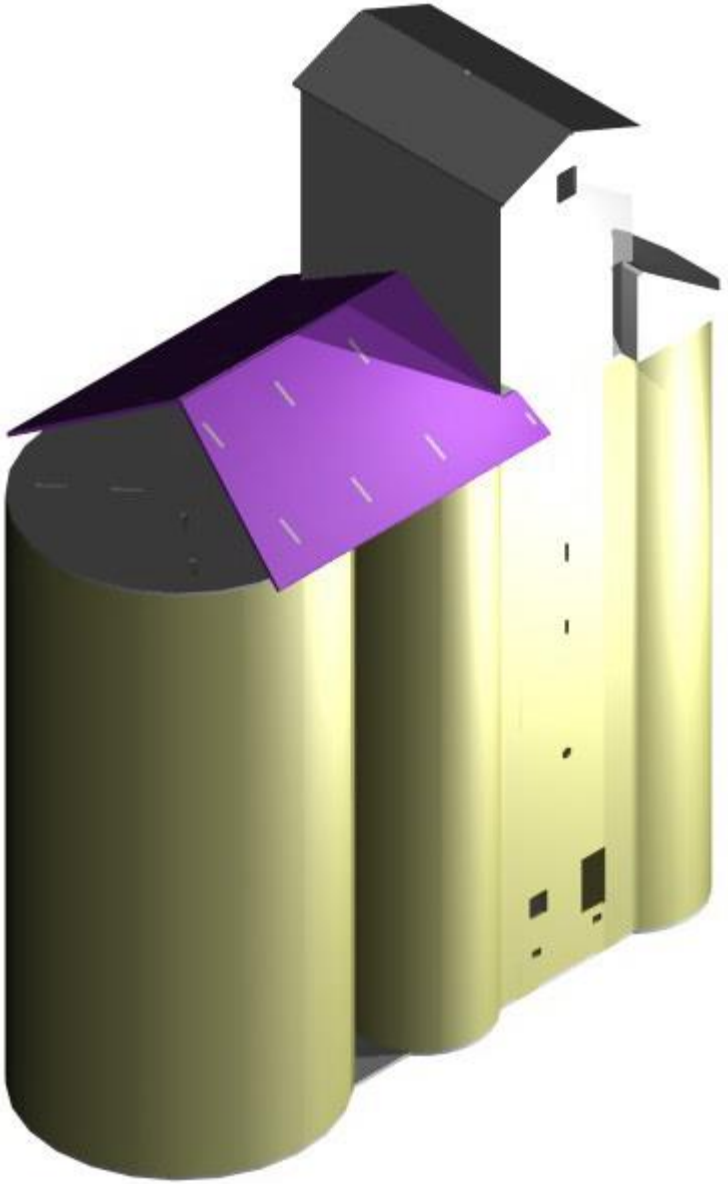


These small parts support the extension of the long roofs, and are fitted into the sides of the cupola.



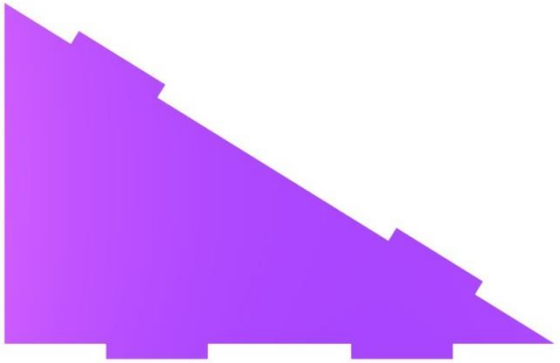
Silo Cupola – Install Step 8

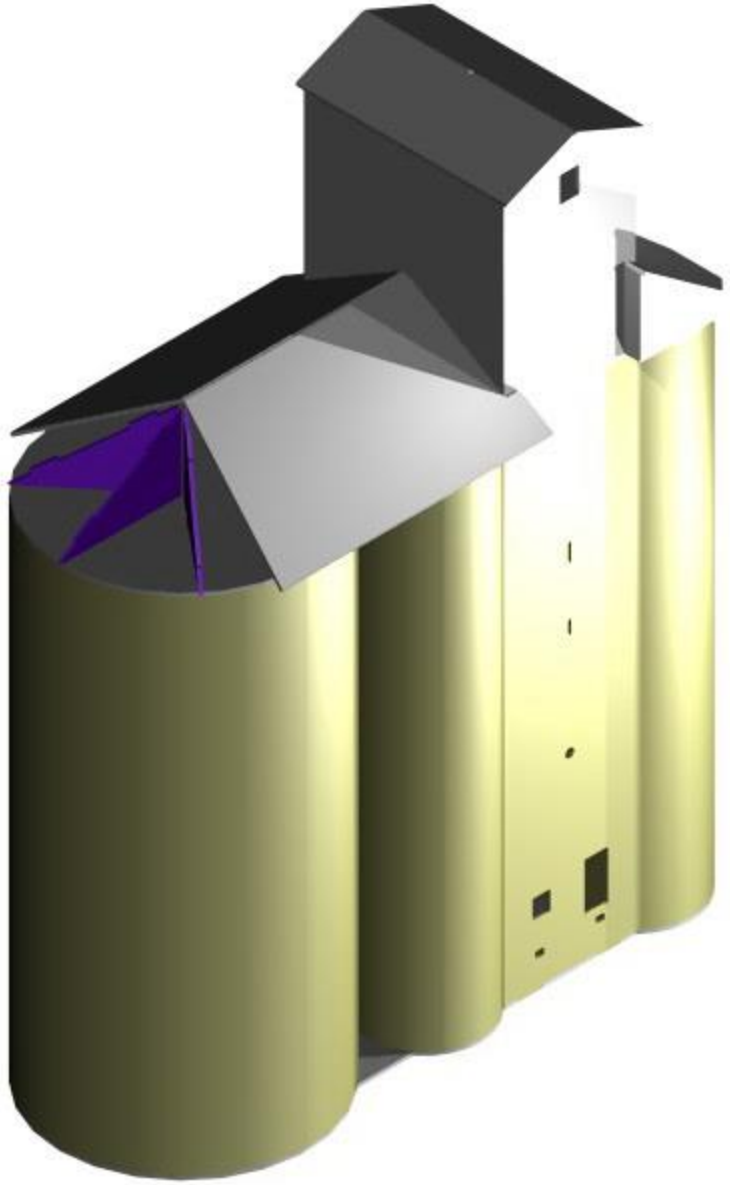




The long roof sections are fitted to the sloping slots on the cupola, and help in aligning the roof support sections that have just been fitted.

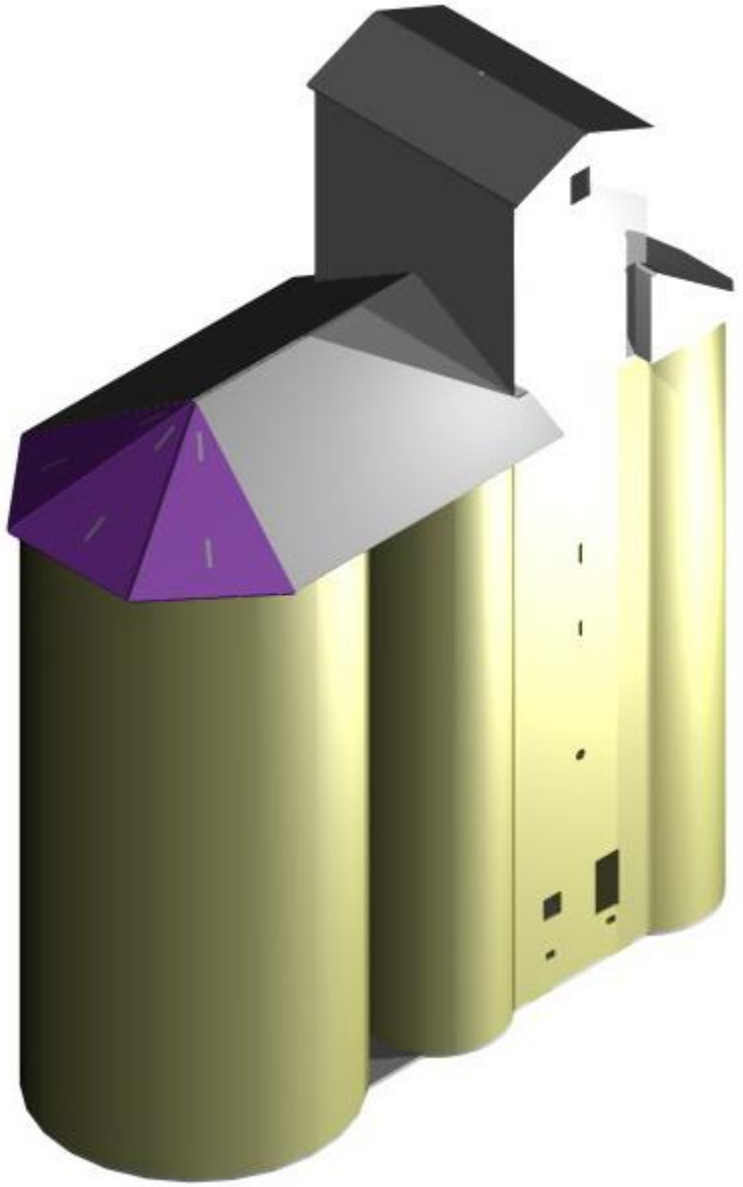
Silo Cupola – Install Step 9





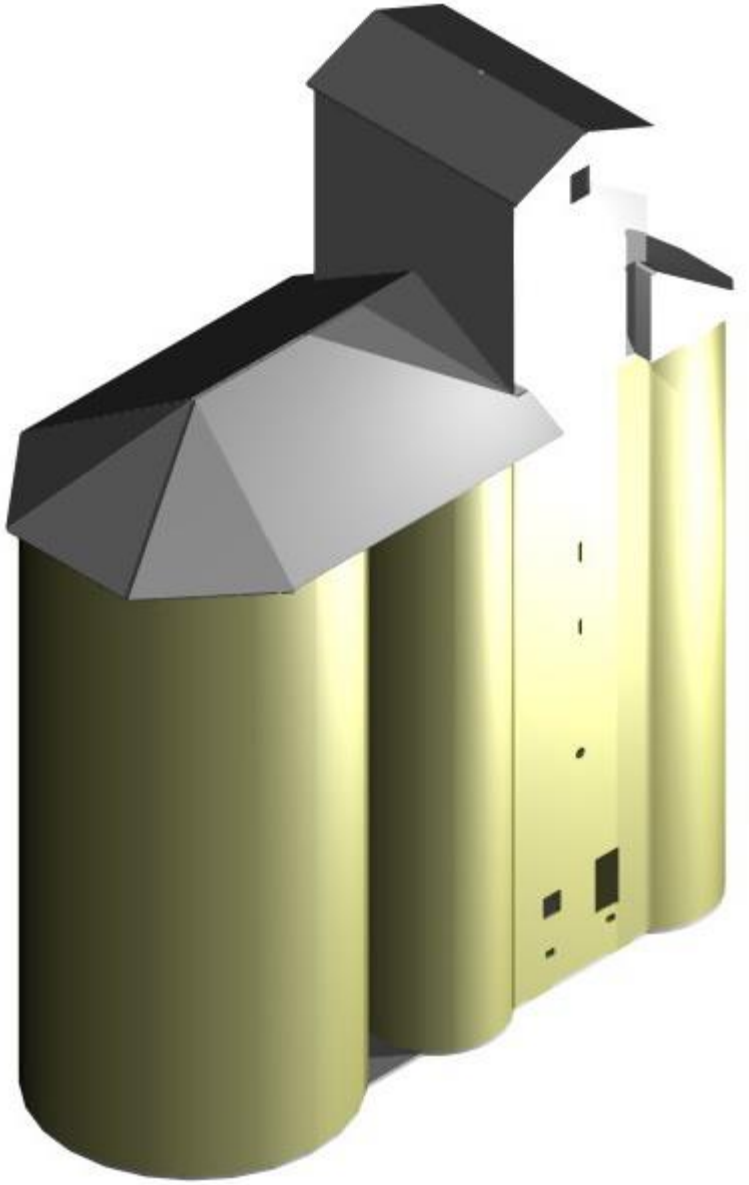
The 3 pieces support the end roof sections, and are fitted into slots in the top of the sub structure.

Silo Cupola – Install Step 10



The roof sections are fitted to the supports and are then adjusted to fit neatly. Allow the glue to dry so that alignment can be maintained. Use supaglue to secure the roof pieces into their final position.

Silo Cupola – Install Step 11



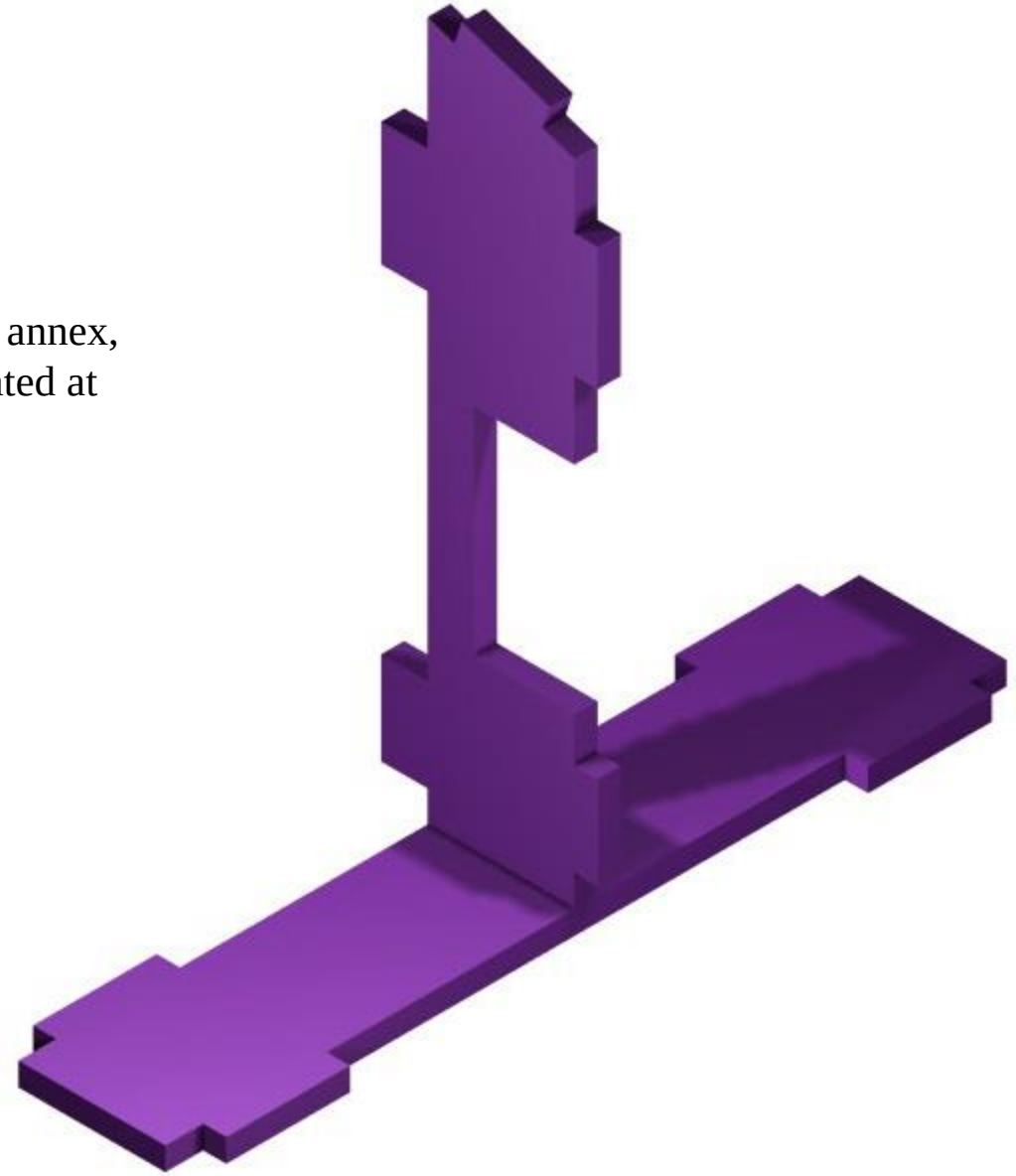
The completed roof of the silo, ready for fascia --- 10”x 2” , guttering --- 1.5 mm evergreen channel and cladding --- Campbell's corrugated aluminum

Another Step Down – Nearly Done

- The main 3 sub-assemblies are now built. Now we can concentrate on the smaller sub-assemblies.
- These smaller sub-assemblies are very easily fitted to the main assemblies at a later time.
- Firstly the Annex, then the Spoil Bin, the Out loading Platform.
- The Annex is located on the front of the silo and slots are provided where it will fit.
- So now, ------- onto the Annex.

Silo Annex - Step 1

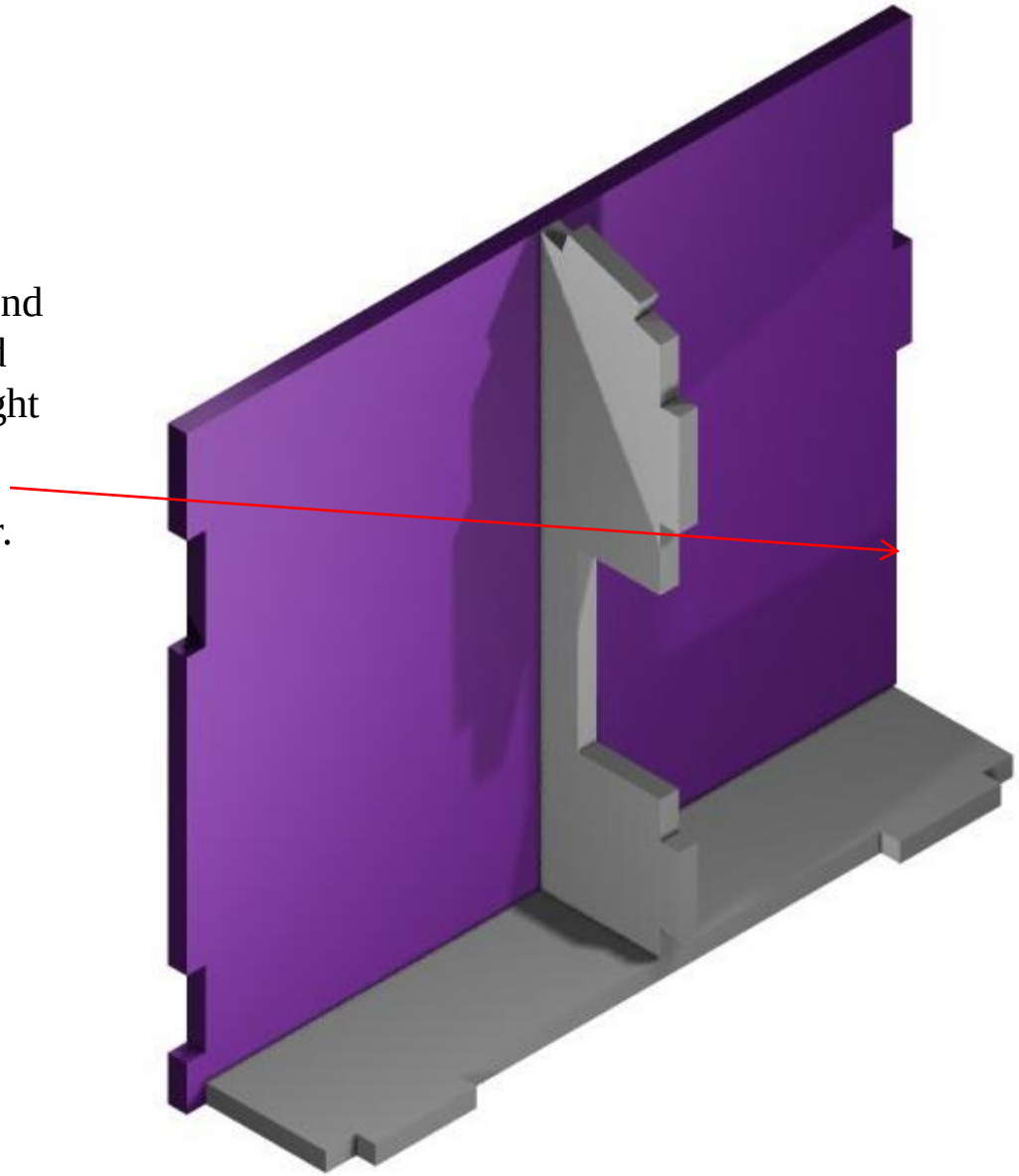
These pieces are the start to the annex, which is the small building located at the front middle of the silo.



Silo Annex - Step 2

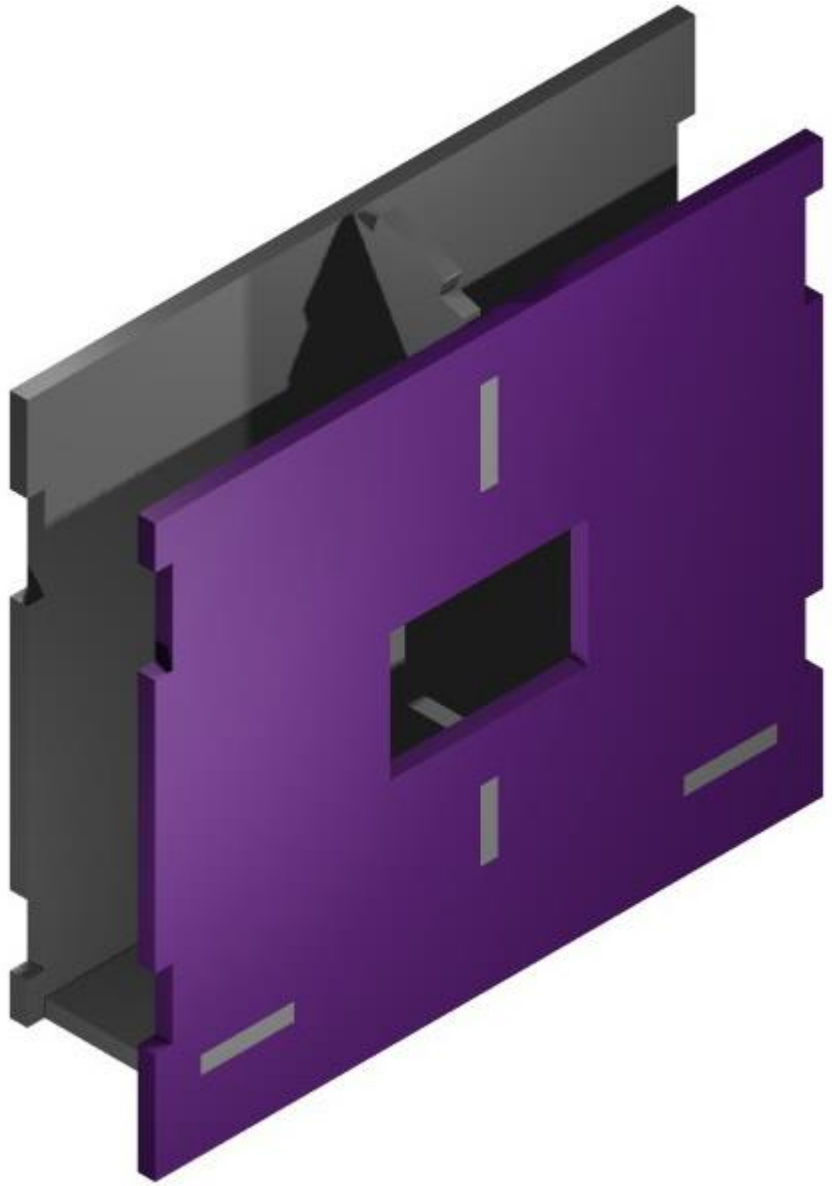
Locate the rear panel to the centre and floor, ensure that the panel is placed with the large void to the bottom right end of the annex.

This accommodates the annex door.



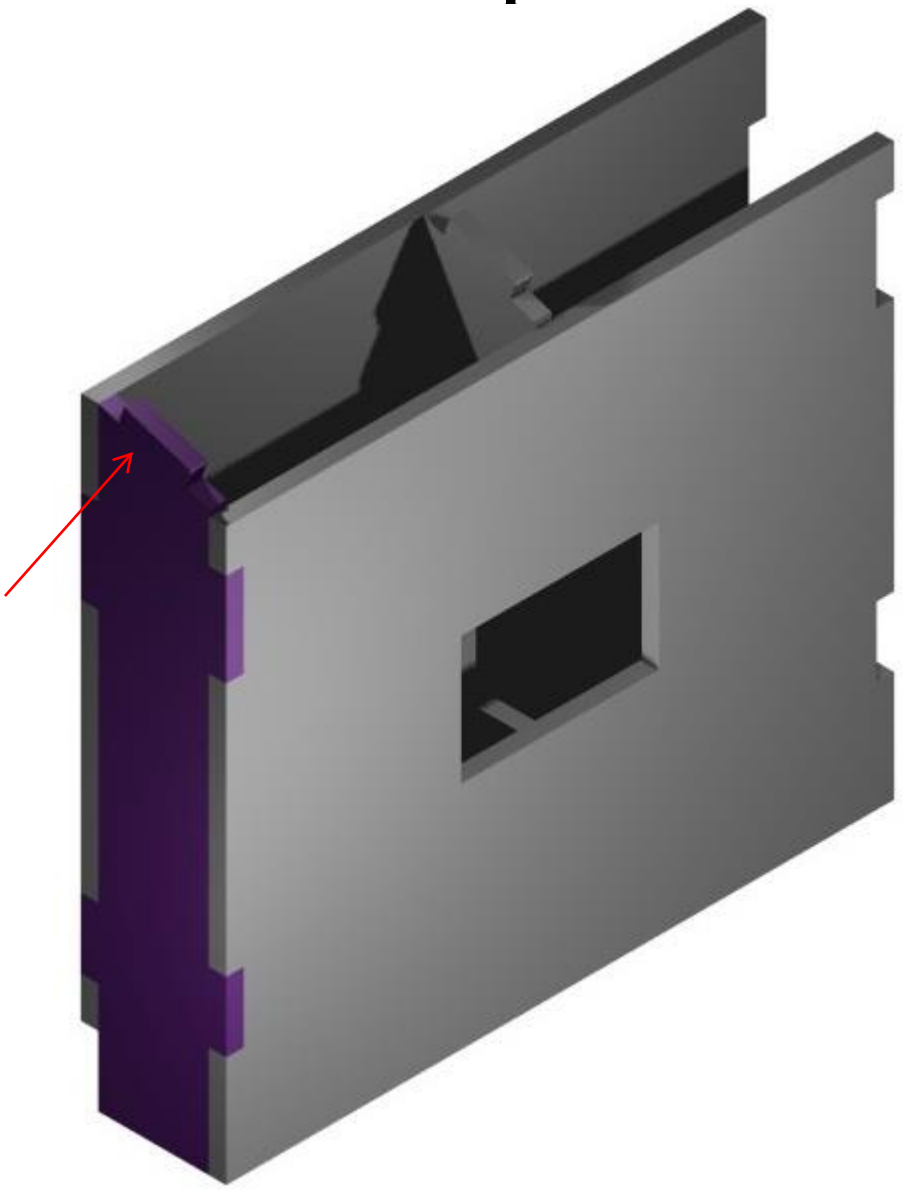
Silo Annex - Step 3

The front panel is located next. The part is symmetrical, so it will fit either way.



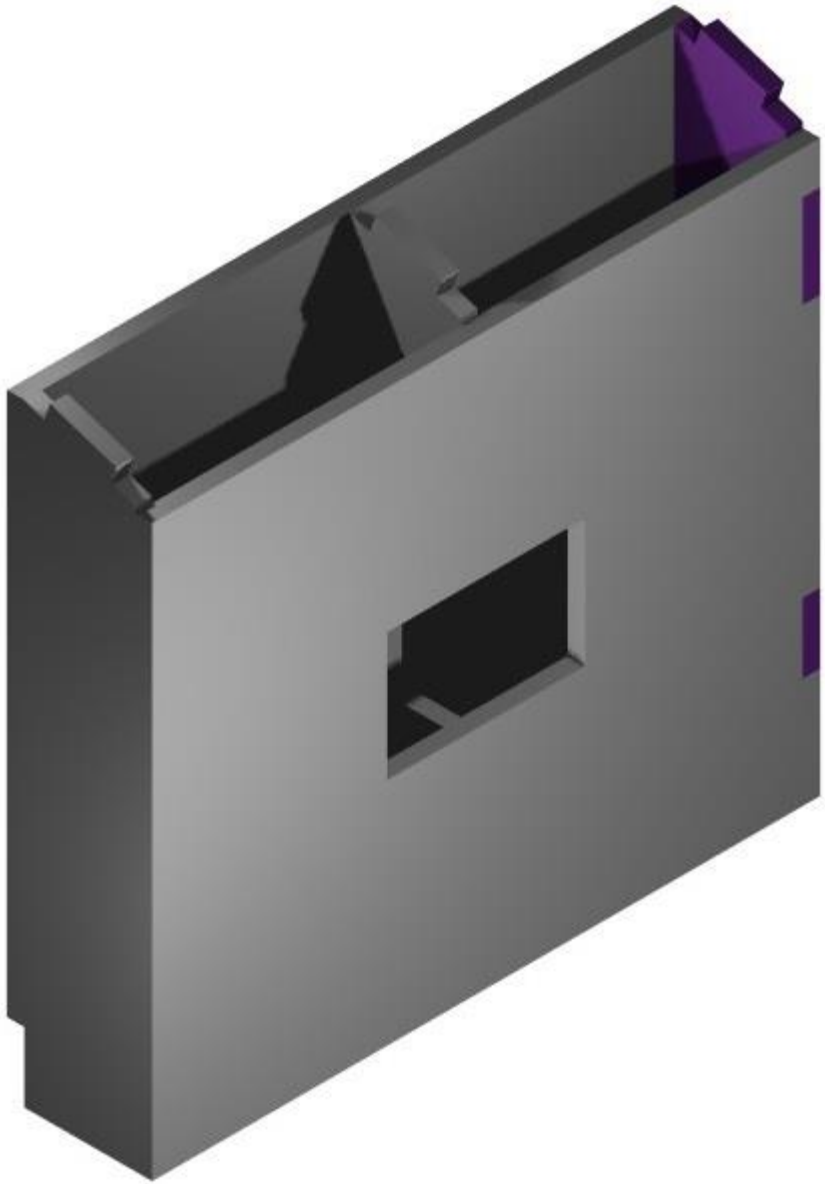
Silo Annex - Step 4

The left side panel will square the annex and please locate the part so the top slopes to the front. While this might sound silly, but it has happened (To Me).



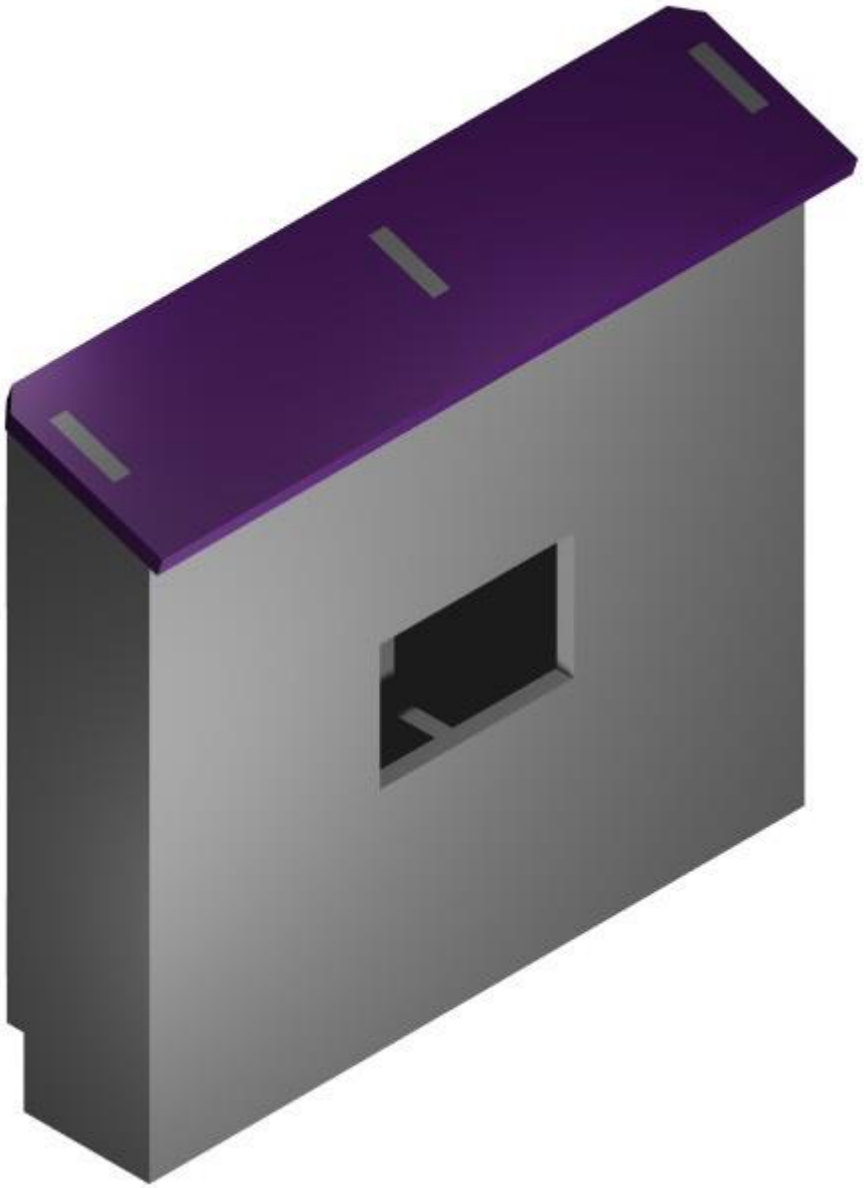
Silo Annex - Step 5

The right end panel of the annex is very fragile and care needs to be taken so as not to fracture or brake the panel.



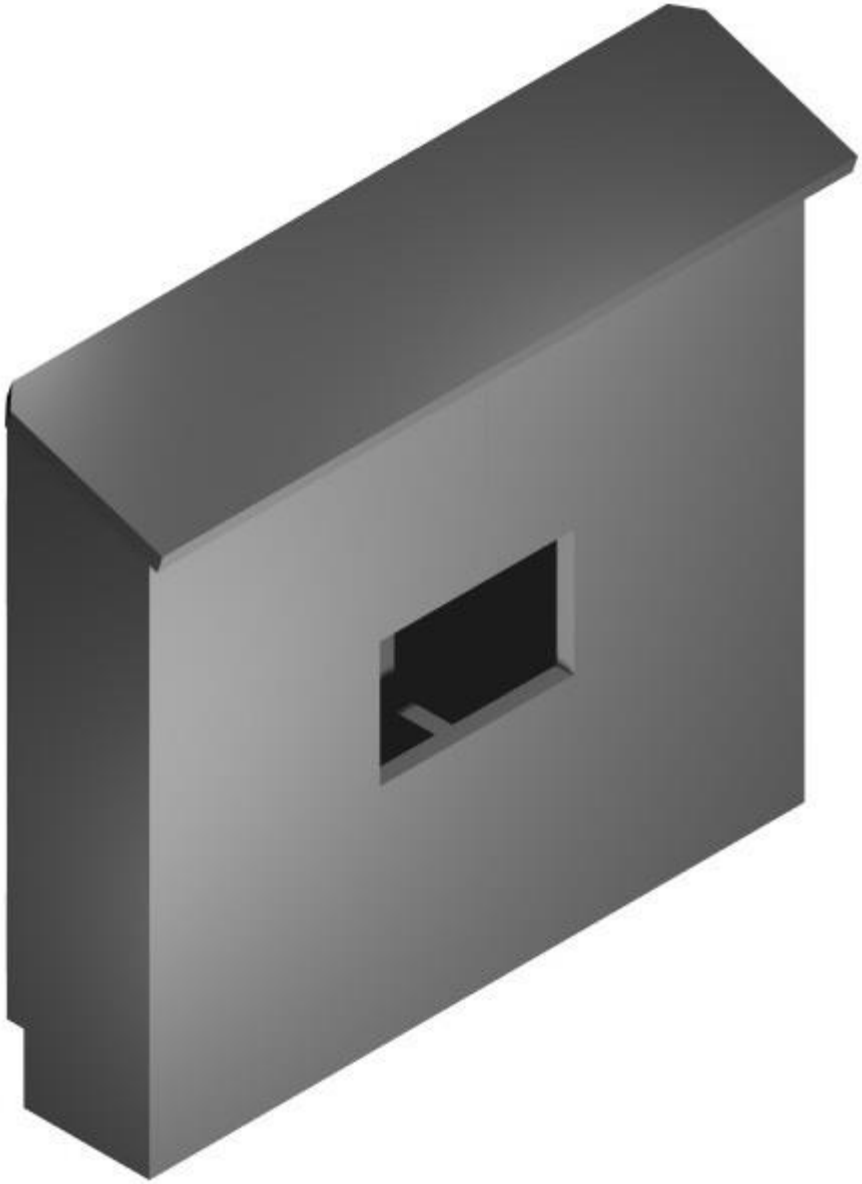
Silo Annex - Step 6

The roof squares up the annex, and is the final panel to be glued in place. Please note that the tabs protrude through the back of the annex, so that the annex can be fitted to the front of the silo.

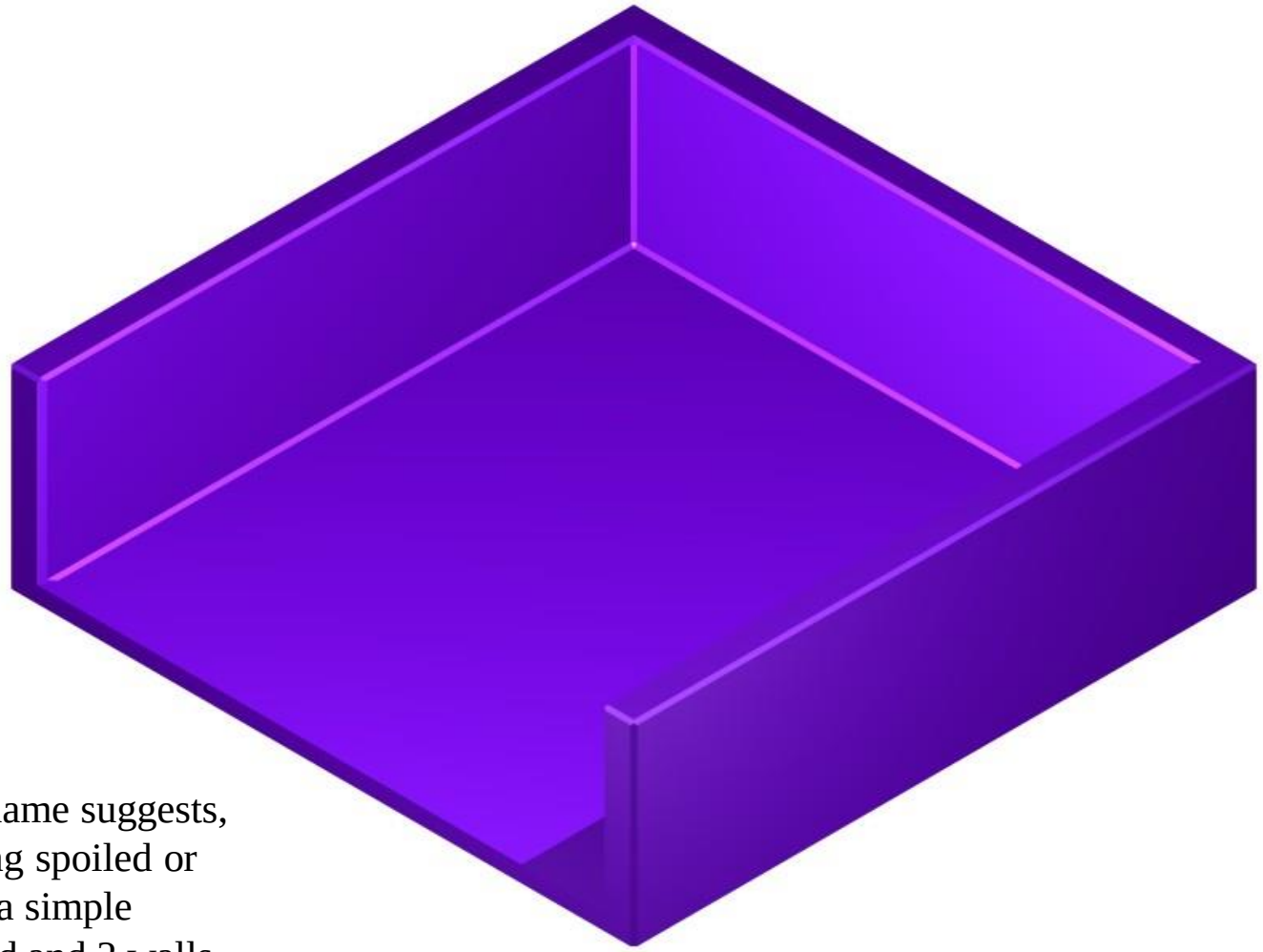


Silo Annex - Step 7

The annex, ready for fascia, gutter and cladding. RSJs can also be located under the floor of the cladding, as per the original silo articles. Photos on the CD give a better indication of the annex support.

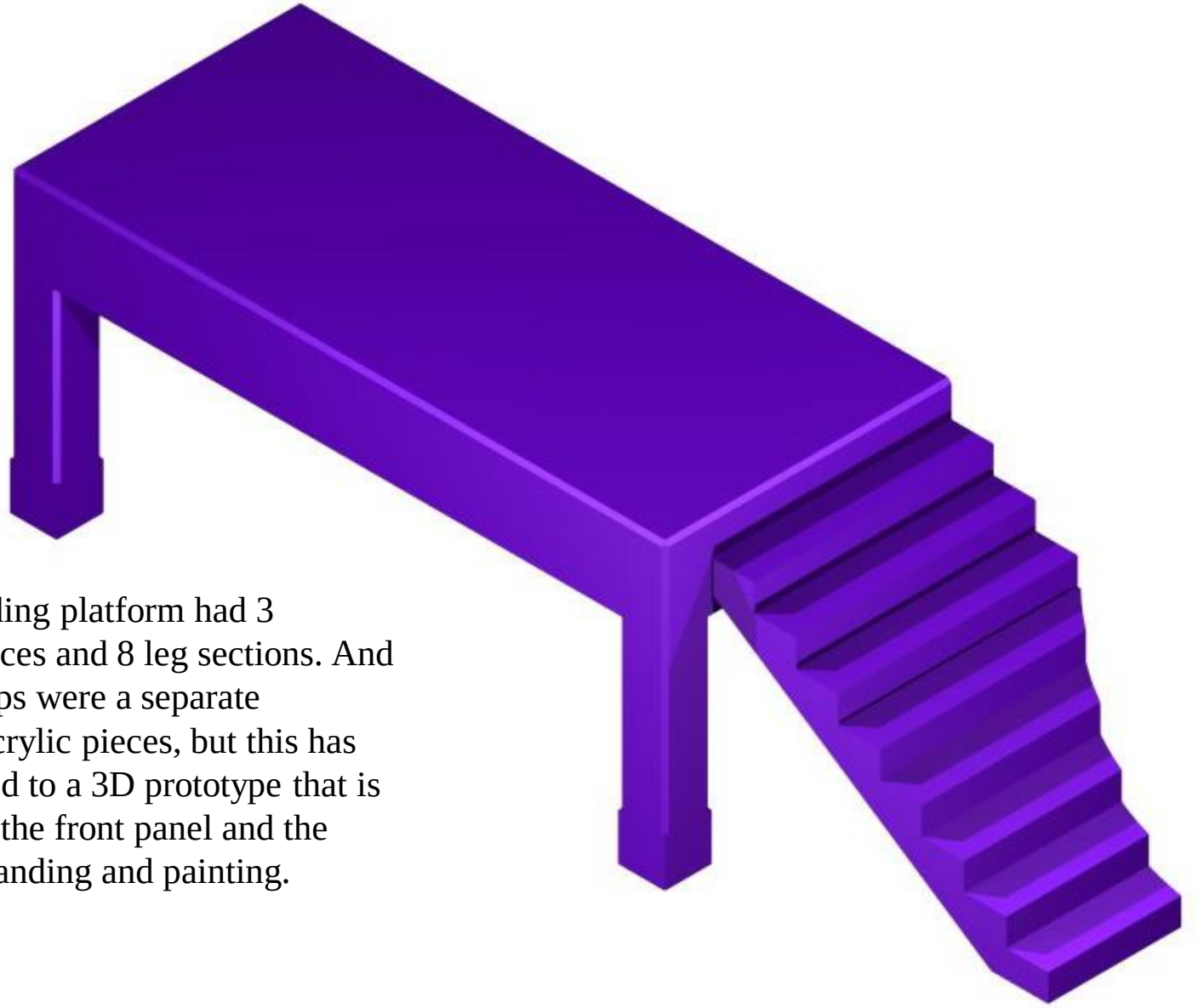


Silo Spoil Bin - Step 1



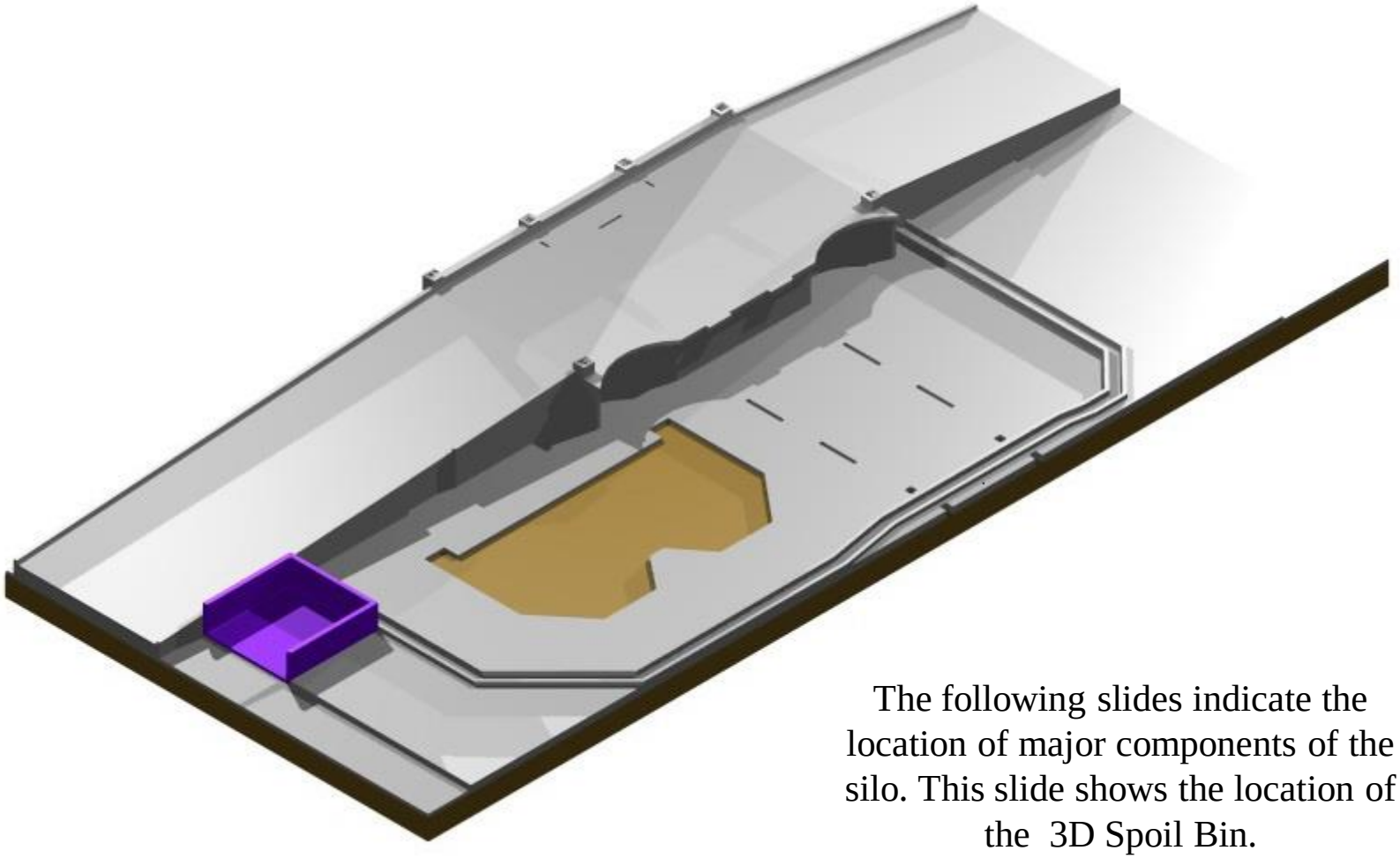
The spoil bin is as the name suggests, a concrete bin for storing spoiled or wet grain. The bin was a simple structure, of a floor, end and 2 walls. The new spoil bin is a 3D prototype and can be sanded slightly and located in place after painting.

Out loading Platform - Step 1



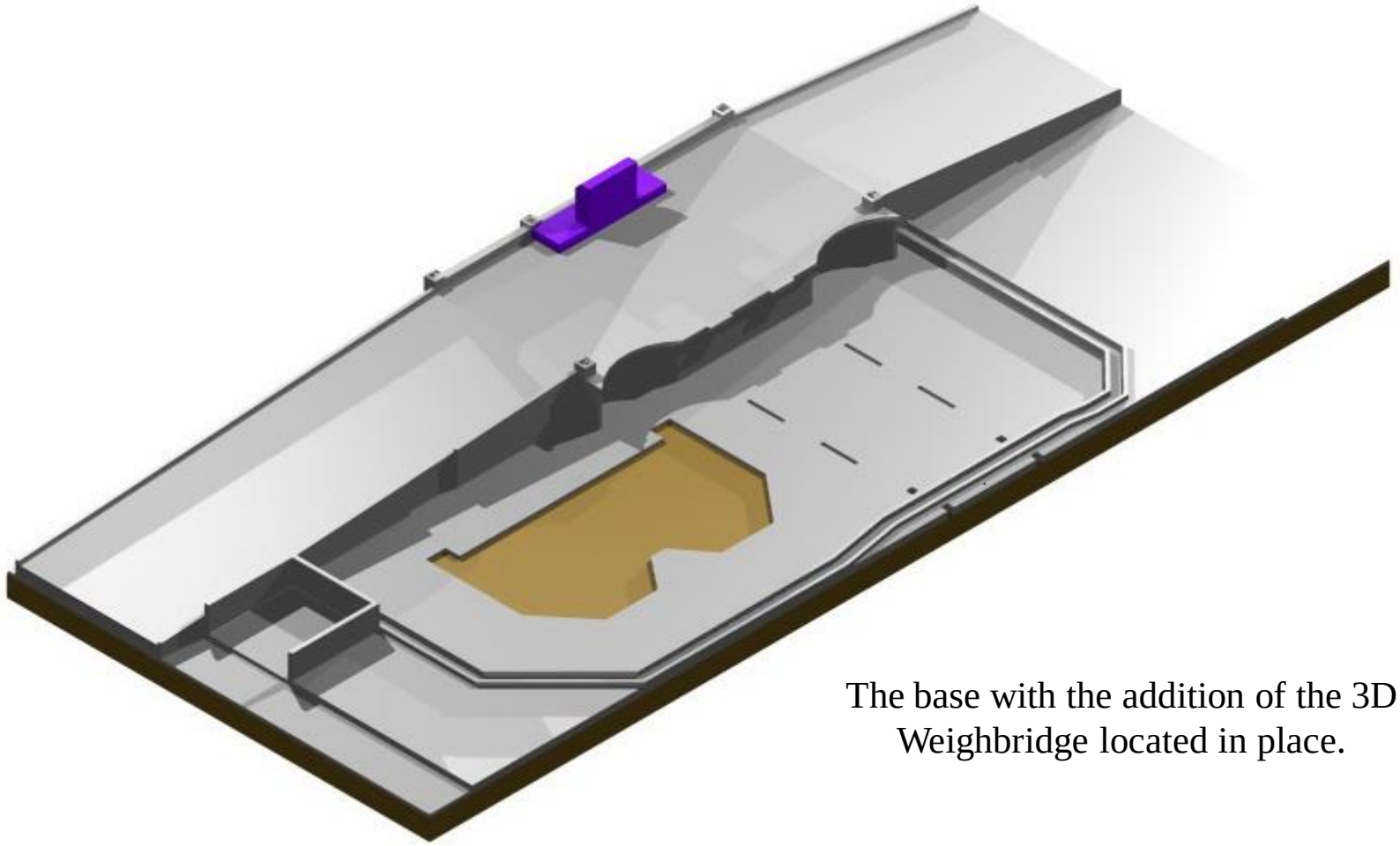
The out loading platform had 3 platform pieces and 8 leg sections. And the front steps were a separate laminated acrylic pieces, but this has been changed to a 3D prototype that is located into the front panel and the base, after sanding and painting.

Fitting the Sub Assemblies Step 1



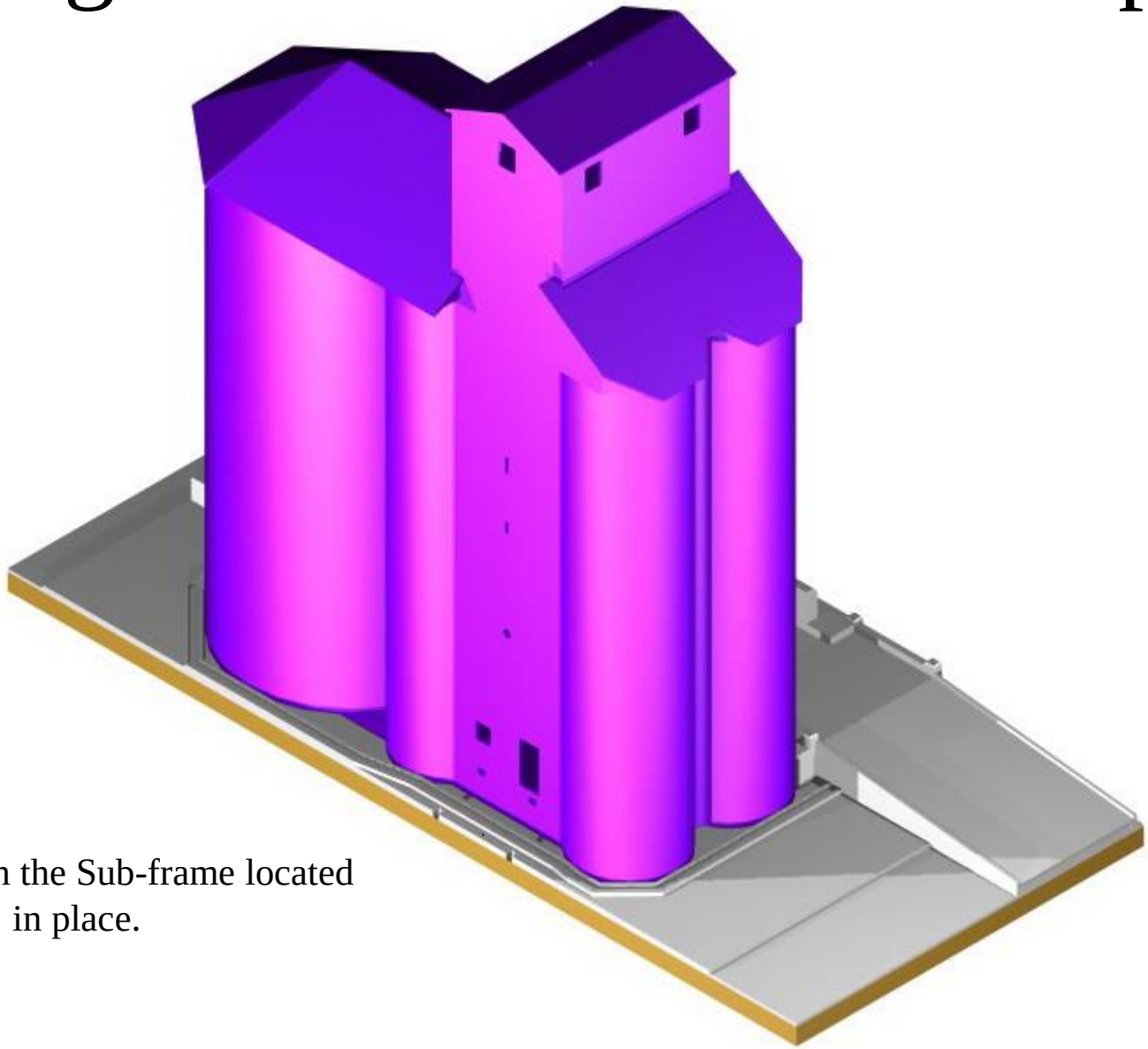
The following slides indicate the location of major components of the silo. This slide shows the location of the 3D Spoil Bin.

Fitting the Sub Assemblies Step 2



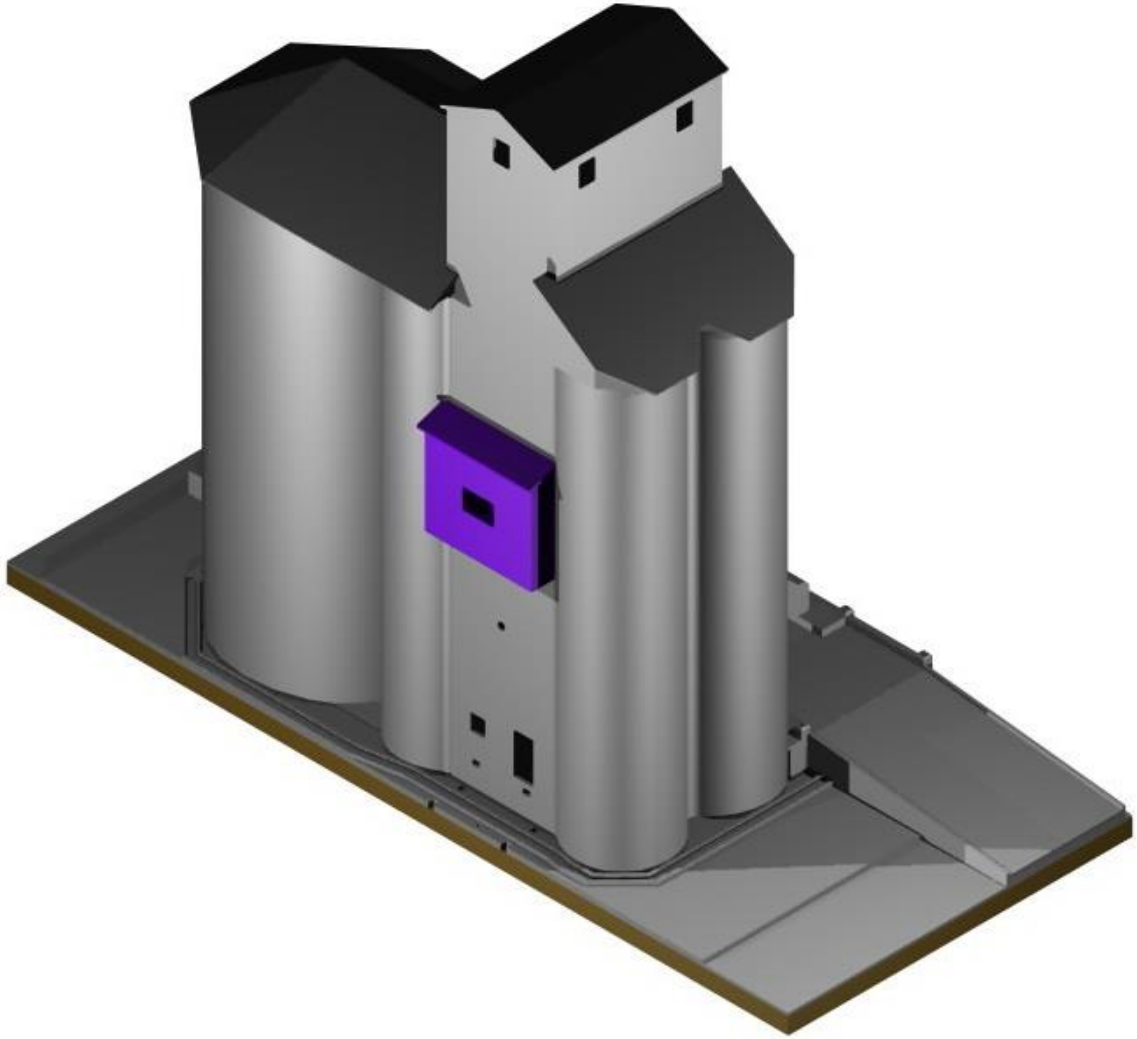
The base with the addition of the 3D Weighbridge located in place.

Fitting the Sub Assemblies Step 3



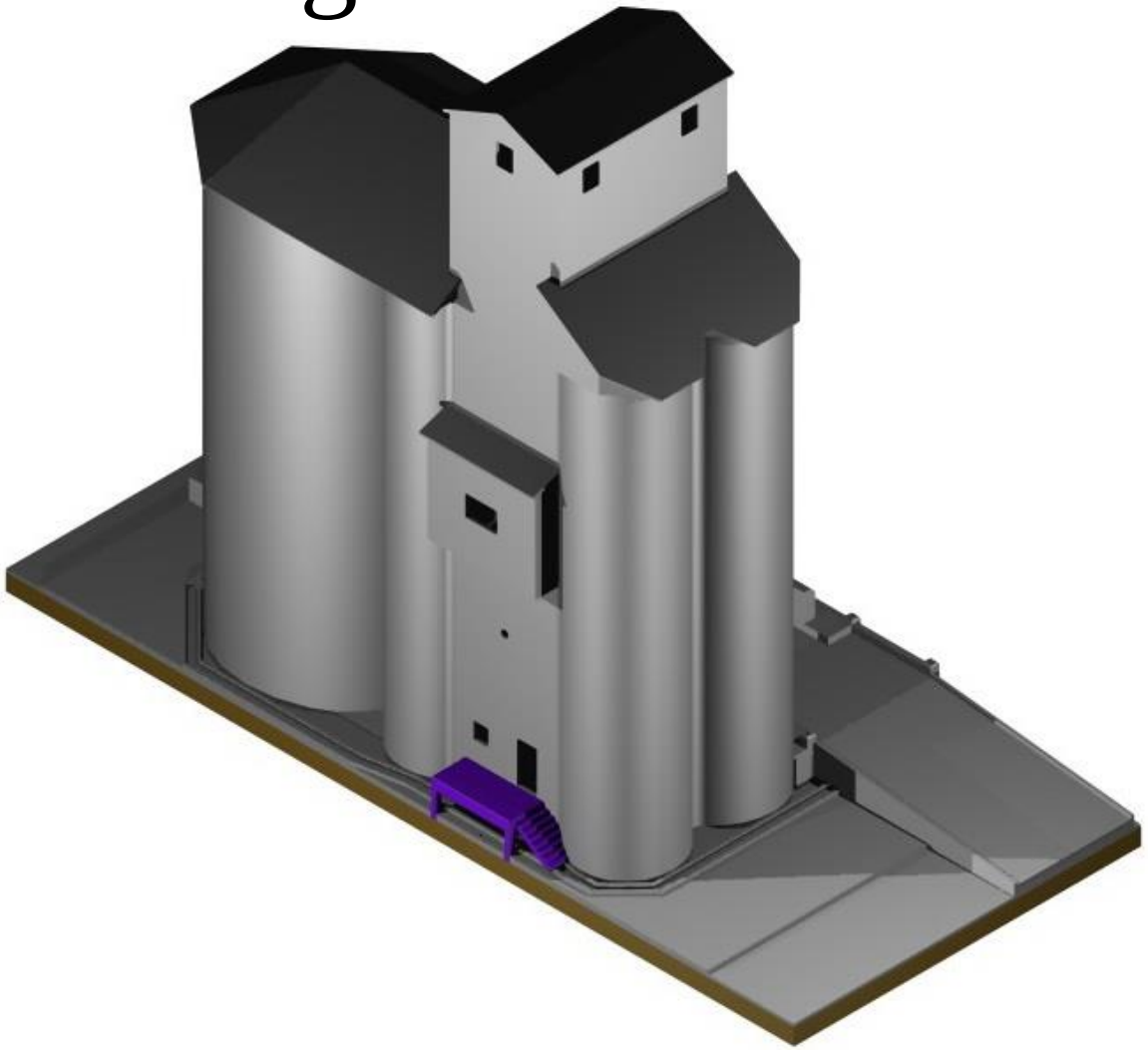
The base with the Sub-frame located in place.

Fitting The Sub Assemblies Step 4



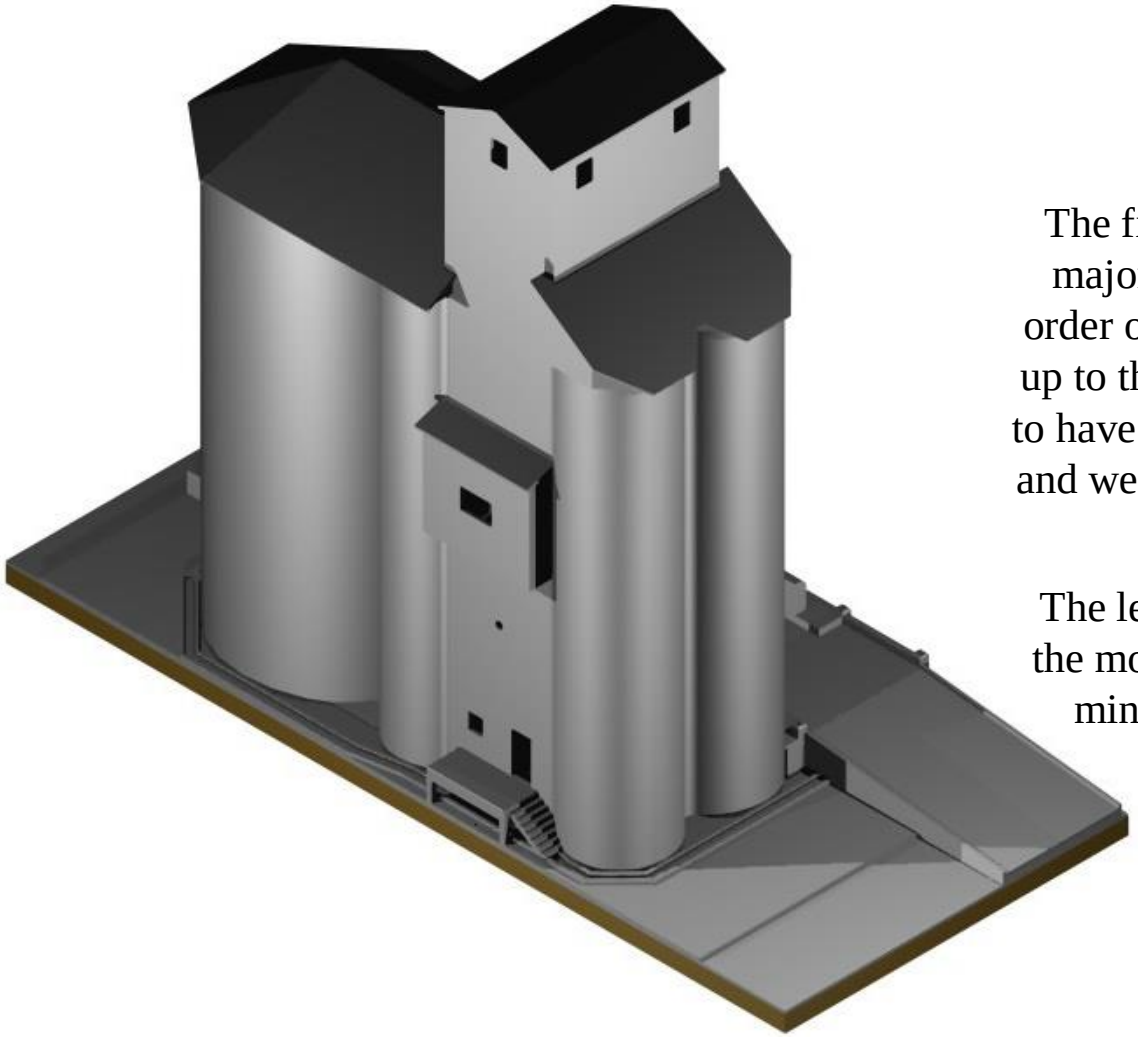
The annex is fitted to the sub frame using the tabs and slots in the front face of the silo. It should be a tight fit, that allows the annex to stay in place. If not, use a small amount of glue to locate the annex , and before it dries, remove it, this should allow for a small build up if glue/acrylic to assist in holding the annex.

Fitting The Sub Assemblies Step 5



The outloading platform is located into the base as well as tabbed into the front of the silo. Place some body filler between the platform and the silo to fill any gaps between the parts. Scrape away any excesses and sand smooth. Locate the platform , as one of the final steps of the construction.

Fitting The Sub Assemblies



The final structure with all of the major components in place. The order of fitting these components is up to the modeller. The main idea is to have the major assemblies painted and weathered then located in place, when finished.

The less that you have to paint on the model, the better, that way you minimize any chance of paint contamination .

Putting it all together

- Although the sub-assemblies are now together, there is work to be done on each sub-assembly before they are joined permanently.
- By all means, test fit the parts, but be aware that there is much work to be done before they can be permanent.
- Some of the work will require other kits such as the KRM S04 Etched Brass Parts Kit, and the KRM S05 Accessory Parts Kit.
- These kits are available.
- Hints on cladding are also available in this presentation.
- The information in the next few slides is not comprehensive and more detail can be found in the original article in the AMRM.
- Let’s start with the Silo Base.

Putting it all together - The Base

- The weighbridge and partitions need to be fitted (KRM S04 Etched Brass Parts Kit).
- The wagon shed frame feet need to be fitted into the 6 wagon shed footings.
- The base will need to be given an undercoat, joints and tab slots filled and sanded to represent concrete (new or old – your choice).

Putting it all together - The Sub Frame

- The Sub-Frame will need to have door holes cut in the bins.
- Down pipes will need to be fitted to all 4 Bins, made up from 1mm brass wire and the Astragals supplied in the KRM S04 Etched Brass Kit.
- The rear door will need to be fitted to the Sub-Frame (KRM S004 Etched Brass Kit).
- The front door and window and the bin doors will need to be fitted to the Sub-Frame (Bins) (KRM S04 Parts Kit).
- There is also a down pipe from the annex to the base of the silo that will need to be fitted.
- And a Ladder/ Ladder Guard will need to be fitted to the front of the silo on the right side of the Annex.
- The joints, bins and front and rear panels will need to be filled with a two-part auto body filler, using a 10mm rod to achieve a neat blended contour.
- The large joint on the sides, between the bins, needs to be filled by body filler, and can be done in a similar way to the other joints, using a 12mm dia. rod to obtain a nice even contour.
- And finally the Sub assembly will require sanding and painting then fitted in place.

Putting it all together – The Cupola, Bin Roof

- Glue the Cupola to the Sub-Frame.
- Fascia and guttering need to be secured to the cupola and bin roof. Fascia from 10”x 2” Evergreen Styrene, and guttering from small Evergreen “C” channel.
- The Cupola and Bin Roof needs to be completely clad with Campbell’s Corrugated Aluminum. The cladding overhangs the silo bins by a scale 4” - 6”.
- The cladding comes in various sheet lengths, but my preferred option is to obtain the 12ft length, as other sizes can be cut from the longer sheets. And always start the cladding at the lowest point and clad up to the highest point.
- Ridge capping made from 8”x 1” styrene with 0.025” styrene rod for the ridge.
- Downs pipes are fitted on both sides of the Cupola, and are distributed onto the bin roof by a “T” piece. Two astragals each side secure the down pipes.
- Lead flashing can be made from masking tape, cut into thin slithers, and placed in the appropriate locations.
- Finally windows need to be fitted to the cupola. These are available in the KRM S05 cast part kit

Putting it all together - The Annex

- Fit the barge board and fascia. Fill the edge of the roof to remove the angle. This will allow the fascia to sit much easier.
- Fit the guttering to the fascia.
- Fit main beam and cross beams under the Annex, as well as a locating loop for the winch rope to go through
- Clad the Annex roof
- Clad the rest of the Annex from bottom to top
- Fit the down pipe (using photos for reference)
- Fit window and door after painting the Annex
- Only glue the Annex in place with a couple of dots of white glue so that it holds in place but can be removed if required.

Putting it all together - The Out loading Platform

- The Out loading platform can be modified with a pipe safety barrier if required.
- Use photos as references for various out loading platforms.
- Many photos will be available in the CD instructions, to use for reference.

Putting it all together – The Out loading Chute, Winch and Pulley

- The Out loading chute needs to be scratch built, as per the original article.
- The pulley and winch are available in the KRM S04, etched brass kit.
- There are 2 etches of both the pulley and winch available on the etch.

Putting it all together – The Wagon Shed

- The Wagon Shed is built from plans in the original article, as well as the template plans supplied on this CD.
- The 6 square styrene tube pieces (rear road) can be trimmed down to the top of the rear walls.
- The frames for the wagon shed fit into the styrene tubes, supplied as footings.
- The vertical beams for the wagon shed can be made from commercially available H beam.
- The battens and purlins can be made from Special Shapes' 3/64"square brass, which gives more surface area to solder to the beams than brass angle would allow.

Corrugated Aluminium

- Campbell's Corrugated Aluminum is my preferred cladding material to use when cladding Australian buildings in HO scale. It comes in 4, 6, 8, 10 and 12 scale ft lengths, and the best value is the 12 ft packs.
- I make up a template with one full sheet, marked with a thin black Pental pen. This is used to make the other sheets. I then cut the sheets with a ruler and sharp snap off blade. If small sized sheets are required, they can be cut from the 12 ft sheets. (13 corrugations)
- The material is them overlapped by 1 corrugation, and is glued to the building, using Selleys Gel Grip.
- The layering of the cladding is important. It must be layered from the bottom up, with the overlapping dimension not being all that important.
- Don't forget the corrugated material is proud of the gutter, and sits, with the edge of the material sitting in the middle of the gutter.
- The use of prototype photos is essential to achieve the correct look
- The material can be obtained from the retailers mentioned on the resources page.

Resources

- Brass Section
  - Special Shapes Brass
- Styrene Section
  - Evergreen Styrene
- Paint
  - Floquil Paints
- Corrugated Aluminium
  - Model Railroad Craftsman
  - The Railcar
- Local Suppliers
  - Casula Hobbies
  - Berg's Hobbies