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DUO system *capping formwork*

dawson construction plant

DUO system user guide



parts required & quantities

The table below details the parts required for the DUO system.

The quantities required can be calculated from the formulae in the table. The number of DUO panels required, **n**, is the calculated from the desired pour length divided by 0.9 (i.e. the panel width in meters). The result must be rounded up to the next whole number.

For example, for a pour length of 15 m: $n = 15 / 0.9 = 16.66 = 17$.

Part	Quantity	Example for 15 m pour length
DUO Panel	n	17
DUO Coupler	$3n - 3$	$3 \times 17 - 3 = 48$
PVC Tube	$n + 1$	$17 + 1 = 18$
Cover Cone	$2(n + 1)$	$2 \times (17 + 1) = 36$
Dywidag Tie Rod	$n + 1$	$17 + 1 = 18$
Wingnut Pivot Plate	$2(n + 1)$	$2 \times (17 + 1) = 36$
D20 Plug	$3n$	$3 \times 17 = 51$
Prop Assembly	$n + 1$	$17 + 1 = 18$
Prop Base Plate	$n + 1$	$17 + 1 = 18$
Bottom Panel Clamp	n	17
Top Panel Clamp	n	17

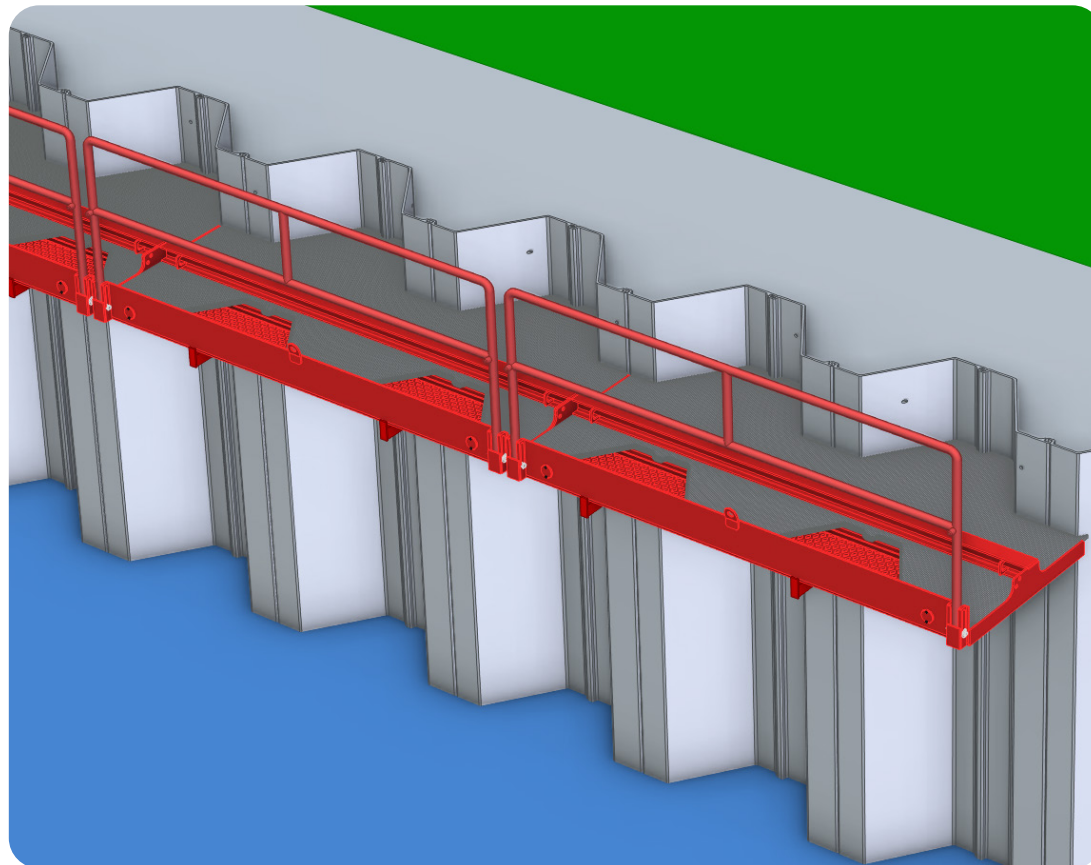
DUO system user guide: step 0

Install the DCP capping formwork system as standard.

Refer to DCP's layout drawing for details of the system required.

Refer to the capping system manual for full installation instructions.

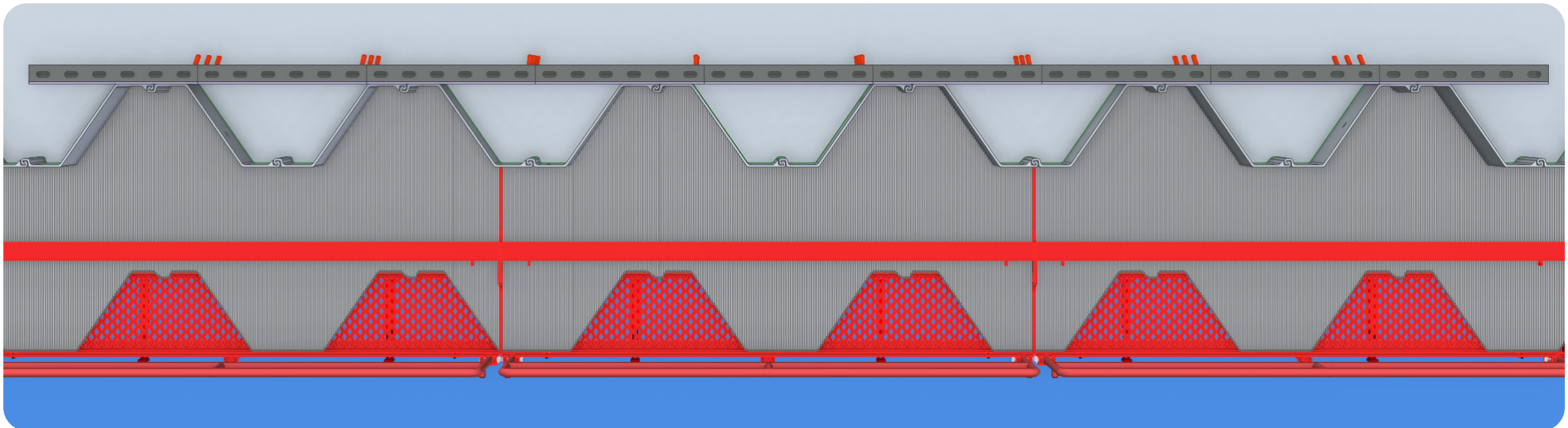
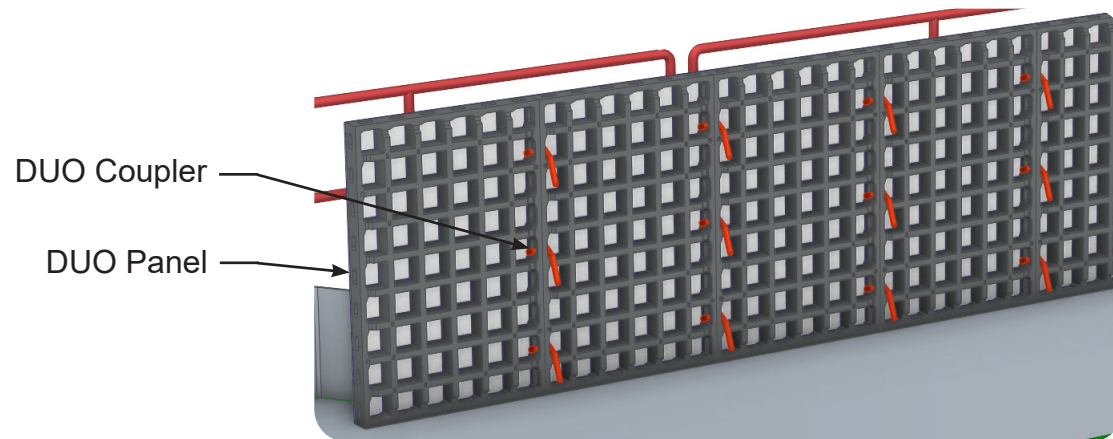
DCP recommend reading & understanding the entirety of this user guide before starting work.



DUO system user guide: step 1

Link the DUO Panels together on the ground side using DUO Couplers. The Panels should be arranged with the shortest length along the ground, and the longest length vertical. Three DUO Couplers should be used between each pair of adjacent Panels.

Push the Panels as close as possible to the pile wall. If there is reinforced bar (not shown), push the Panels up next to it.



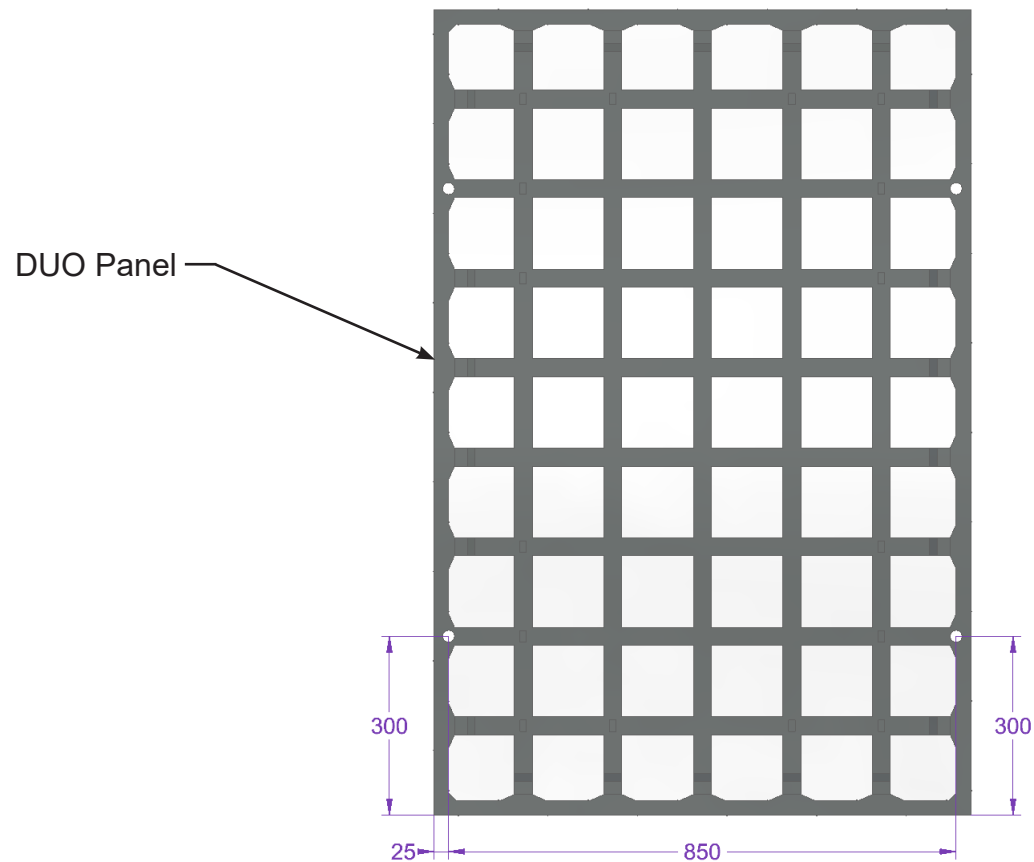
DUO system user guide: step 2

Spot through the bottom holes in the DUO Panel to mark on the piles where the holes need to be drilled for the Dywidag Tie Rods.

Bear in mind that the holes being spotted will need to align with the both sides of the DUO panelling, on either side of the concrete cap.

The holes to be spotted through are on the outer edges of the panels, 300 mm up from the ground.

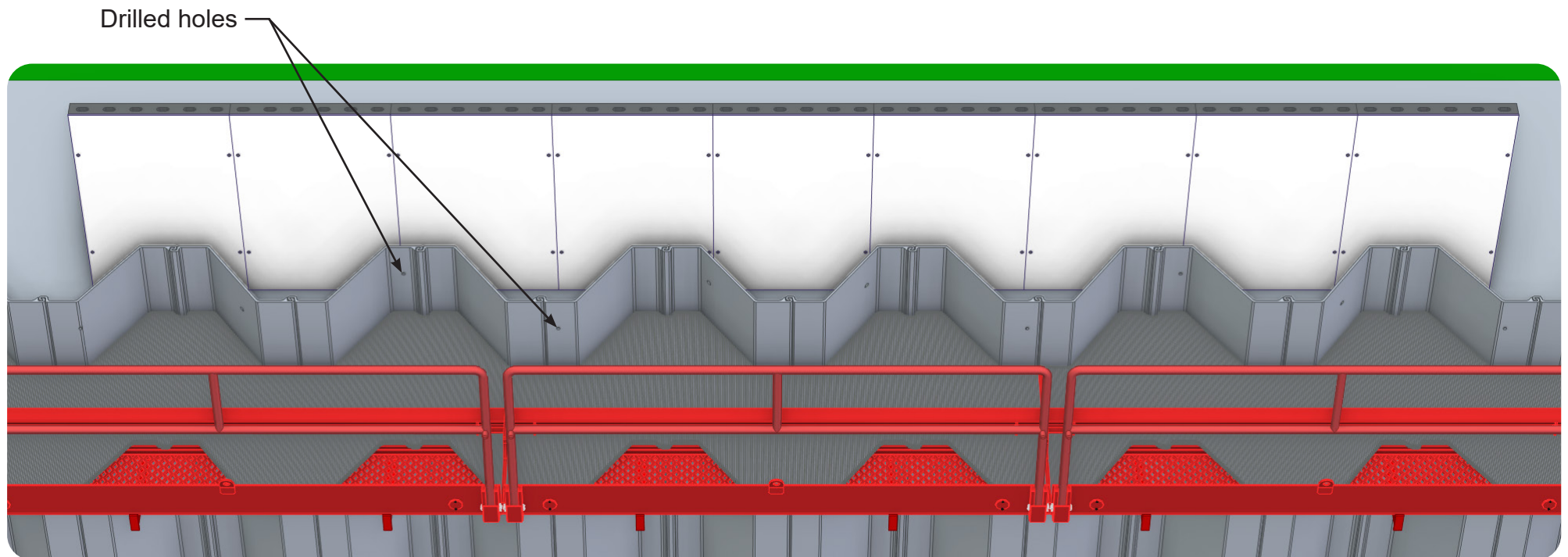
Where two Panels connect together, there will be two holes side by side. Only one of the two holes needs to be spotted through.



DUO system user guide: step 3

Drill / burn holes in the piles where marked.

The holes should be $\text{\O}30$ mm minimum and either 900 mm or 850 mm apart.



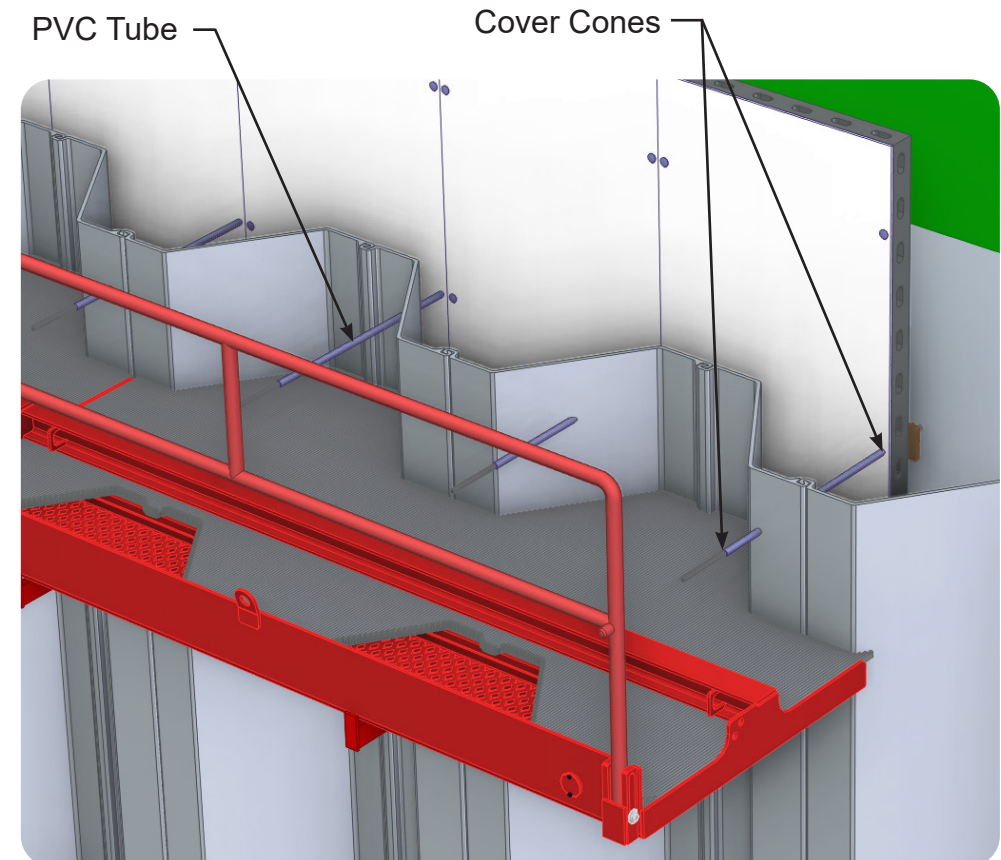
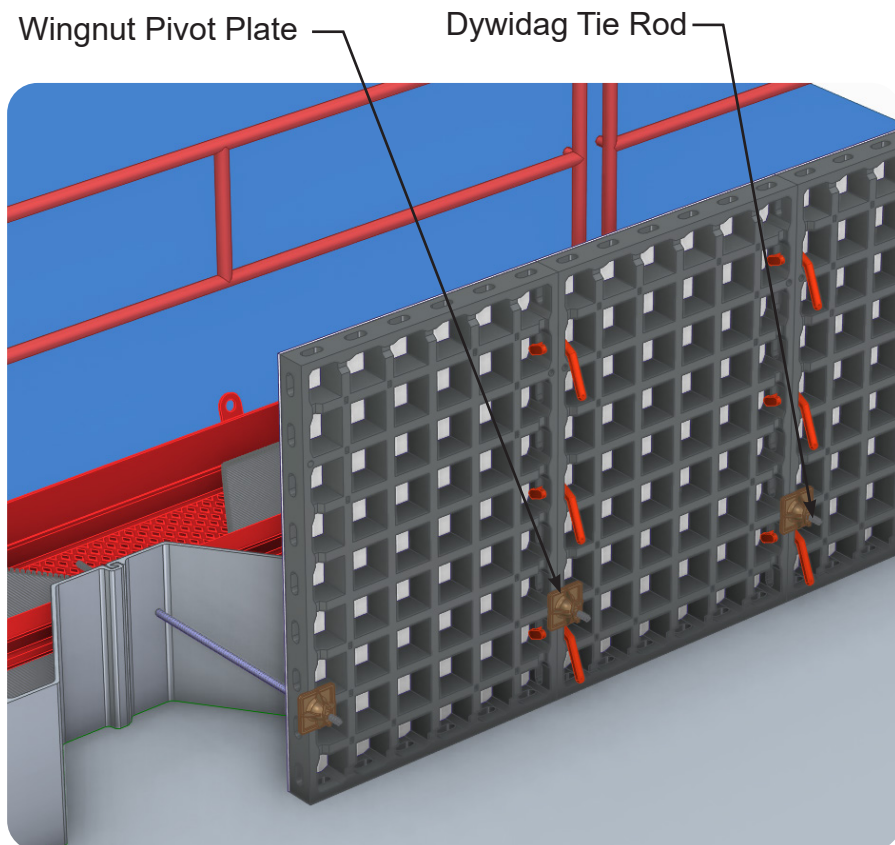
DUO system user guide: step 4

Cut the PVC Tubes to length based on the desired cap width. Slide them through the piles and fit the Cover Cones to each end of each Tube.

Align the ground-side Panels with the PVC Tubes. Insert the Dywidag Bar through the Panels & Tubes.

Fit the Wingnut Pivot Plates over the Dywidag Tie Rods and butt up to the Panels. Do not tighten at this point.

One PVC Tube is required per Panel joint, with an additional Tube at either end of the run. Two Cover Cones are required per PVC Tube.



DUO system user guide: step 5

Assemble the DUO Panels on the soffit side using the DUO Couplers.

Move the Panels into position, ensuring the holes align with the opposing Panels on the ground side.

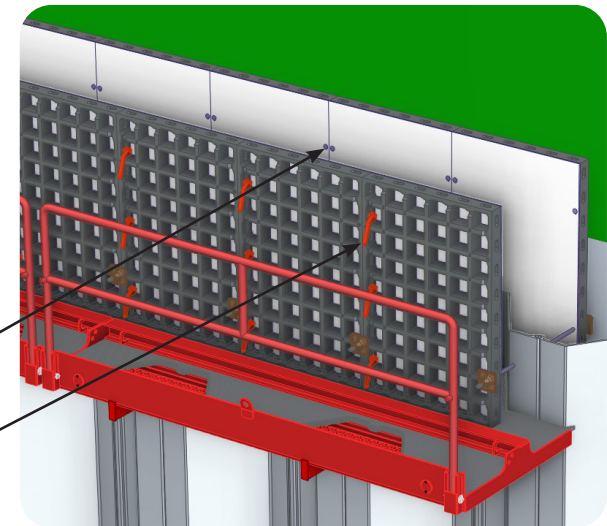
Slide the Dywidag Tie Rods through the holes, and fit the Wingnut Pivot Plates.

Tighten the Wingnut Pivot Plates on both the soffit side and the ground side.

Plug any unused holes on the Panels using the D20 Plugs.



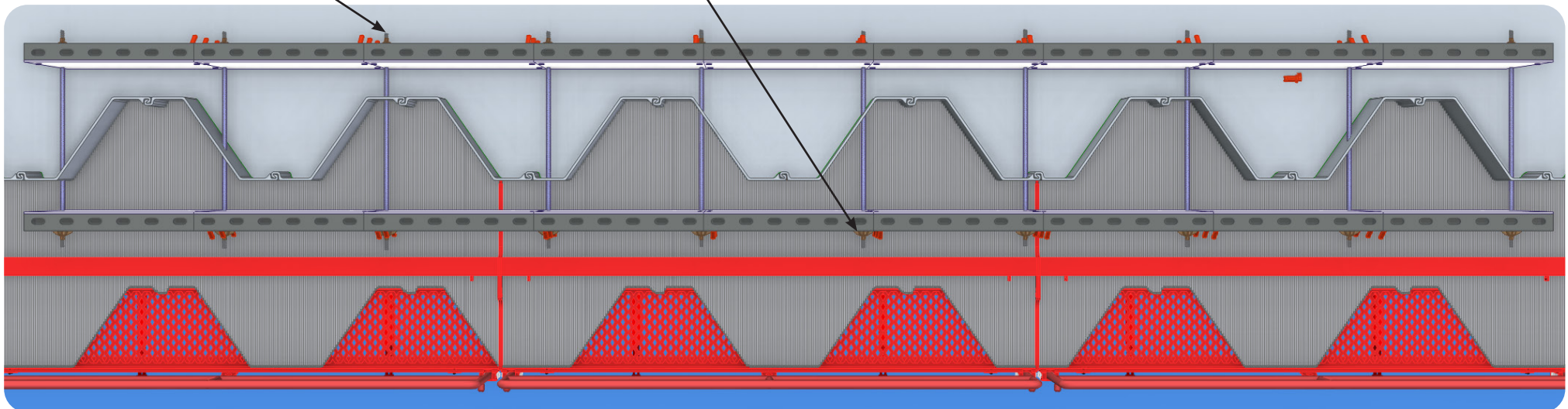
D20 Plug



DUO Coupler

Dywidag Tie Rod

Wingnut Pivot Plate



DUO system user guide: step 6

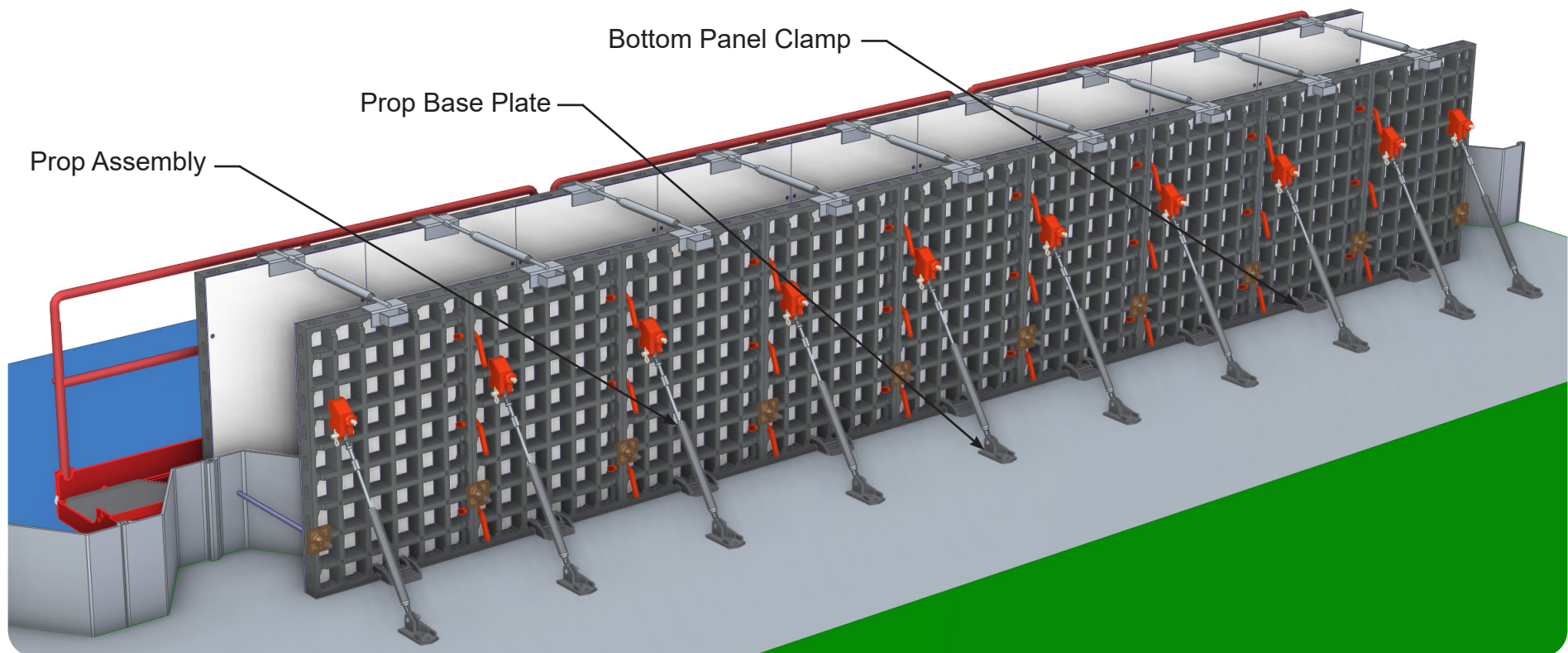
Ensure the Panels are positioned in the correct position to suit the required concrete cap overhang. Adjust if necessary.

Secure the ground-side panels in position using the Prop Assemblies, Prop Base Plates & Bottom Panel Clamps.

The fixing holes for the Prop Assemblies are pre-existing in the DUO Panels.

The Base Plates require 2x M24 bolts. The Bottom Panel Clamps required 2x M16 bolts. Note: the bolts are not supplied by DCP.

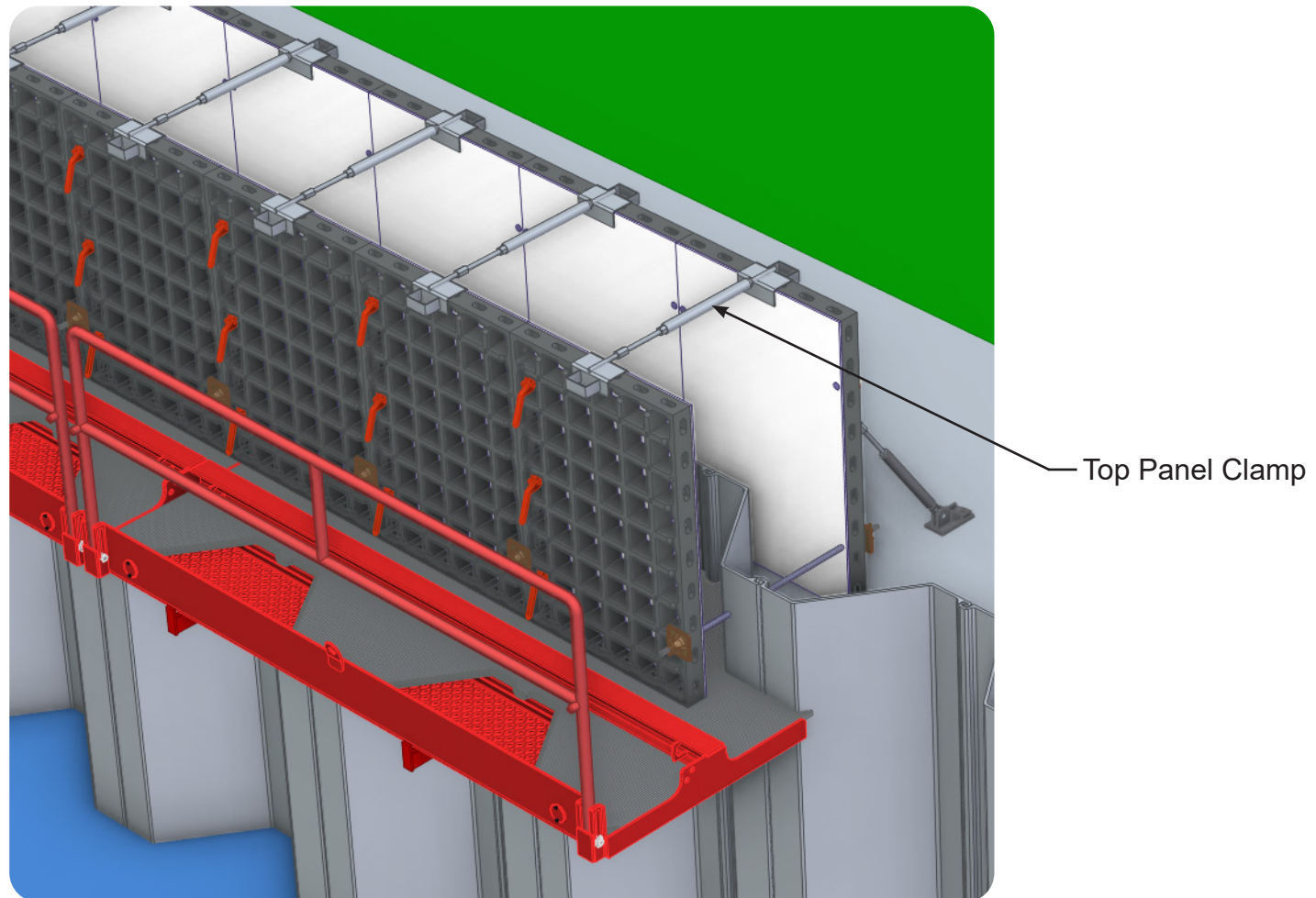
One Prop Assembly, Base Plate & Bottom Panel Clamp is required per panel. An additional Prop Assembly & Base Plate is required at the end of the run.



DUO system user guide: step 7

Fit the Top Panel Clamps to the tops of the Panels.

One Top Panel Clamp is required per Panel.

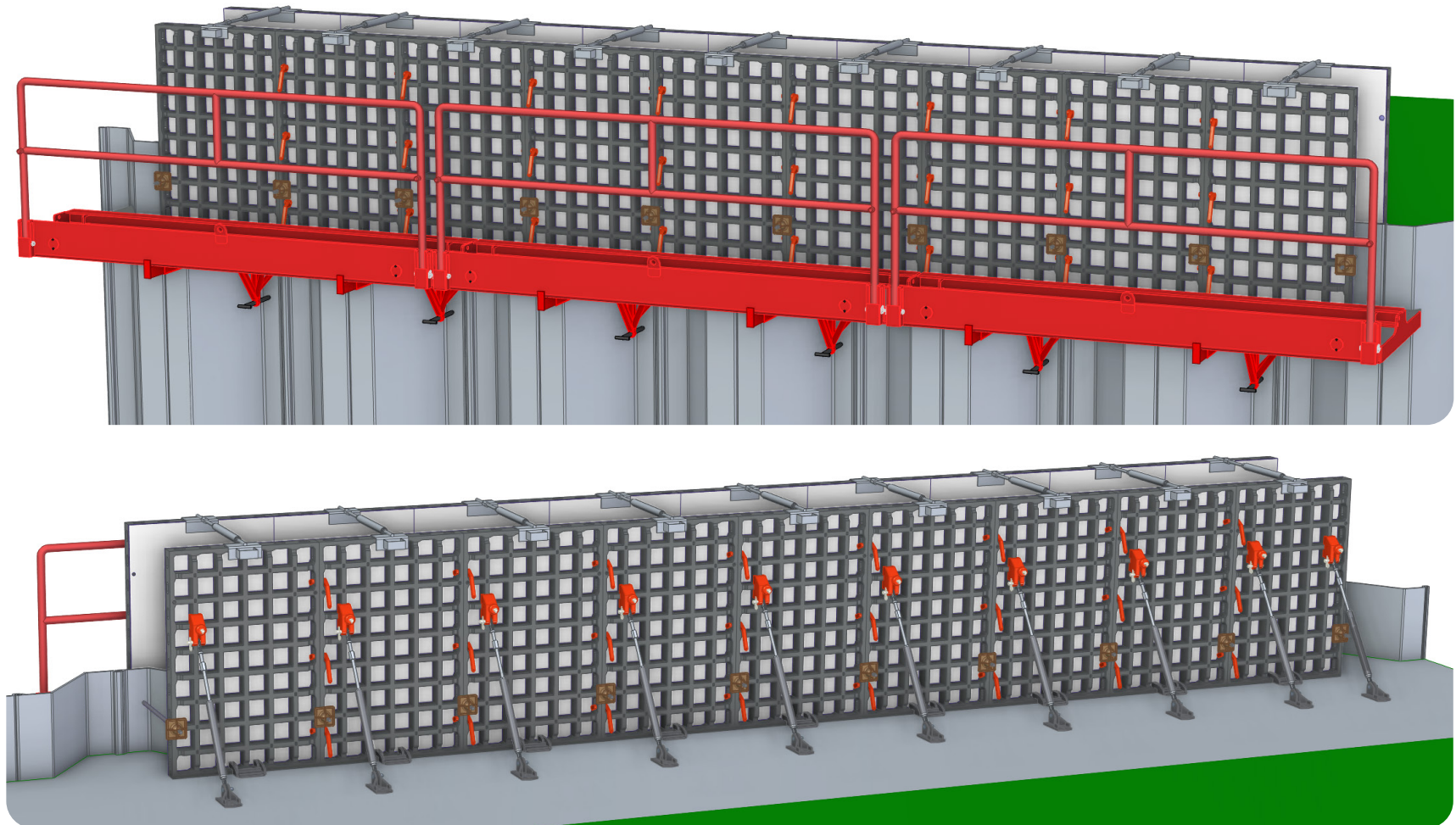


DUO system user guide: step 8

At both ends of the run, cut and secure Timber End Plates to the Panels (not shown).

The sourcing & fitment of the Timber End Plates is the responsibility of the contractor. They are not DCP-supplied items.

The formwork system is now complete and ready for pouring.





HPH1500

HPH1000

HPH1000



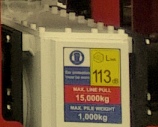
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