BEWI FormMaster Shuttering
Installation Guide

BEWI FormMaster Shuttering offers a permanent formwork solution for casting ground beam foundations. Made from durable polypropylene corrugated sheets, it's perfect for shaping the U-profile of ground beams and is also well-suited for applications requiring only side shuttering.

FormMaster Shuttering is an 8mm-thick, twin-wall, fluted polypropylene panel with a black finish. It is available in large, flat panels for on-site customisation by the installer or can be provided 'cut to size' to match specific ground beam depths.

It is also offered in pre-scored U-shape profiles to fit exact ground beam dimensions.

Ancillary products

- Concrete Spacers
- Polypropylene Spacers
- Connectors
- Tape

Product Selection & Suitability

It is essential to take into account the lateral earth pressure when installing Formmaster Shuttering and selecting the appropriate ancillary items.

Formmaster Shuttering is designed to hold the backfill pressure against the foundation and to deflect within an acceptable tolerance.

FormMaster spacers should be chosen in accordance with BS 7973-2:2001 so that they adequately resist the soil pressure.

It is advised to follow the recommendations provided by the dsigner in alignment with the NHBC guidelines (if applicable) and the FormMaster Shuttering data sheet.

Storage & Handling

FormMaster Shuttering packs and individual panels are lightweight and can be manually handled, following any site-specific manual handling regulations.

No specialist installation equipment is required. Standard on-site tools should be adequate.

Given the lightweight nature of the product, all FormMaster Shuttering sheets should be weighted down or secured if stored outdoors prior to installation. No additional storage requirements are necessary, as the product is resistant to both UV light and water.

FormMaster Shuttering sheets must not be exposed to flames or ignition sources. Fire risk management during storage should be carefully considered; detailed guidance is provided

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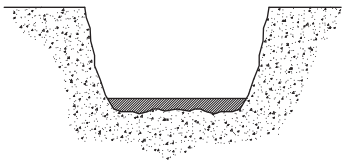
General considerations

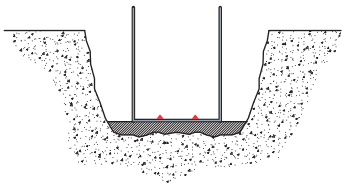
- Ground beam excavations should generally follow the guidelines in BS 6031:2009, with special attention to any site-specific safety procedures or requirements.
- Whenever possible, FormMaster Shuttering panels should be installed from outside the excavation; if entry is required, ensure appropriate safety measures are in place. Precautions, such as shoring, should be taken to prevent the excavation sides from collapsing during installation.
- If panel cutting is required, use appropiate tools and follow all necessary safety precautions.
- Each FormMaster Shuttering panel should be butted together and connected with FormMaster Shuttering connectors and staple clips.
- Joints should be taped using FormMaster Tape to prevent grout loss between panels.

FormMaster Shuttering installation

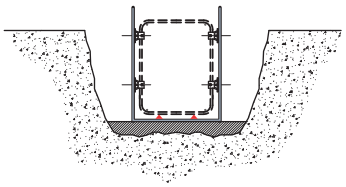
- FormMaster Shuttering panels should be positioned on a stable, level surface. A blinding layer is typically recommended beneath the panels for optimal support.



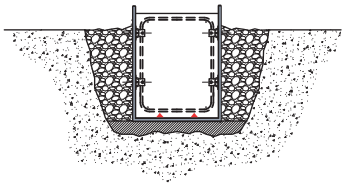
- Position the FormMaster concrete spacers along the trench, in a staggered distribution. If FormMaster U-section or if it being used with HeaveMaster GRP the concrete spacers go above them.



- Place the reinforcement cage on top of the concrete spacers and fix the plastic side spacers to the side of the reinforcement.



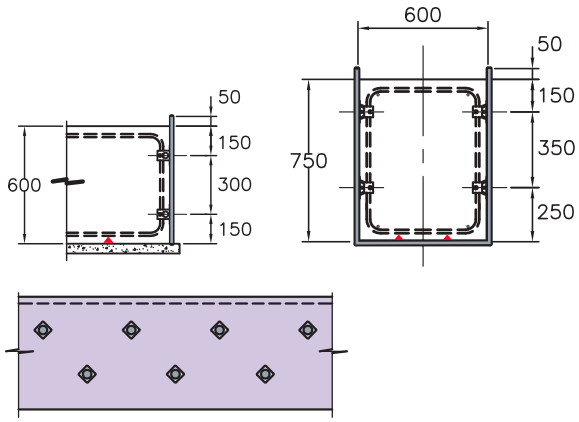
- If using FormMaster Side Shuttering, install it against the plastic spacers, then place loose backfill within 50mm of the finished concrete level.



- L-Section Shuttering can be installed instead of Side Shuttering to provide more stability to the formwork against the lateral pressure.

Spacers arrangement/distribution

- The selection of the number, type, and frequency of spacers should ensure adequate concrete cover between the reinforcement and the FormMaster Shuttering panels.
- Medium duty spacers are used if the lateral earth pressure is < 5.5 kN/m^2, High duty spacers are used for earth pressure > 5.5 kN/m^2.
- The NHBC recommends to limit the number of spacers to 11 per m^2, and to install them in a staggered arrangement at min. 300 mm centres and max 1m apart.



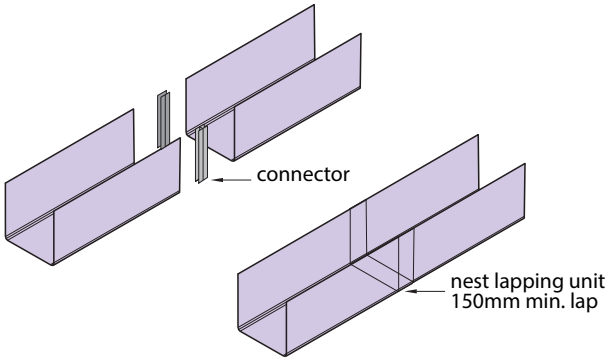
Connecting FormMaster Shuttering Panels:

Using jointing connectors

- Attach connectors to the vertical edges of each panel.
- Position adjoining panels so they fit into the open sides of the connectors and secure in place with appropiate means.
- Add braces if required to provide extra stability.

Aternative nest lap connection

- Overlap the unit by a minimum of 150mm and secure in place with appropiate means.
- Add braces if required to provide extra stability.



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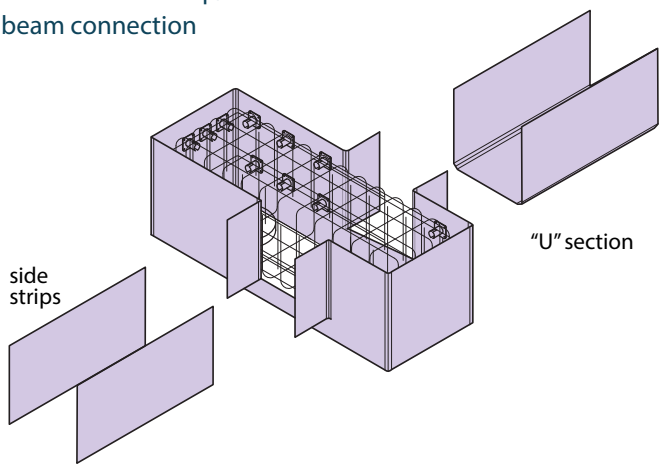
Inter-connecting beams

1: Trim the vertical panels so they can open toward the perpendicular connecting beam.

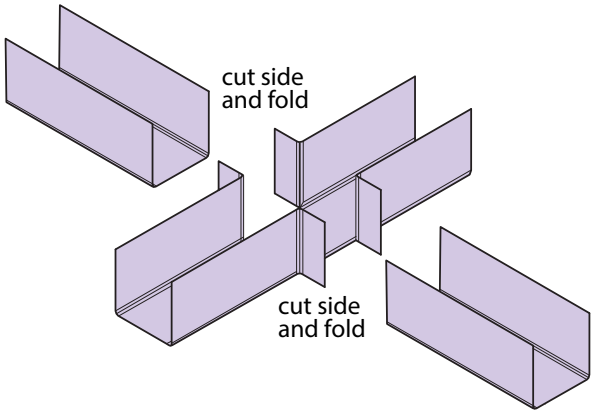
2: Place the perpendicular panels with their vertical edges positioned outside the opened connecting panel.

3: Use FormMaster Tape to secure the two connecting panels.

Recommended cap/base – beam connection



Typical beam intersection



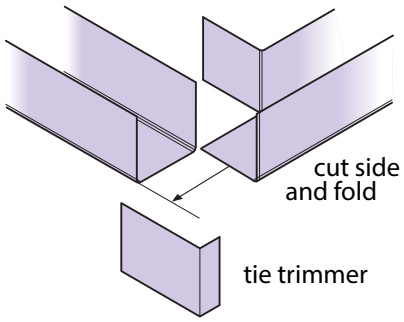
Corner Detail

1: Attach corner connectors before joining the perpendicular panels.

2: Position the adjoining panels so that their vertical ends fit into the open side of the connectors.

3: Secure the connection by placing staple clips over the connector and pressing them into both panels on either side.

External corner, no pile



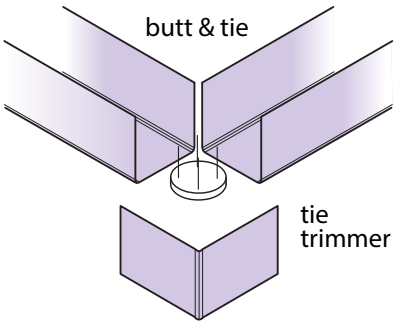
Pile Detail

1: For FormMaster Shuttering panels installed next to piles, cut the base of the panels to create a void that matches the pile diameter.

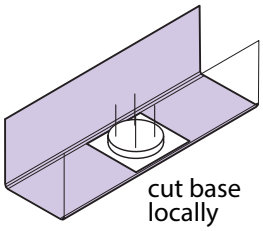
2: Position adjoining panels so that their vertical edges fit into the open sides of the connectors.

3: Use staple clips to secure the connection by placing them over the connector and pressing them down into both panels on either side.

External corner with pile



Pile intrusion



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