



MILBANK | GDECK™

INSULATED EPS FLOORING





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Milbank GDeck is our latest advancement in thermally efficient flooring – combining high-performance EPS (expanded polystyrene) insulation with precision-engineered concrete components. With an integrated top sheet, it reduces installation time and on-site waste, saving both time and cost from the ground up.

Smart Design, Built In

The system features **EPS infill panels** that sit above **prestressed concrete T-beams**, creating a continuous insulation layer. Each panel includes an **integrated structural rail**, minimising thermal bridging and supporting compliance with **Part L Building Regulations**.

Designed Around You

Every Milbank GDeck floor is tailored to your project. Our in-house team works with you to meet your layout and thermal targets – with U-Values as low as **0.09 W/m²K**.

Faster, More Efficient Installations

The integral structural rail eliminates the need for an additional top sheet, streamlining installation and reducing on-site labour. The system is quick to install and easy to handle, supported by the reliability and sustainability of our **low carbon prestressed T-beam construction**.

Versatile and Reliable

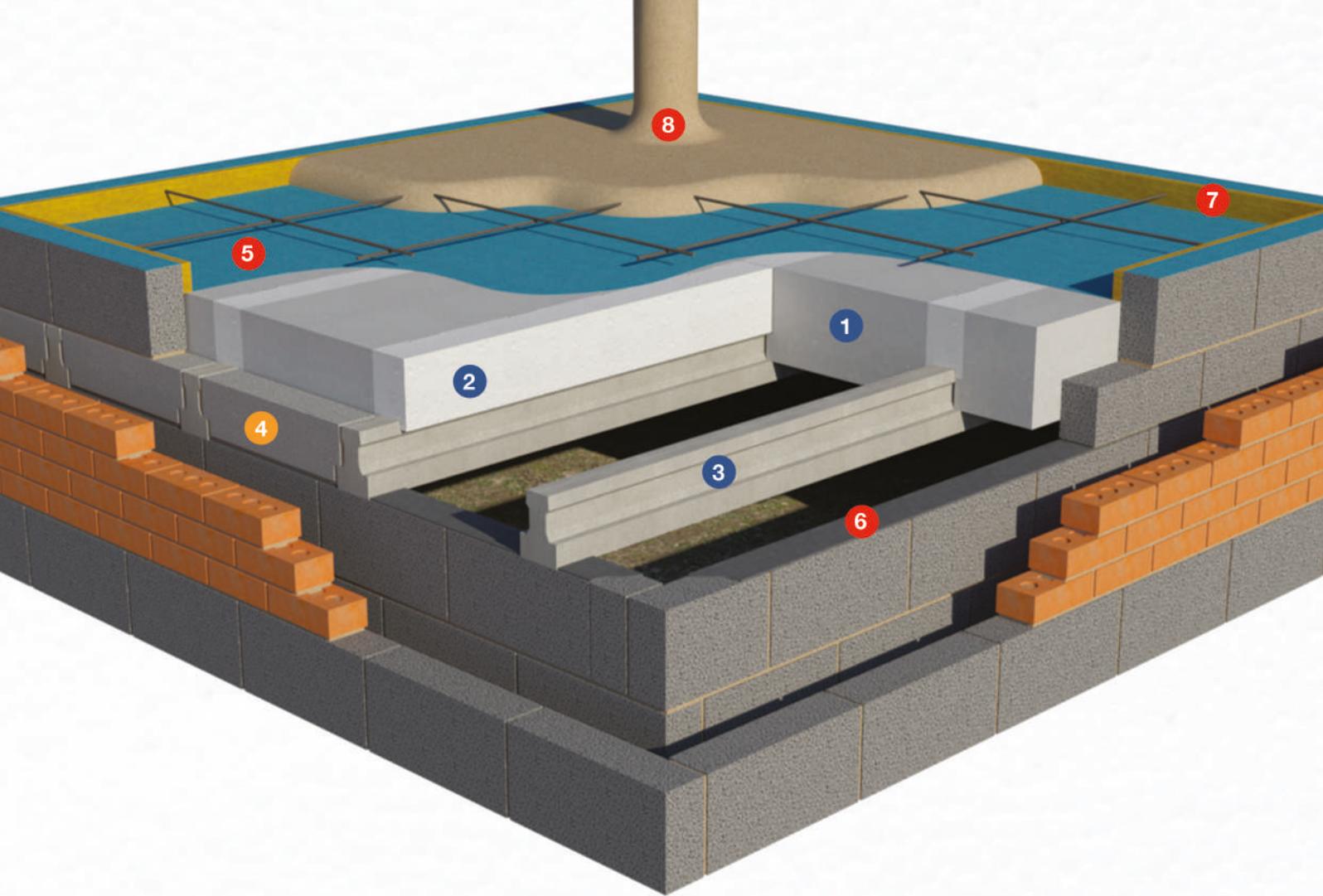
Ideal for a wide range of residential and commercial projects, Milbank **GDeck** offers strength, speed, and sustainability – making it a smart choice for modern ground floor construction.



The Benefits of Using Milbank GDeck Flooring

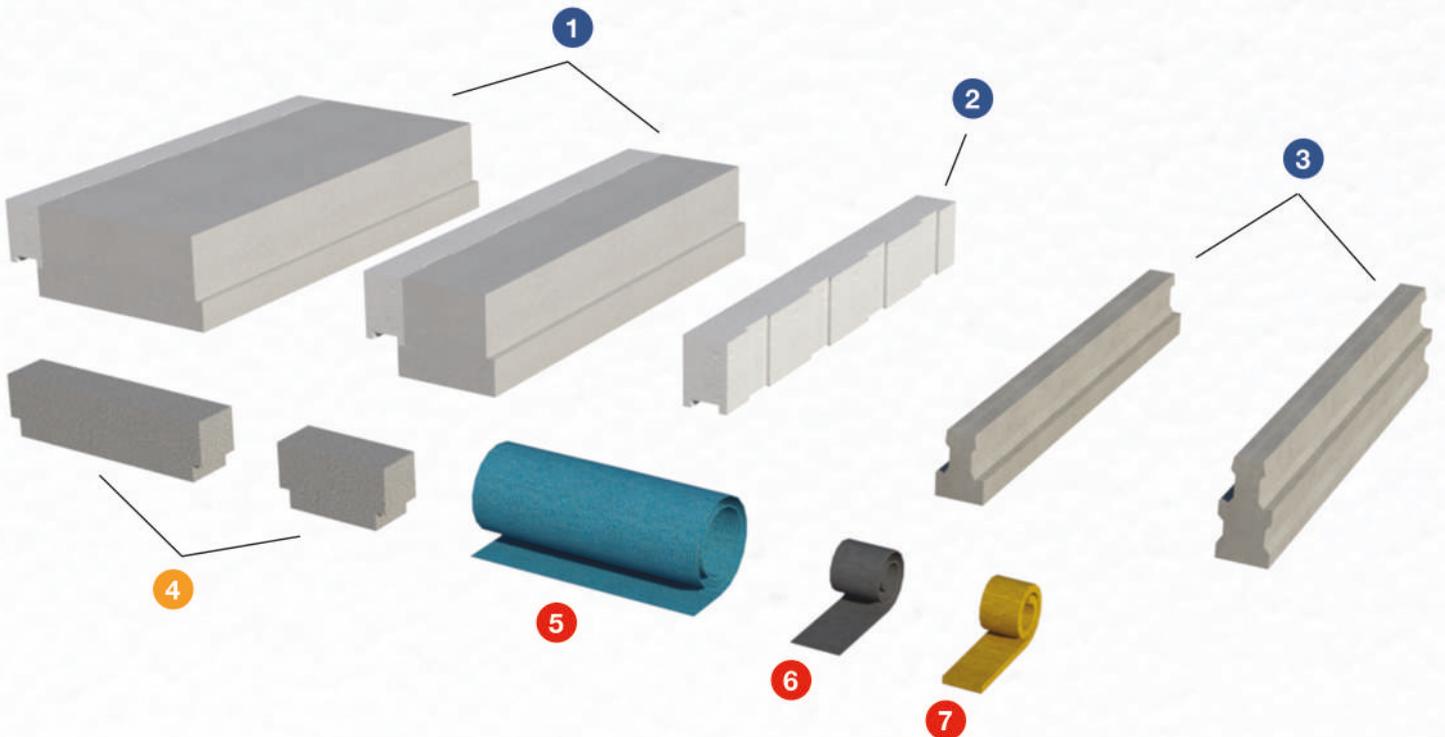
Milbank GDeck offers a wide range of benefits for housebuilders, developers, and contractors:

- ✓ **Integrated Top Sheet** – Speeds up installation and reduces labour costs.
- ✓ **Quick Installation** – Lightweight EPS panels are easy to manoeuvre and slot into place.
- ✓ **Reduced Waste** – Fewer materials, less handling, and less site waste.
- ✓ **Outstanding Insulation** – High levels of thermal resistance built into the system.
- ✓ **Compatible with Underfloor Heating** – Ideal for modern heating strategies.
- ✓ **A Walkable Platform** – Lightweight, but strong enough to walk on (and load out) without compromising structural integrity.
- ✓ **Sustainable** – Lower embodied carbon and made from 15% recycled materials, with recyclable components.
- ✓ **Clean, Easy and Safe to Work with** – At just 2kg, EPS panels are a lightweight alternative to 20kg concrete blocks, making handling and installation far easier.
- ✓ **Industry Compliant** – Milbank GDeck utilises components that are fully certified with an A+ green guide rating.



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Component Breakdown



Component Summary

 Included with Milbank GDeck

 Optional

 Not included with Milbank GDeck

Milbank GDeck comprises a range of carefully engineered components, designed to work in harmony to deliver outstanding thermal performance, reduce upfront construction costs, and enhance long-term energy efficiency for all users.

1 **EPS Insulation Module (Infill Panels)** – The EPS panels are available in both 275mm and 545mm sizes and are designed to replace your standard concrete infill block.

2 **EPS Insulation Module (Load-bearing Rail)** – The EPS load-bearing rails are designed to sit on top of the prestressed concrete beams. They are interlocked to an infill panel and come as one unit. Separate load-bearing rails are required when you have multiple beams tight together.

3 **Prestressed Concrete Beam** – Milbank Concrete Products manufacture both 155mm and 225mm deep lightweight prestressed concrete beams, suitable for spans up to 6.5m.

4 **Closure Blocks** – Closure blocks are used to finish the row of EPS insulation infill panels.

5 **Damp Proof Membrane** – The damp proof membrane illustrated is for guidance only. It shall be specified from an external source and installed in accordance with the manufacturer's instructions.

6 **Damp Proof Course** – The damp proof course is rolled into place onto the base of the bearing wall, before the concrete beams are laid, to prevent the spreading of moisture from the ground.

7 **Perimeter Strips** – The perimeter strips are installed to line the edge of the floor solution, preventing any thermal bridging between the interior wall and the concrete topping.

8 **Concrete Topping** – The concrete topping provides the essential structural capacity, load distribution, and a suitable finished surface for the Milbank GDeck system.

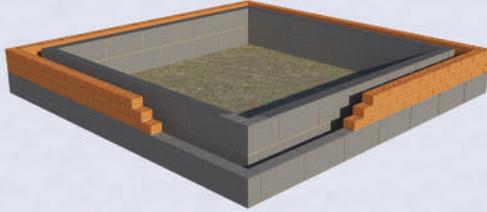
Installation Guidance

 Included with Milbank GDeck

 Optional

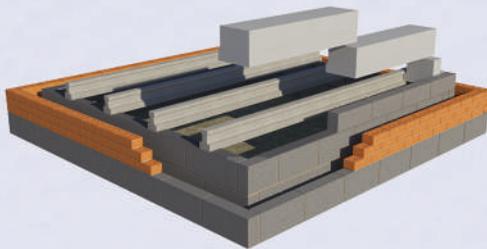
 Not included with Milbank GDeck

1



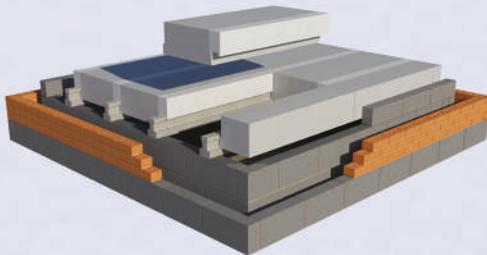
Bearing Wall Construction – The bearing wall is constructed to act as the structural base for the floor. The end walls will need to be erected, equal to or greater than, the top of the beams. This will provide enough friction/anchorage to support the EPS end panel. The damp proof course is rolled into place to prevent the spreading of moisture from the ground.

2



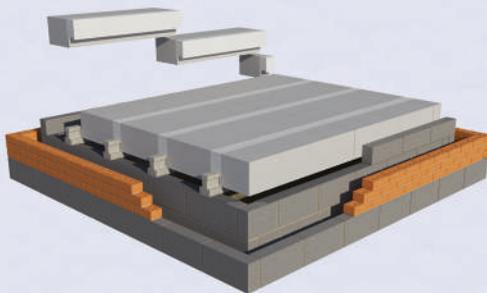
Laying the Beams – The beams are laid in accordance with the Milbank GDeck design drawings. The starter and end rows are both cut from one singular 545mm wide panel. The starter block will be the half, without the load-bearing rail attached. The first half is laid firmly into place, ensuring it sits onto the lip of the beam and vertically flush against the end wall. This is continued until the end row. To reduce chance of creep, it is advised to slide the beam inwards towards the EPS end panel to achieve a snug fit.

3



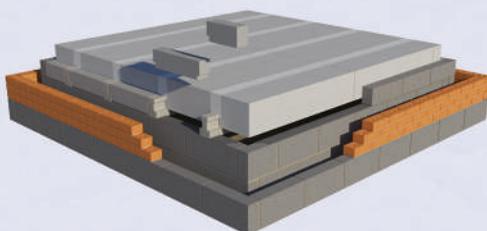
Laying the Infill Panels/Load-bearing Rails – Each wide and narrow panel will come attached with a load-bearing rail. The remaining EPS infill panels are laid between and on top of the concrete beams. Any penetrations, such as plumbing, should be cut circular and tight to the piping, any gaps shall be filled with foam insulation. Install separate load-bearing rails over the multiple beams where required.

4



Laying the End Panels – Lay the final row of EPS panels as per the Milbank GDeck design drawings. Some creep may occur, so the remaining half from the starter row might differ from the layout drawing. Cut the end panel with a handsaw (or similar) to achieve the correct width and continue installing end panels to complete the row. The last panel will have the final load-bearing rail attached. Once all panels and rails are in place, the surface is safe for foot traffic. Three scaffold boards placed perpendicular to the beams will support a pallet of 90 medium-density blocks (1.2 tonnes), allowing trades to proceed. Place the pallet as close to the supports as possible.

5



Laying the Closure Blocks – The (optional) concrete closure blocks are designed to correspond with the width of the EPS infill and end panels. A bed of mortar is placed onto the wall between the area where the beams and the blocks are placed, ensuring the top of the block matches that of the beam level. This stage represents the last of the components supplied with the Milbank GDeck solution.

Installation Guidance



Included with Milbank GDeck



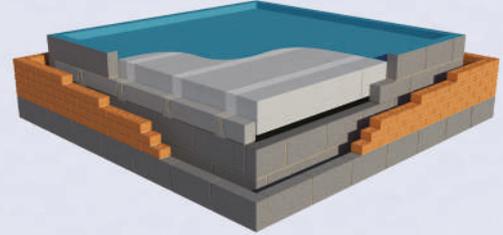
Optional



Not included with Milbank GDeck

Screed Rail & Laying the Damp Proof Membrane –

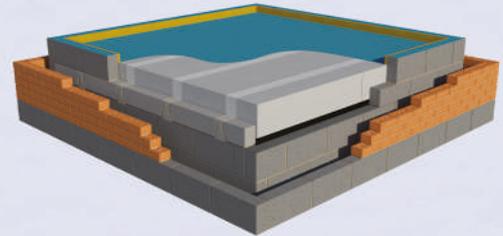
Brick or block courses are laid to bring the internal wall up to finished floor level. This wall is to be used as a screed rail to ensure the concrete topping is laid to the required depth. The membrane is pulled tight to ensure that it lies flat over the EPS panels and load-bearing rails, ripples or creases are removed. To maintain the full depth of the topping at the edges of the floor, care is taken to ensure the membrane sits flush where the floor meets the wall. It is then pulled over the screed rail to complete installation.



6

Laying the Perimeter Strips –

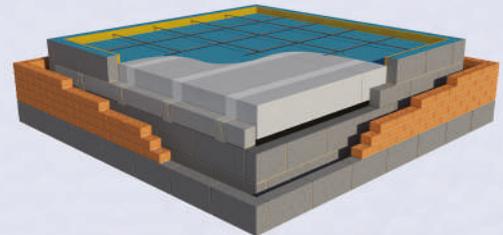
EPS perimeter strips are installed throughout the screed rail and to any internal walls of the development to eliminate thermal bridging between the walls and the concrete topping.



7

Laying the Structural Mesh/Fibre –

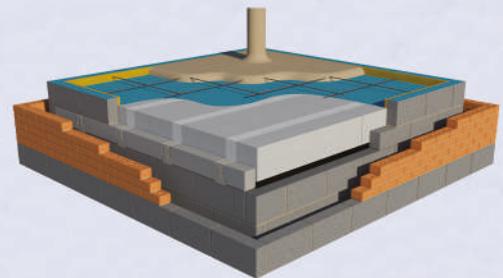
A mesh/fibre is laid in accordance with the concrete topping specification. Please note, image is for illustration purposes only and must be carried out by a professional.



8

Laying the Concrete Topping –

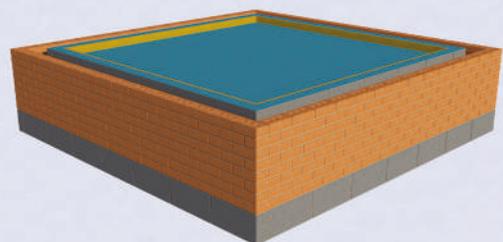
The specified structural concrete topping is poured to the required depth, ensuring the EPS infill panels and top sheet are not disturbed during the flow of the concrete. Please note, image is for illustration purposes only and must be carried out by a professional. The concrete shall not be poured on the panels or the load-bearing rails from heights greater than 500mm.



9

Milbank GDeck is Complete –

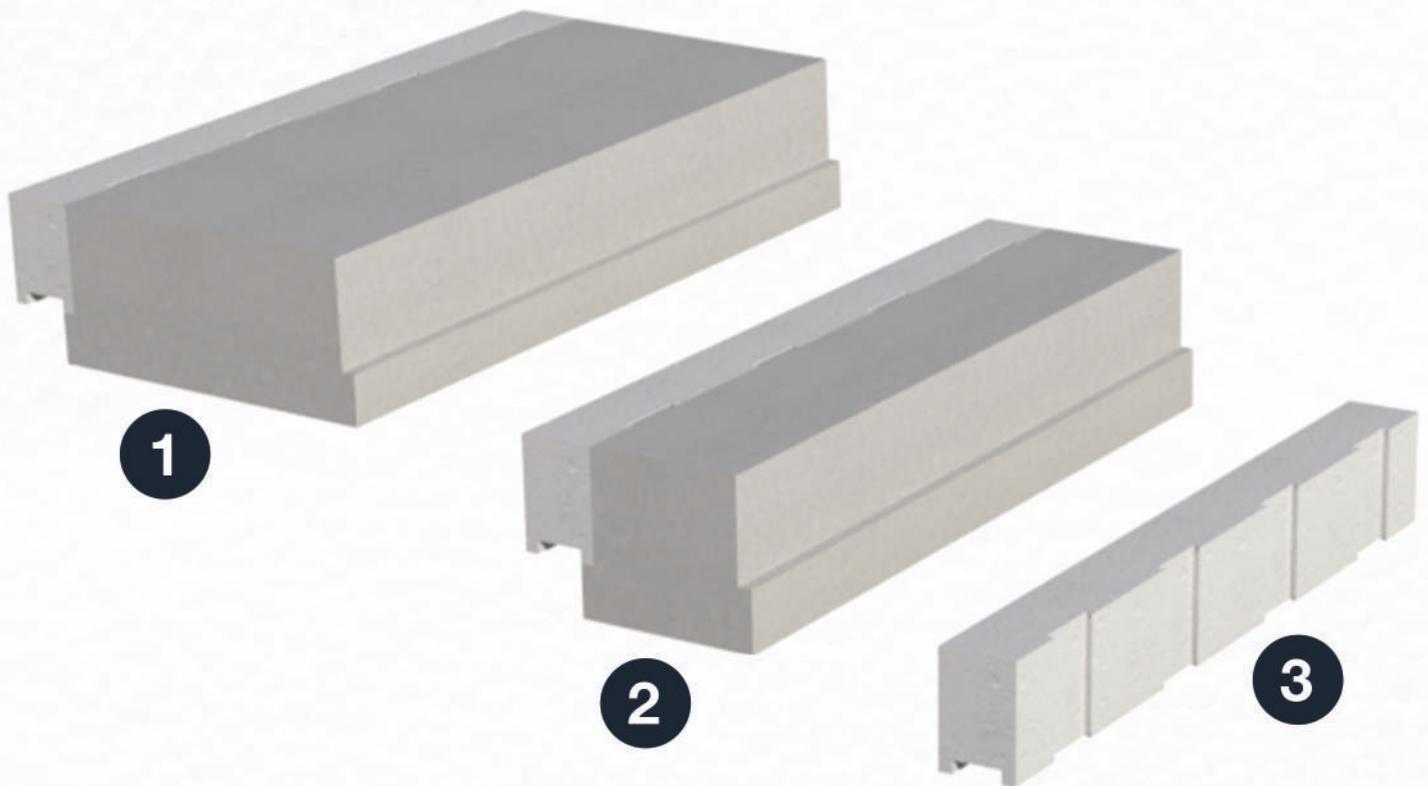
The insulated thermal flooring solution from Milbank is successfully installed and complete. Once the concrete topping has cured, the floor is ready for follow on trades to continue with required building works.



10

EPS Module Information

Milbank GDeck is comprised of three components and is available in three depths to cater to your U-value requirements.



The three components are made up of a **Wide Panel 1**, a **Narrow Panel 2**, and a **Load-bearing Rail 3**.

Wide Panels are 545x1200mm and Narrow Panels are 275x1200mm. Both Wide and Narrow panels come with a load-bearing rail attached.

Separate load-bearing rails can be ordered when required. For example, if you have a section D-D, one additional separate rail would be required.

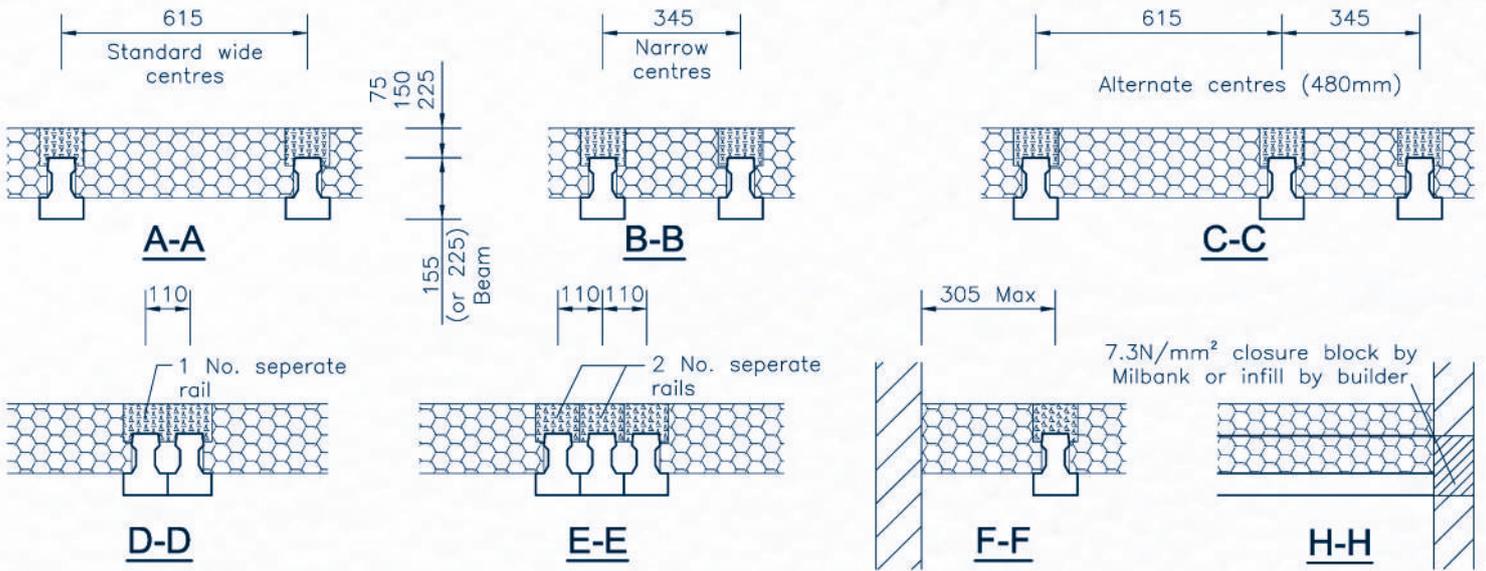
The starter and end rows are made from cutting a full wide panel in half. The half without the rail attached would be the starter panel, the other half is then cut to suit the remaining gap at the end row, utilising the rail attached.

All units are 1200mm long and can be cut on site to the required length using basic tools such as a handsaw. The panels have guidelines every 100mm to allow for efficient cutting when required. A cut panel can be a minimum of 300mm, unusable cuts shall be avoided by using two larger cuts.

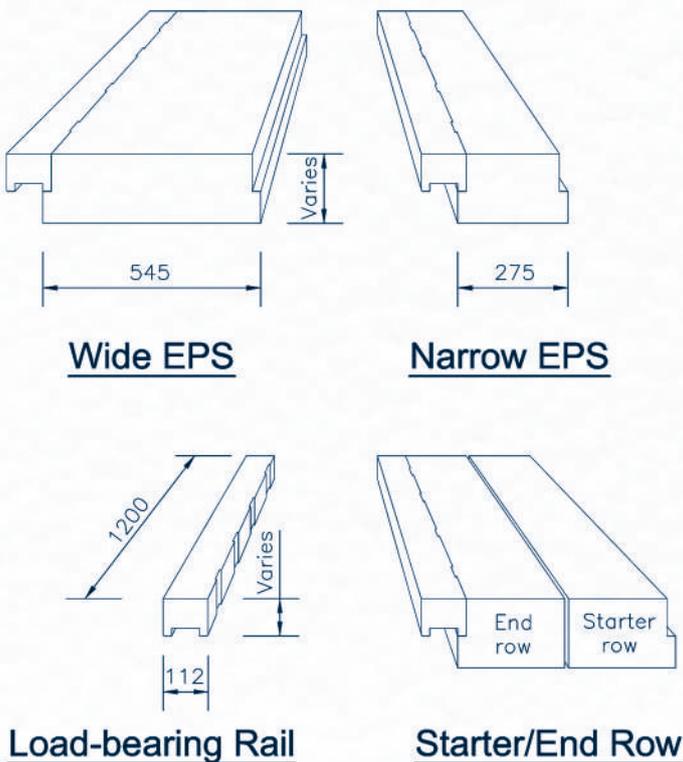


Technical Information

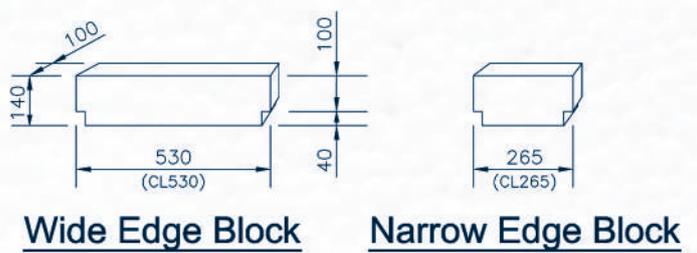
GDeck Typical Details



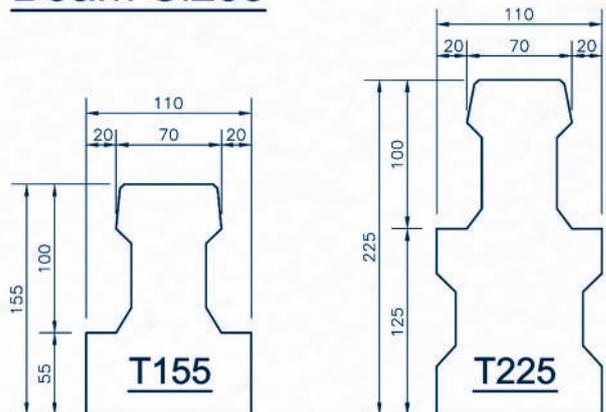
EPS Panels



Edge Blocks - For T155 Only



Beam Sizes





Frequently Asked Questions

1 What concrete topping should be used?

The overall depth of concrete topping above the services is to be 65mm. For standard concrete, the slump should be Class S3 (100 to 150mm) or S4 (for spot samples taken from initial discharge, 140 to 230mm). See datasheet for structural mesh reinforcement specifications.

2 Can I use an underfloor heating system?

Yes, an underfloor heating system is completely safe to use in conjunction with Milbank GDeck. Plastic pegs push into the EPS panels and hold heating pipes securely before concrete topping is applied. If using a radon barrier, we recommend attaching underfloor heating with self-adhesive pipe strips.

3 Can I walk on the EPS panels during installation?

Due to the interlocking EPS block and structural rail, the system works as a fully walkable surface and can support light construction traffic. Additional certification is currently being verified to enable the safe loading out of a full pallet of 90No 1450kg/m³ blocks, if positioned on two standard scaffold planks spanning between the beams.

4 What holds up the end panels against the wall?

Due to their positioning against the internal wall, the EPS end panels are restricted from rotating, ensuring a solid and fixed position is maintained at all times.

5 What's the best U-Value achievable?

As stated on Milbank GDeck's certification, the best U-value achievable is 0.09w/m²K by using a combination of EPS panels in a variety of depths.

6 How long can I leave it before applying the topping?

To avoid damaging the EPS panels, the concrete topping should be laid as soon as possible after installation. This stage must be completed to allow the construction of the building to proceed.

About Milbank Concrete Products

MILBANK
CONCRETE PRODUCTS

Milbank Concrete Products offer the most comprehensive precast concrete product service in the UK, providing a range of products encompassed within a complete full-package solution, including design, manufacture, delivery and installation.

**Beam & Block
Flooring**



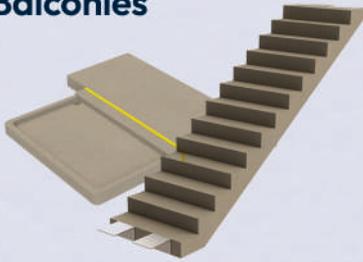
**Hollowcore
Flooring**



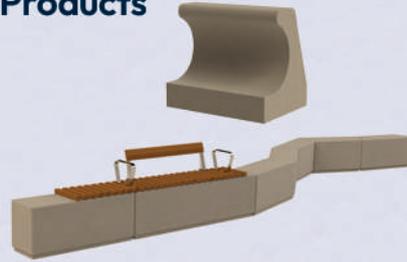
**Winder &
Dogleg Stairs**



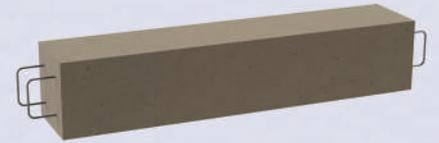
**Stairs, Landings &
Balconies**



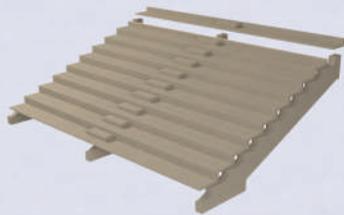
**Bespoke Concrete
Products**



**Ground
Beams**



**Stadia
Components**



**Kallisto Helical &
Curved Stairs**



**Lift
Shafts**



Columns



**EV Charging
Bases**



**Retaining
Walls**





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Milbank GDeck is our latest innovation in thermally efficient, insulated flooring systems – combining high-performance expanded polystyrene (EPS) insulation with precision-engineered concrete components. With an integral top sheet, it reduces both installation time and on-site wastage, saving you time and money from the ground up.

