# XPS Installation Guide

XPS Installation Method - Panel Pool Construction

XPS thermal boarding is an **Extruded** Polystyrene closed cell board (XPS). The boards 1200 x 600 x 80mm will enable you to prevent minimal heat loss through the walls and floor (optional) of the pool. **IMPORTANT**: do not be tempted to use cheaper alternative under floor insulation such as EPS, Jablite, Polyurethane, Polystyrene or similar products as these absorb water and will have an adverse effect on retaining heat in your pool!

To insulate a panel pool wall structure read the following instructions. If panels have been supplied in increments of 6ft then trimming will be necessary using a handsaw.

STEP 1 Assemble pool wall and place into position as per manufacturers instruction. Do not place any concrete around the panel at this stage.
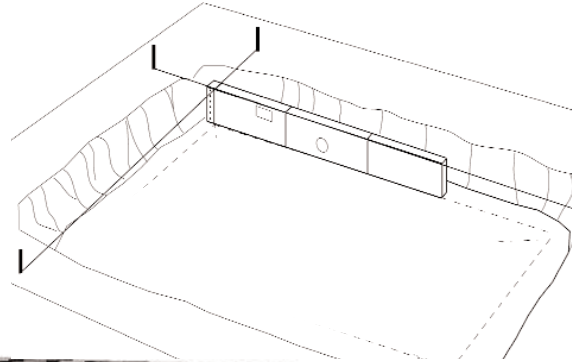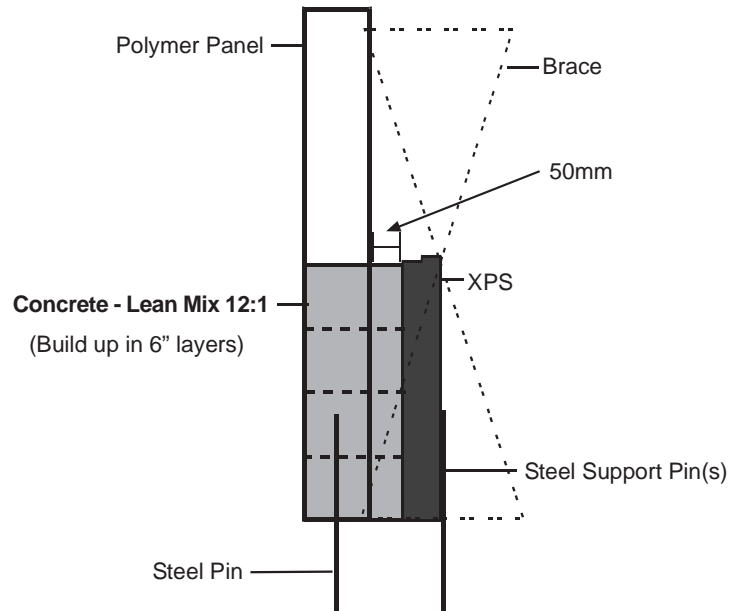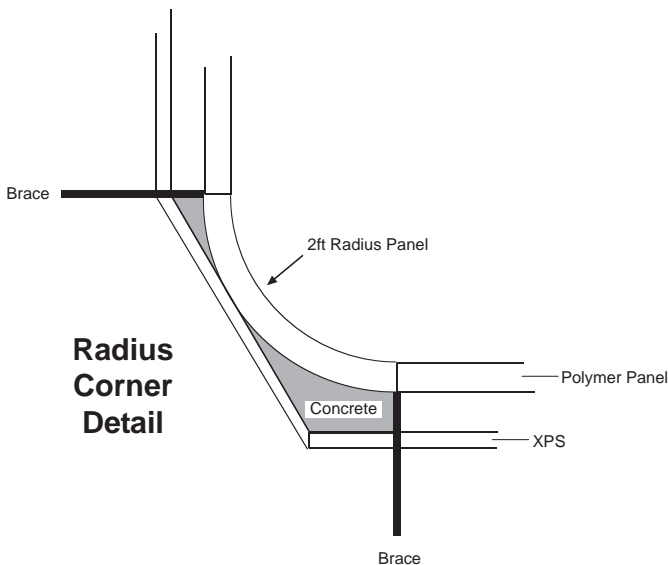
STEP 2 Place one layer of XPS boarding (50mm away from back of panel) horizontally and position at the base of the panel as per diagram 1. Using two steel support pins (450mm) insert these into the ground to temporarily prop up the XPS boarding. Repeat this process around the perimeter of the pool wall.

diagram 1.

XPS

Temporary Support
Steel Pin(s)

Brace
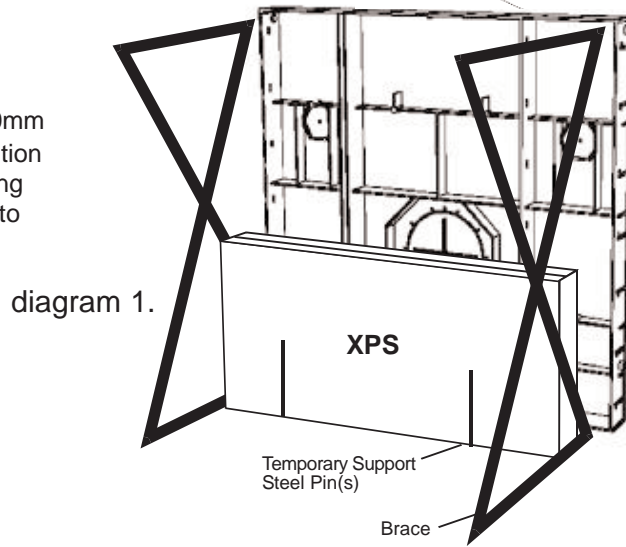
STEP 3 When the first layer of XPS is in position, infill between the panel and the boarding with a concrete lean mix (ratio 12:1). It is important to make the concrete mix fairly dry. A runny wet mixture may result in the boards being displaced or dislodge.

Build up in layers around the perimeter of the pool i.e. 6" depth layers.

Polymer Panel

Brace

50mm

XPS

Concrete - Lean Mix 12:1

(Build up in 6" layers)

Steel Support Pin(s)

Steel Pin

Brace

Radius Corner Detail

2ft Radius Panel

Polymer Panel

Concrete

XPS

Brace

STEP 4 Using a non-expansive material, backfill up to the height of the first XPS board.

Brace

Polymer Panel

XPS

Concrete - Lean Mix 12:1

(Build up in 6" layers)

Backfill - non expansive material ie.chalk, shingle, soil or concrete lean mix 15:1

Steel Pin

UNDISTURBED GROUND
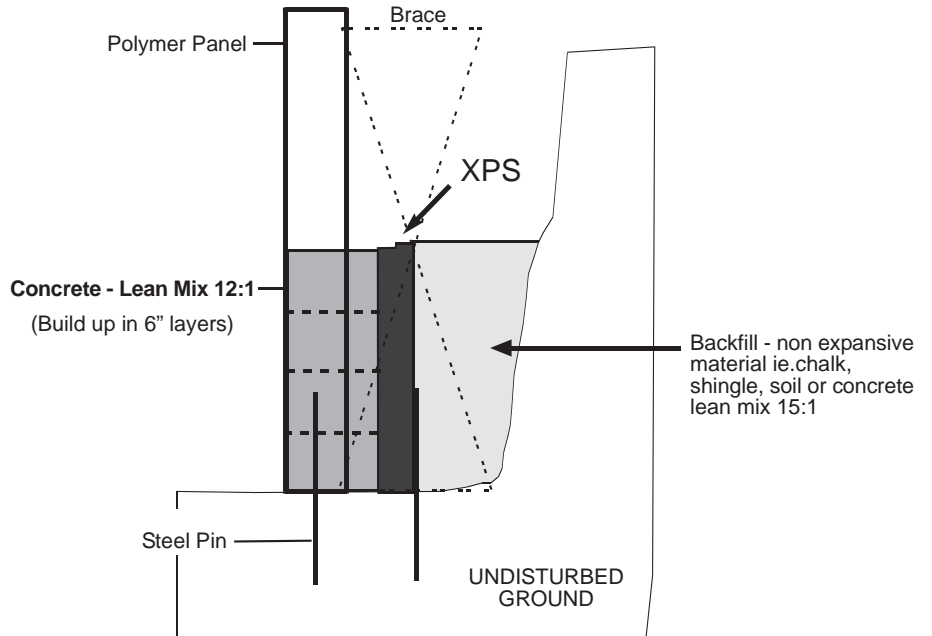
STEP 5 Apply 2nd XPS sheet on top of the 1st XPS board. **Prior to pouring** 2nd concrete stage, use either plastic stripping or wooden batons to hold the XPS boards in place, see Plan View diagram below.

It is important to make the concrete mix fairly dry. A runny wet mixture may result in the boards being displaced or dislodge.

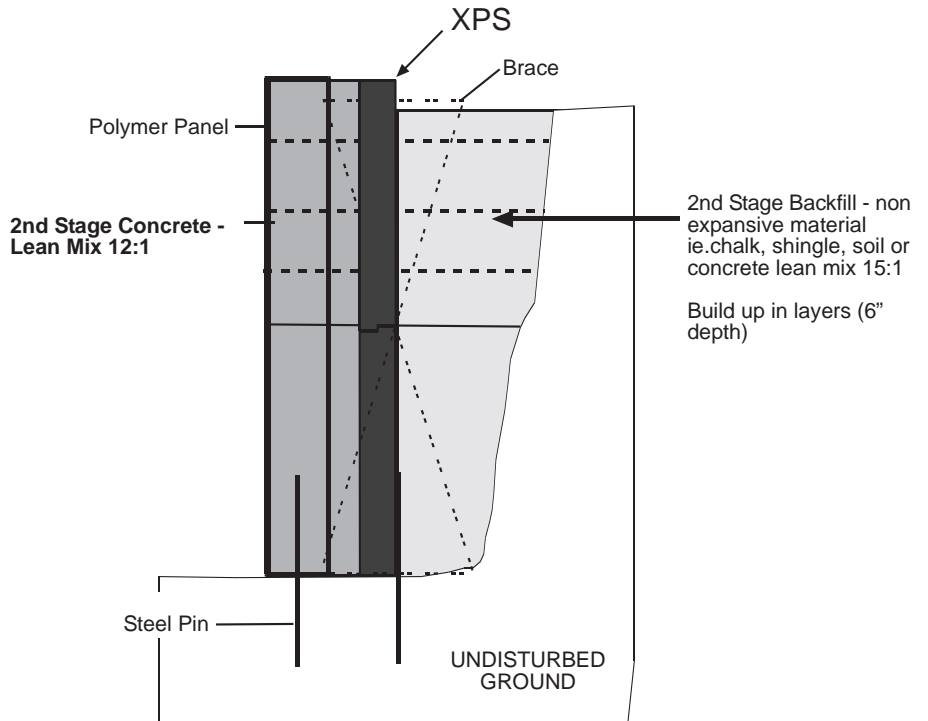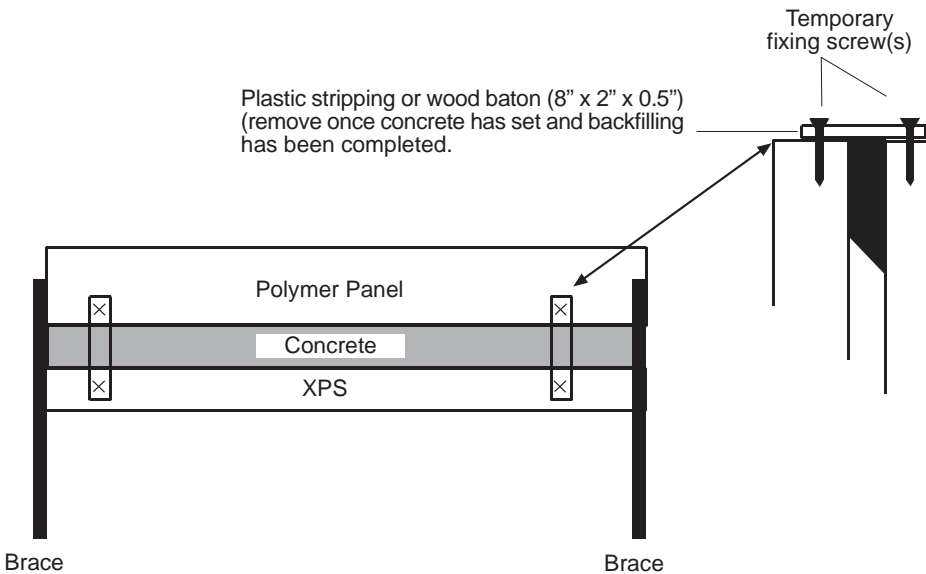**Build up in layers around the perimeter of the pool i.e. 6" depth layers. Commence backfilling at the same time in 6" layers.**

XPS

Brace

Polymer Panel

2nd Stage Concrete - Lean Mix 12:1

2nd Stage Backfill - non expansive material ie.chalk, shingle, soil or concrete lean mix 15:1

Build up in layers (6" depth)

Steel Pin

UNDISTURBED GROUND

PLAN VIEW

Temporary fixing screw(s)

Plastic stripping or wood baton (8" x 2" x 0.5") (remove once concrete has set and backfilling has been completed.

Polymer Panel

Concrete

XPS

Brace

Brace

Floor Installation

XPXS boarding can be used to insulate the pool floor. It is important to make sure that adequate soil has been removed prior to laying the down the XPS sheets. The amount of soil to be removed will depend on the ground conditions.

Ideally, you will need to form a flat level surface on which the XPS can be laid on. In the event that there are too many undulations or the ground conditions do not allow this, then it is our recommendation to blind the whole floor area with a concrete lean mix (ratio 15:1). The diagram below allows for 50mm depth but this can be increased or decreased dependant on site conditions.

Concrete - Lean Mix 15:1

150mm

80mm XPS

450mm Backfill - non expansive material ie.chalk, shingle, soil or concrete lean mix 15:1

Polymer Panel

UNDISTURBED GROUND

50mm Sand & Cement Screed

80mm XPS

50mm Concrete Levelling Base:Lean Mix 15:1

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50 mm — Coping

1220 mm
or
1006 mm — Panel

Excavation Detail
Flat Bottom Pool

130 mm

UNDISTURBED GROUND

Concrete - Lean Mix 15:1

450mm Backfill - non
expansive material
ie.chalk, shingle, soil or
concrete lean mix 15:1

150mm

80mm XPS

Polymer Panel

**UNDISTURBED
GROUND**

50mm Sand & Cement Screed

80mm XPS

50mm Levelling Base:Lean Mix 15:1

50 mm — Coping

Excavation Detail

Suitable for Kafko DIY 1.5m / 5ft Depth
option

1220 mm — Panel

130 mm

**UNDISTURBED
GROUND**

1067 mm

355 mm