Pre-Cast Wall Panels

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**Previous Projects:**

Old Phoenix Park Racecourse, Dublin  
N3 Blocks, Cloonlara Square Blocks & Glenesky Square Blocks (24000m²)

Adamstown Castle, Lucan - Residential Development Blocks 1,2,5 & 6  
(5200m²)

Bettystown Neighbourhood Centre Hotel, Bettystown, Co. Meath  
(6500m²)

Own Door Units – Fingal Bay Business Park, Balbriggan (1600m²)
Advantages of Precast:

- Wall panels are constructed off-site regardless of weather conditions and are rapidly assembled on site.

- As a result projects are completed sooner, leading to earlier occupancy and faster revenue returns.

- Precast concrete has unsurpassed fire ratings, readily achieving up to 4 hours fire resistance.

- Concrete will not burn or give off lethal fumes, and will retain its structural integrity for safe evacuation and fire fighting.

- In real fire situations, in temperatures above 1100°C, concrete has retained its structural stability even in complete burn out situations.

- Because it is impervious to wet and dry rot, the structure will not weaken over time.

- The density of the concrete provides excellent sound attenuation, thus reducing sound transmission.

- Wall Panels reduce vibration and have fewer joints through which sound can potentially travel.

- Lower maintenance costs and insurance premiums, together with greater occupant satisfaction and re-sale value.
PreCast Concrete Wall system

O’Reilly Concrete Precast concrete Walls

Wall dropped down so that tubes line up with T25’s

T25 Bars overlap in Wall

T25 Bars inserted for next Wall

Mesh in screed

T10 Bars bent over Floor Slab into screed

Screed poured over Floor slabs

Floor Slab

Floor Slab

Floor Slab

Floor Slab

Floor Slab

Floor Slab

Abbey slots provided in wall to allow brickwork to be tied to face of wall

Anchors cast in wall for Push Pull Props

Starter Bars from Floor slab

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Connection Details

Various connection methods can be used for Precast walls. The most common are:

1. Scarf Joints system
2. Pfeifer VS Rail system
1. Scarf Joint system

Scarf Joints line up as shown.

T25's are inserted and grouted.

T25's continue up to next Floor.
2. Pfeifer VS Rail system

Precast Walls line up. T12 Bar inserted into loops. Joint is shuttered either side. Walls are grouted as shown.
Wall Profiles
Different Profiles are available for Top of Wall
Typical Wall Details
Detail of Starter Bars

1 No T25
Through Horizontal Joint (Typical)

Typical Wall Details
O'Reilly Concrete Pre-Cast Concrete Wall Panels

Typical Rebar Drawing for Precast Wall
NOTES:
1. Cover to be 30mm.
3. T10 U. Bars @ 400 c/c Around Perimeter.
4. 2 No. T16 bars around perimeter of wall panel.
5. T16 L Bars at corners.

PANELS WITH OPES.
Use Rebar Detail as shown above.
Lintel over opes to be reinforced
with 2 No. T20 Bars in top, 2 No. T16 Bars in Center
and 2 T20 Bars in Bottom. and T10 Links @ 200 c/c.
Use 2T20 Bars under ope., T16 Bars at sides of opes
with T10 U Bars @ 200 c/c.
Provide T16 anti-crack Bars 800mm Long @ 45 degs.
at corners of all opes. as shown.

Typical Rebar Drawing notes
Typical Fabrication Drawings

Single row of T10 Bars Projecting 700mm @ 400 c/c

Push/Pull fittings 1.65m from bottom of Wall (Both Sides)
Weight: 11595 kg
Concrete Volume: 4.64 cu.m.

Single row of T10 Bars Projecting 700mm @800c/c

Push/Pull fittings 1.65m from bottom of Wall (face side)
Weight: 7320 kg
Concrete Volume: 2.9 cu.m.
Abbey Slots on Mould side @ 750mm centers
## Propping Sheet

<table>
<thead>
<tr>
<th>Wall Length</th>
<th>No. of Props Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>9Mts – 10Mts</td>
<td>5 PROPS</td>
</tr>
<tr>
<td>7Mts – 9 Mts</td>
<td>4 Props</td>
</tr>
<tr>
<td>4Mts – 7Mts</td>
<td>3 Props</td>
</tr>
<tr>
<td>0Mts – 4Mts</td>
<td>2 Props</td>
</tr>
</tbody>
</table>

* All Props must be bolted through Floor Slabs.
* If for any reason bolting through is not possible, O’ Reilly design office must be contacted immediately.

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**Type of Prop:** Perri Props RSS

Signed:_______________  Signed:_______________

John Lynch Safety Officer ORB
Photographs
O’Reilly Concrete Pre-Cast Concrete Wall Panels

Walls Delivered to site on A-Frames

Walls unloaded from Trailers
Walls stored on site in Wall Racks

Walls dropped into position – T25 Bars line up with tubes in wall
Walls propped and plummed with Push-Pull props

Joints grouted
Building constructed with precast Walls & Floors

Precast Walls, Floors & Stairs
Apartment Blocks constructed with precast Walls

Prestressed Floors fitted on Precast walls