

# Concast Precast

## Stadium Design



- Raker Beams
- Seating Units
- Multi-Storey Columns

- Hollowcore
- Wideslab
- Wall Panels



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**PRECAST CONCRETE SPECIALISTS**

# Concast Precast Ltd

## Stadium Design

Concast is Ireland's leading structural precast concrete manufacturer. Since its establishment in 1975, Concast has worked with Ireland's foremost Architects, Structural Engineers and Contractors to develop civil and structural engineering structures throughout Ireland and the UK. Concast provide a complete service from design, manufacture, transportation and installation of a wide range of precast products.



### Previous Stadium work

Concast have worked on many of the most innovative stadium designed in Ireland, including the internationally renowned Croke Park - a 82,000 capacity stadium in the heart of Dublin City, The O2 Arena (Dublin), The National Aquatic Centre (Dublin), Thomond Park (Limerick), Turner's Cross (Cork City), Dailymount Park (Dublin), Wexford Park (Wexford) etc.

Concast is at the forefront of Stadium Design in Ireland and our team of designers, production specialists and installation crews are always available for advice and assistance.

Left: Croke Park - Dublin

### Croke Park Redevelopment, Dublin

The stadium stands 35m high, it is constructed in three tiers, consisting of a main concourse, a premium level and the upper concourse, and provides world class facilities including bars, restaurants, conference facilities and a GAA museum.

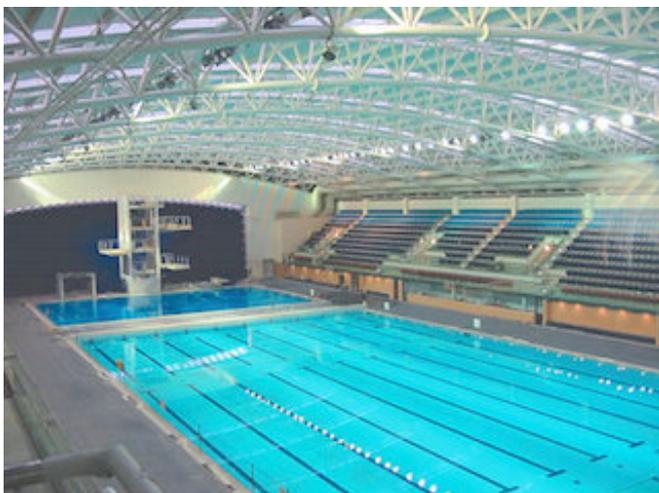
In Croke Park, Concast installed over 3,600 seating units, as well as multi-storey columns, hollowcore slabs, stair units and wall panels.

The Croke Park redevelopment earned the Concrete Design Awards (Irish Concrete Society) 1995 - Overall winner RIAI Regional Award in 1996.

### Typical Stadium Design

Sports Stadia are ideally suited for precast construction, due to the large number of standard units that are used in their construction. Raker beams span between columns, at regular intervals, and seating units span between raker beams to make up the basic shape of the stand.

These are then combined with vomitory wall panels and stair units to create access to and from the seating area.



National Aquatic Centre - Dublin



The O2 Arena - Dublin

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## Stadium Design

### Raker Beams

Raker beams span between the columns and are placed at regular intervals (generally 7-8m bays) along the length of a stand on a typical stadium. Seating units are then installed, spanning from one raker beams to the next, to provide the seating area. Raker beams are generally long span beams (depending on the size and scale of the stadium) and can be cast up to 30 m.

These beams come from individually fabricated moulds and are cast vertically to give a fair face finish on both sides. Dowel tubes are cast into these units to connect to the seating units, which span onto them.



Raker Beam - McHale Park



Raker Beam

### Seating Units

Seating units are used to span between raker beams, and form the exposed surface which the seats are bolted onto. Concast have a number of existing moulds for seating units, but can also fabricate new moulds, depending on the requirements of the client.

The end section and length of these seating units can be varied, in accordance with the span and angle of the bays between raker beams, to form the curved section at the corners of the stadium.

Seating units can be easily installed on site, and when the joints between units have been sealed, form an effective barrier against external elements. Precast seating units can also be easily installed in steel structures.



Seating Units - Shamrock Rovers



Seating Units - Production

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