

ALP provides fresh air for the new breath-taking O₂ Arena



Dublin, Ireland – December 16, 2008 - The new **O₂ Arena** officially opens. When the 14.000 capacity O₂ Arena opens its doors for the first time in December Dublin finally gets the major indoor concert venue it has long aspired to,. Better known to thousands of concert-goers as the former The Point Depot, the new O₂ Arena has been created following a major refurbishment and upgrading project that has transformed the original dockside building almost beyond recognition. The 80m Euro investment radically changes the original venue in almost every aspect, doubling its capacity to make the biggest-purpose built music venue in Europe.

One of the major changes from the old venue is that the stage has been readapted around to what was the original side walls of the building, with the roof also being raised considerably making for an amphitheatre style venue with the seats wrapped around the stage. This also means that no-one will be more than 55 meters from the stage. As such the external shell needed to be extremely lightweight, contradicting traditional auditoria design which would have been far too heavy!

Visibility has been improved too. The excellent sightlines have been achieved with the aid of complex geometry modelling to provide a unique, amphitheatre-style, column-free auditorium despite of a roof span of over 50 metres.

The sound is the state-of-the-art; the O₂ Arena has the most up to date acoustics design in Europe.

The new venue has a spectacular effect on the Dublin skyline with its translucent polycarbonate cladding extending two storeys upwards above the original building. It features a built-in lighting system programmed for all the colours of the rainbow to give an effect that contrasts with the stone and brick of the original railway depot dating back from 1878.

About the new O₂ Arena:

- U2 recorded the No. 1 hit single "Desire" in the Point in 1988.
- Construction of the redevelopment of The O₂ commenced on 1st Sept 2007
- At the height of the renovation of The O₂ 500 people were employed on the site
- The roof of The O₂ has the most up to date acoustics design in Europe. Audiences will be treated to acoustics never before witnessed
- A total of over 5.000 tons of steel, 13.000 sq.meters of ductwork, 7.000 meters of pipe work and 270 kilometres of cables were used to construct the new venue
- 3.500 light fittings have been installed in the venue to provide the proper atmosphere
- The O₂ will form the centre point of The Point Village, which currently under construction

Notes regarding ALP

For the air distribution system of the O2 Arena the consultants, Ms Faber Maunsell, have selected the ALP System ductwork.

The air distribution system is composed of 2 runs, for a total capacity of 60 m³/sec, at a speed of 5 m/sec.

In consideration of the high volume of air involved, the air ducts have a quite large section. The transitions from the Air Handling Units are 9,4 x 3,5 metres, while the main ducts inside the arena are 4,5 x 3 meters.

ALP System ductwork have been preferred to the traditional sheet-metal ductwork because of the good looking (the ductwork inside the arena are completely exposed...) but also for their light weight; considering the dimensions, sheet-metal ductwork should have caused a weight problem with the structural steel of the building.

The major challenge regarding air ducts in this project was the height of the duct runs (22 metres to the bottom of the duct above finished floor level). As the seating was installed before the installation started, it was not possible to erect scaffolding. The duct had to be install using 3 no 35 metre-boom crane, one to lift the duct and the other two to connect both ends. This would not have been possible with sheet-metal ducts due to the weight.

