

JUNE 2009 ISSUE 13

**NEWSFLASH**  
**RECENT CONTRACT AWARDS**

**Dunne Building and Civil Engineering Ltd**



STENHOUSEMUIR RETAIL PARK

90151

Project: Stenhousemuir Retail Park Block A Site  
Package: Construction of Retail Unit Shell  
Client: McDonald Estates

90153

Project: New Tyne Crossing, Newcastle  
Package: Cut & Cover Concrete Works (North Section)  
Client: Bouygues Travaux Publics UK



DUNDEE HOUSE, DUNDEE

90154

Project: Dundee House (new council headquarters)  
Package: Sub and Super Structure  
Client: Bovis Lend Lease

**Dunne Concrete Flooring Ltd**

50072

Project: Lidl, Penicuik Site  
Package: Ground Floor Slab  
Client: LJR Properties

50073

Project: Tesco's Kilmarnock Site  
Package: External Hardstand  
Client: Northern Plant Supplies Ltd

50074

Project: Highlander Snacks, Whitehill Ind Estate  
Package: External Yard Renewal  
Client: Highlander Snacks

**DUNNE DOES IT AGAIN!**  
Post Tensioning provides the ideal solution



**Westport House, Edinburgh**

Dunne's works at this landmark City Centre development included the removal of over 9,000m<sup>3</sup> of material that was transported off site as part of the bulk excavation. This included the removal of approx 2,000m<sup>3</sup> of rock and the associated vibration monitoring of the surrounding buildings. During the excavation, some 620m<sup>3</sup> of contaminated material in the soils & rock strata was located to the south east elevation of the project. Upon approval Dunne Plant Hire removed this material to 'Soil Hospitals' for treatment & purification.

Adjacent footpaths and carriageways were then supported by a combination of Kingpost wall and traditional sheet piled retaining schemes which allowed the early construction of the basement foundations to these areas. The internal and external drainage package included all service pipe work, provision and install of the internal basement pumping chamber, street works service tie-ins and some external hard landscape reinstatement.

The basement car park slab and retaining walls were then cast and capped by a heavily reinforced post tensioned transfer slab at ground floor level.

The main central core was constructed using PERI Climbing Formwork, which allowed the core to be constructed in advance of the following floor construction and was therefore removed from the programme critical path. The proximity of the two perimeter cores to existing

buildings however did not allow jump form construction, so these were constructed level by level with the floors.



Upper floor slabs were all of a post tensioned construction which forwarded early striking of formwork and good programme turnaround. Due to site perimeter constraints, standard table soffit systems were ruled out in favour of RMD Airedek lightweight panel formwork. Despite the site logistics the floor footprint of 1800m<sup>2</sup> per floor was achieved in a three week cycle.



The project was delivered on programme and the structural frame topping out ceremony took place at the end of May 2009.

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## NEWSFLASH RECENT CONTRACT AWARDS

Conforce Ltd



SEYMOUR ST, LISBURN

70028

Project: Seymour St, Lisburn, Northern Ireland  
Package: Design supply and installation of post tensioning to podium slab and upper floors of sheltered housing development, total area 6130 m<sup>2</sup>  
Client: J Donaghey Construction Ltd

## ALL SET FOR IRELAND

Conforce secures first contract in Lisburn N. Ireland



ConForce have recently been awarded the subcontract to design, supply and install the post tensioning to a new housing and commercial development at Seymour St, Lisburn, Northern Ireland. We are starting design on the podium deck where it carries landscaping and emergency access and has to be carefully detailed to provide the required restraint releases from cores and secant pile walls and will be cast in approximately three main pours. Design and drawings will then continue onto the upper floors.

When submitting our tender we assisted by reducing considerably the depth of the podium deck thereby giving savings on the project cost and programme.

Conforce are due on site in August 2009 working for James Donaghey Construction; the main contractor is Sean Devine Developments and the Engineer is Albert Fry Associates; all these companies are based in Northern Ireland.

We are delighted to secure this first project in Ireland for a Dunne Group company and hope it will be first of many more; adding significantly to our expanding nationwide portfolio which currently includes ongoing projects in Bolton, Bristol and Edinburgh.



left to right: David Smailes, Morgan Ashurst Durham Area Director, Kevin Graham, Dunne Group Regional Director, Gordon Dunne, Dunne Group Managing Director and Gordon Ray, Morgan Ashurst North East Managing Director

The works comprised of basement plant rooms, a main 25m swimming pool and learner pool with ground level suspended and ground bearing slabs to entrance lobbies. Suspended first and lower roof floor slabs with transfer beams provided a changing village and fitness suite and a mezzanine slab on metal decking including lift and stair cores all enclosed by curved and raking R.C. walls up to 9m high, resulted in exposed aesthetic architectural features.



The key to the project was achieving a high quality finish to the exposed concrete walls which was one of the 5 main objectives of the project and to achieve this within the confines of the contract programme. It was therefore imperative to use the most efficient formwork system and achieve the highest quality concrete mix to achieve this aim. The pool walls were formed using the Peri Trio system but required significant timber make ups to produce an intricate head detail involving chamfers, rebates and box-outs forming features and spillways.

The curved walls were constructed using Peri Vario panels that included a board pattern layout to the finished concrete face. Due to walls varying in both height and radii as they circumvented the building almost 30 different wall forms where required. Working drawings were produced at an early stage and then issued to the client for approval. Each wall form was then fabricated off site to

ensure the required exacting standards were met to provide the flawless continuity of features and finishes to fully express the architectural expectations. These panels were then carefully maintained on site until these walls were completed.

Prior to the permanent works being under taken great care was taken to ensure the concrete mix for the exposed works provided the colour and texture required. Careful consideration is given to each one of the constituent materials and their percentage within the overall mix is vitally important. Once this was achieved the goal then was to ensure this product was consistently delivered throughout the duration of the contract. Care was taken to ensure single sourcing of all aggregates throughout the production cycle from that used on the approved sample mix with no cross contamination being permitted. An early sample was quickly agreed upon and the standard set. The uniformity in concrete colour and quality together with the dedicated expertise in its placement resulted in an excellent concrete standard.



Co-ordination and collaboration between the design team, supplier's contractor and sub-contractors plus a commitment to the highest standards of quality ensured the perfect delivery of this concrete frame. This was fully recognised and appreciated by the main contractor Morgan Ashurst who presented the Dunne Group with a Certificate of Perfect Delivery at their annual awards ceremony.