



## ECHO, LEEDS

Client :	Rushbond Plc
Project Manager:	RBA
Structural Engineer :	Robinsons
Services Consultant:	Silcock Dawson
Contractor :	GB Design Solutions
Value :	£10.55 million
Completed :	January 2009
Author :	Iain Jones



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### FOCUS ON DETAIL | INNOVATIONS IN BRICKWORK

Located on a highly visible prime site on the eastern corridor approach to Leeds City Centre, this development provides a dramatic and eye-catching focal point for the city, whilst helping to kick start the strategic regeneration of the surrounding area.

This development places 'art' very much at the heart of the design concept. The architectural feel of the completed development is highly sculptural - not only creating space to live and work but also providing the city with its very own piece of architectural art work. The sculptural form has taken its inspiration from the nearby river, the areas industrial past, sailing barges and nautical themes from the 1900's.

Echo Central 2 contains 122 one and two bedroom residential apartments over 9 storey's with 2 levels of Basement that

contains parking, Cycle and Bin Store facilities. The overall build cost was £10.55m.

To achieve the original design concept of fluidity and curved shapes and to ensure the architecture is grounded within the East Bank and its industrial history, the choice of brick as a module allowed the facades of Echo Central 2 to be faceted on a 4 brick set out.

EC2 is constructed with an insitu concrete frame, externally clad with the innovative use of walled brickwork and a coloured Corium glazed brick slip cladding system by Wienerberger Ltd to form the recess, and inner skin formed with a structurally insulated panel system.

The main body of the external envelope is a Janinhoff Blue-Blue-Red smooth facing brick which has a sinter glaze finish, which shimmers in almost any weather.

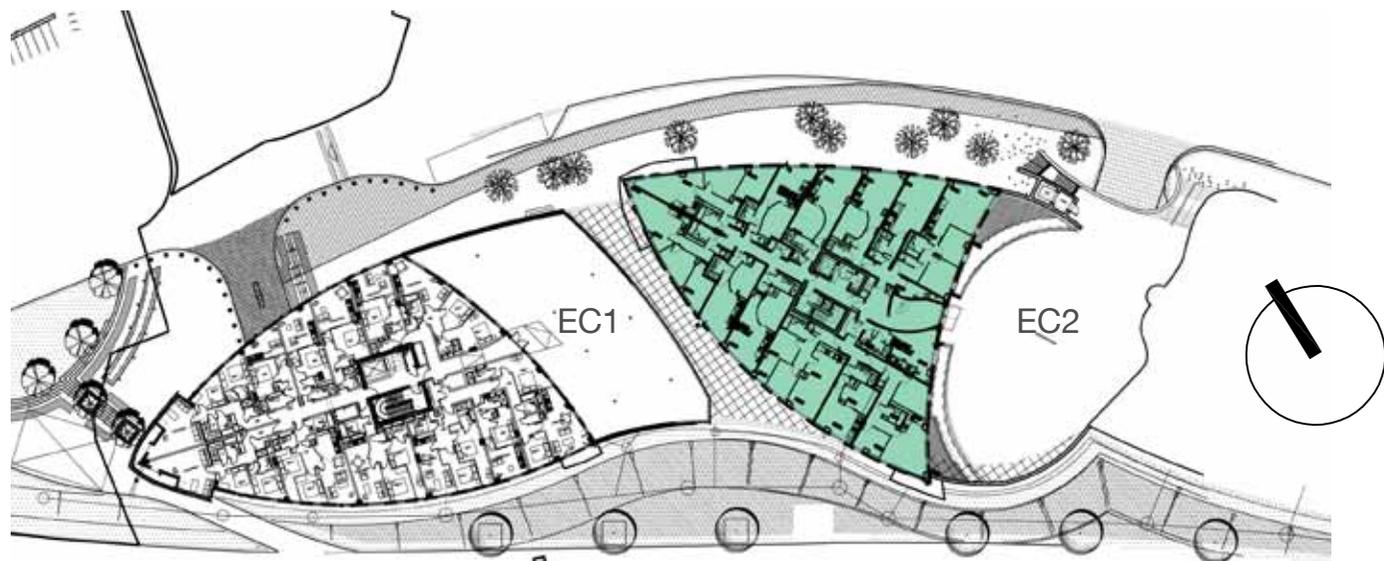
The bricks are made from high quality clay mixtures which are fired up to the sintering of the body, guaranteeing a high level of quality which is frost resistant, dirt repelling and completely insensitive to aggressive environmental impacts such as acid rain.

The Corium system consists of brick slips clipped and adhered into a galvanised steel backing tray which is in turn mechanically fixed to an internal structural wall system, in this case 'Panablok'. This system allows us to continue the 40mm Kingspan insulation that is used in the more traditional adjoining masonry construction. The overall thickness of this system is 35mm, and as only 25mm cavity space is required, this forms a 100mm recess from the main face of masonry.

The continuation of insulation behind allows for all joints to be taped and sealed, meaning that the air seal can be transferred from the glazing system to the face of insulation via an EPDM and then transferred to the floor slab, again by an EPDM to ensure the continuity of the air seal line.

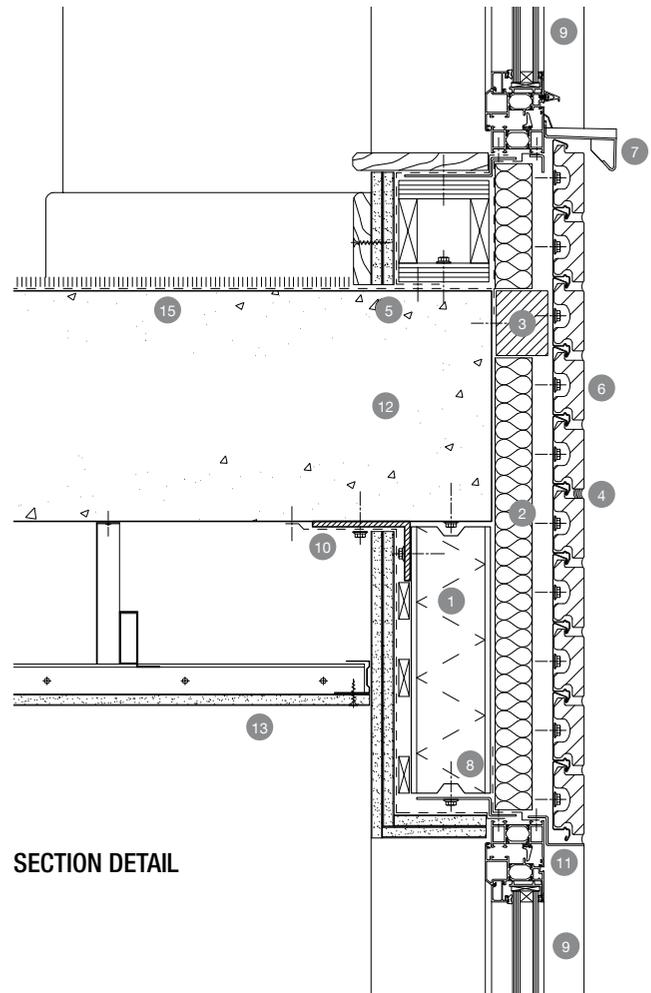
The setting out of brickwork proved challenging, due to the masonry curving both horizontally and vertically on the recessed corium element. Varying facet lengths were considered, but in the end decided that due to the tight radius of the building in plan, a 4 brick facet would prove the most apt solution, in terms of both economics and speed of construction. Centre points for the 3 arcs were selected and each facet point given a 'northing and 'easting point that was established by inserting the building plan into the original CAD survey and identifying the exact points around the building.

The eye catching building, which is visible from various vantage points around the city, creates a strong setting for the eastern gateway to the city centre. This is 'echoed' in the Leeds Civic Trust April 2009 Newsletter which described the scheme as 'One of the most striking pieces of architecture the city has seen for some time', and Peter Baker, Chairman of Leeds Civic Trust commenting "DLA are to be congratulated on producing a high quality landmark building of which Leeds can be proud".

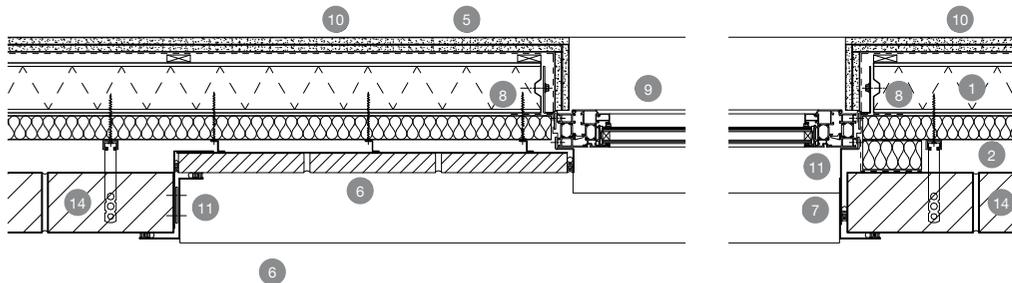


**SITE PLAN**

- 1 PANABLOK SYSTEM FIXED BACK TO SLAB ON ACOUSTIC SEALANT. VAPOUR BARRIER TO BE TRAPPED UNDER.
- 2 40MM KINGSPAN KOOLTHERM CAVITY INSULATION, ENSURE ALL JOINTS IN INSULATION BOARDS ARE TAPED.
- 3 CONTINUOUS HORIZONTAL FIRE BARRIER TO PROVIDE 90MINS FIRE RESISTANCE AT ALL LEVELS. ROCKWOOL SP120 FIRESTOP SYSTEM. FIXED AS MANUFACTURERS RECOMMENDATIONS.
- 4 CONTINUOUS HORIZONTAL MOVEMENT JOINT AT ALL LEVELS. JOINT TO BE FULLY FILLED WITH MIERS MIOTHENE 70, SEMI-RIGID JOINT FILLER TO SUIT MOVEMENT JOINT WIDTH OR SIMILAR WITH SEALANT BY ADSHEAD RADCLIFFE-ARBOKOL 2000, COLOUR TO MATCH ADJACENT MORTAR.
- 5 INTERNAL PLASTERBOARD ACOUSTICALLY SEALED AROUND ALL EDGES.
- 6 CORIUM BRICK CLADDING SYSTEM FIXED BACK TO 25MM DEEP ZED SECTIONS.
- 7 PPC FLASHING GLAZED INTO WINDOW SYSTEM.
- 8 EPDM GLAZED INTO WINDOW SYSTEM AND BONDED BACK TO PANABLOK.
- 9 ALUMINIUM GLAZING SECURED BACK TO PANABLOK INTERNAL LEAF.
- 10 VAPOUR BARRIER ON INTERNAL PLASTERBOARD LINE. ENSURE THAT BARRIER IS SEALED BACK TO SUITABLE SUBSTRATES AND GLAZED INTO FRAMES WHERE APPLICABLE TO MAINTAIN AIR SEAL LINE.
- 11 METAL REVEAL TRIM
- 12 250MM THICK INSITU FLOOR SLAB MINIMUM DENSITY 2400KG|M<sup>3</sup>
- 13 M/F PLASTERBOARD CEILING
- 14 FACING BRICKWORK
- 15 THERMAL ECONOMICS 3MM ISORUBBER RESILIENT LAYER FOR IMPACT SOUND INSULATION.



SECTION DETAIL



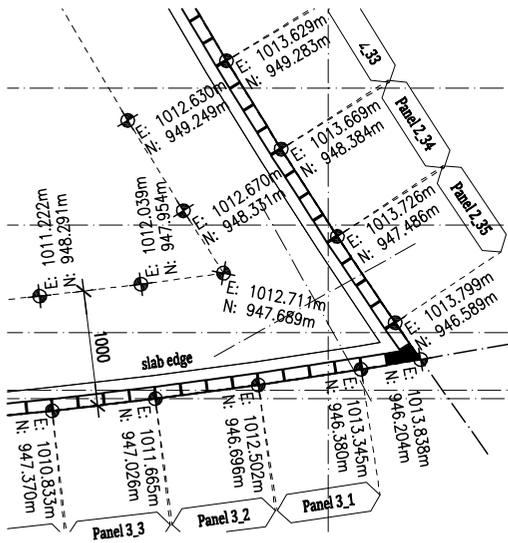
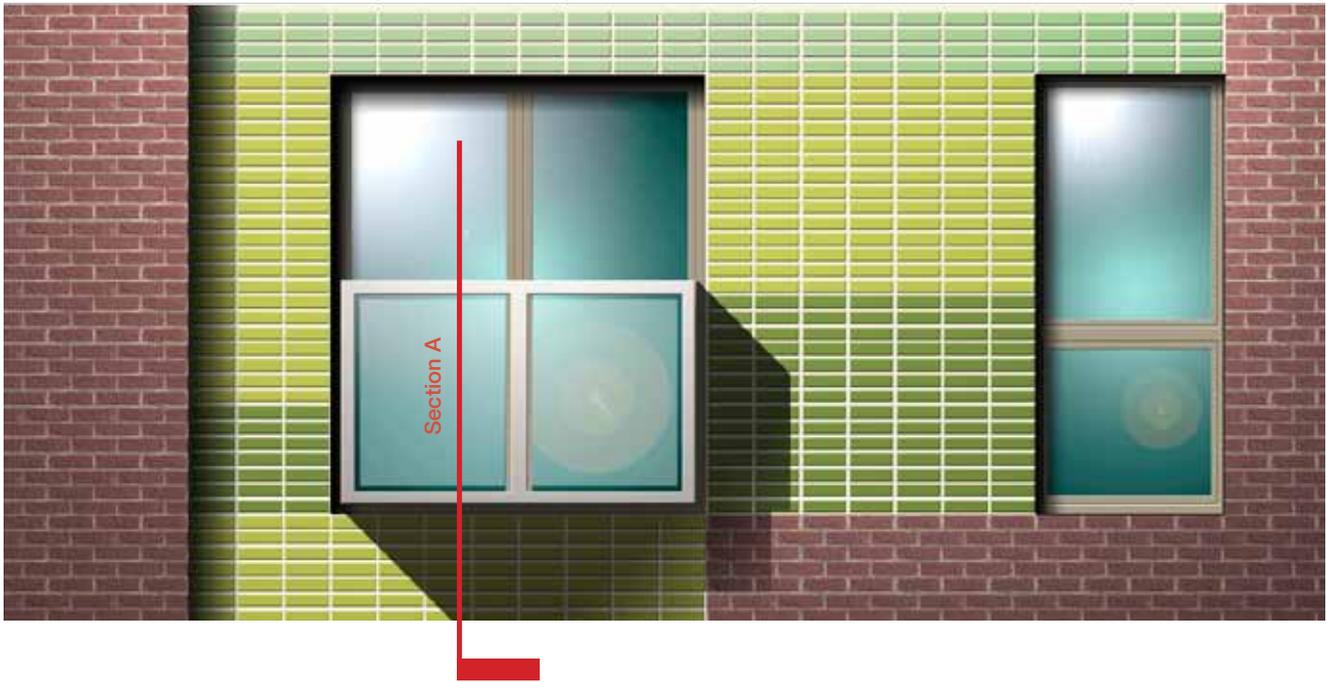
PLAN DETAIL



FOCUS ON DETAIL

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TYPICAL FACET SETTING OUT PLAN





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