



Project Fact Sheet

Skerries Educate Together National School, Skerries, Co. Dublin



PROJECT: Skerries Educate Together

Projects	Skerries Educate Together National School
Value	€2.85m
Client	Department of Education and Skills
Stage	Complete
Completion Date	June 2013
Description	Design & Build extension to existing primary school consisted of 10No new classrooms, 2No Specialist Teaching Rooms, General purpose Hall and associated ancillary works.

FACTFILE

The design and build consortium planned a fast-track on-site construction duration of 26 weeks. With an area of 2050 sq m and 10No. classrooms, this was awarded to ABM by the Department of Education and Skills Rapid Build Programme 2012.



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PROJECT DETAILS

Schools in rapidly developing areas

In 2012, the Department of Education and Skills prioritised funding to facilitate the construction of schools in rapidly developing areas such as Skerries, Co. Dublin. Skerries Educate Together was an existing 2 storey school built circa and the programme was tendered on a design and build basis for the new 10 classroom extension with GP hall. It was intended that the school would be operational by the start of the school term in September 2013/14. The Actual commencement date was 10th December and was completed within a 26-week programme.

The project consisted of the construction of a 2 storey extension to existing primary school including link corridors comprising of 10No-Classrooms, 2No support teaching specialist rooms, General purpose hall and ancillary accommodation with a total floor area of c. 2050sqm. The site works to the school grounds involved of the provision of gardens & landscaping and boundary treatments.

In order to achieve completion by June 2013, ABM Design and Build procured a system build solution which enabled 'fast-track' construction. The school was constructed with a high emphasis on build quality and durability and the solution to this was to utilise a Steel Framing infill system manufactured off site which was IBA certified. This system build solution consisted of a unique pre-insulated light gauge steel external wall system, which was combined with internal load bearing walls to provide low carbon structures. The application of this particular system has recently been approved, by the Royal Institute of Architects of Ireland, as a Continuing Professional Development (CPD) course.

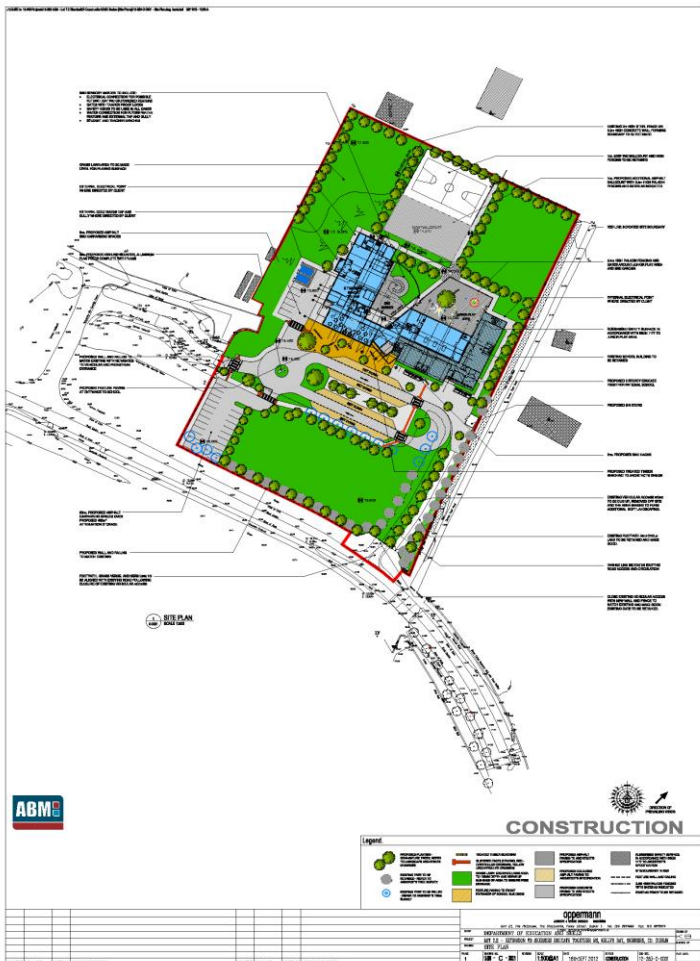


Image 1 & 2 – Site Plan & New School Logo

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The ground works commenced simultaneously with the off-site fabrication of the steel frame system. After week four, the ground works and off-site fabrication period was complete. The steel frame system which is highly efficient in terms of transport utilisation was delivered to site and craned into position just after installation of the precast concrete stairs.

Externally, the façade comprised of concrete block work outer leaf with coloured cement sand render finish.

Once the windows and roof system were complete, the building was 'watertight' allowing internal finishes to begin at week 10. Wherever possible, off-site fabrication of the internal components were used such as pre-hung door sets, internal wall partitions, kitchens, cubicles, and heating pipe work runs.

All civil works were carried out in accordance with The National Roads Authorities guidelines and parameters.

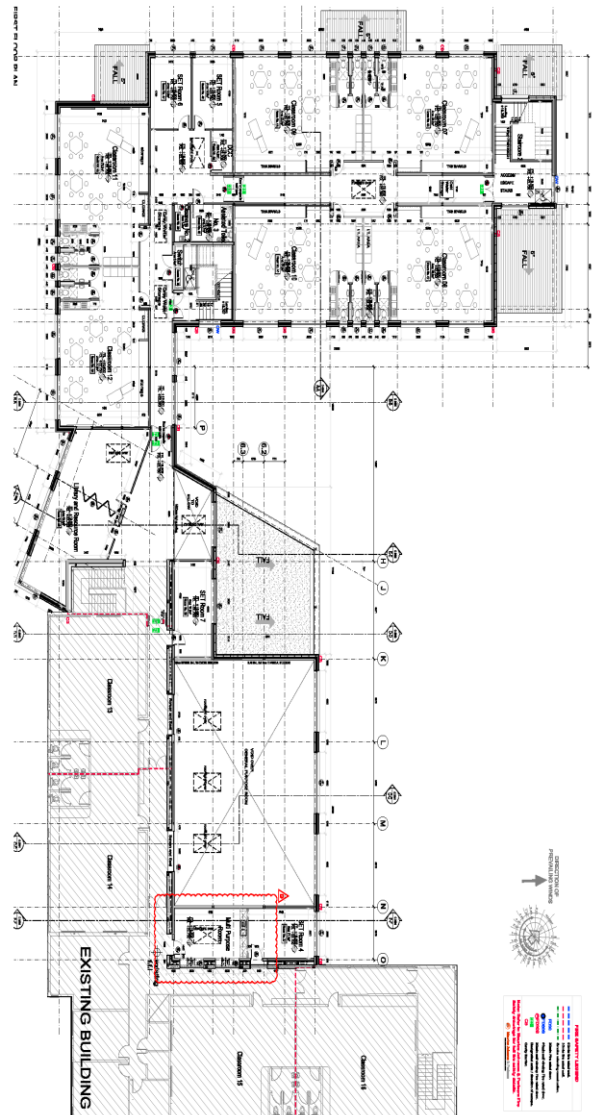
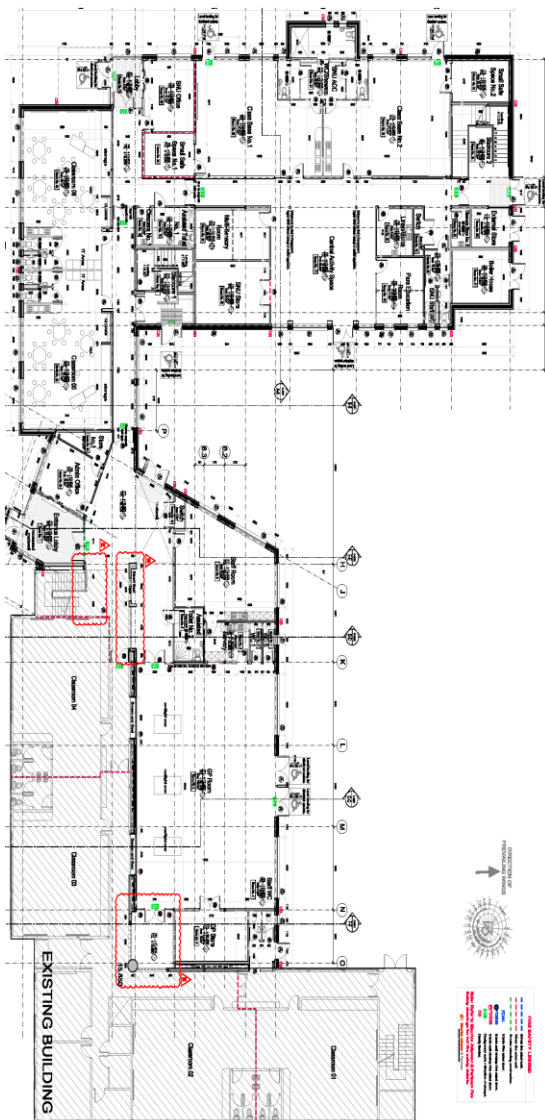


Image 2 & 3 – Ground Floor & First Floor Layouts

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Image 4 – Elevations



Image 5 – Front & Rear Elevations



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Image 6 & 7 – Entrance & Classroom



Image 8 & 9 – GP Hall & Stairwell



Image 10,11 & 12 – Entrance, Stairwell & Corridor

Sustainability

In accordance with the Department of Education and Skills school specification, the building was constructed to facilitate a passive environment entailing light sensitive light fittings, excellent natural daylight, natural ventilation, air infiltration and water efficiency.

Building Element	TGD Part L 2008 required U-Value	As Built U-Value W/m2k	ABM Surpassed TGD Part L Requirements by U-Value w/m2k
Ground Floor	0.25	0.12	0.13
Walls	0.27	0.16	0.11
Windows	1.8	1.5	0.3
Doors	1.8	1.5	0.3
Roof	1.8	0.14	0.02

The requirements set out in the Department's TGD documents for air-tightness required an air loss of 3 m³/h/m² at a test pressure of 50Pa. The actual results from the test at surpassed the minimum requirements. This was down to the quality of installation and construction of all building elements. A Tyvek breather membrane was installed throughout to give the building excellent air-tightness. Energy conservation was conveyed through thermal performance & air tightness requirements which when constructed surpassed part L requirements.

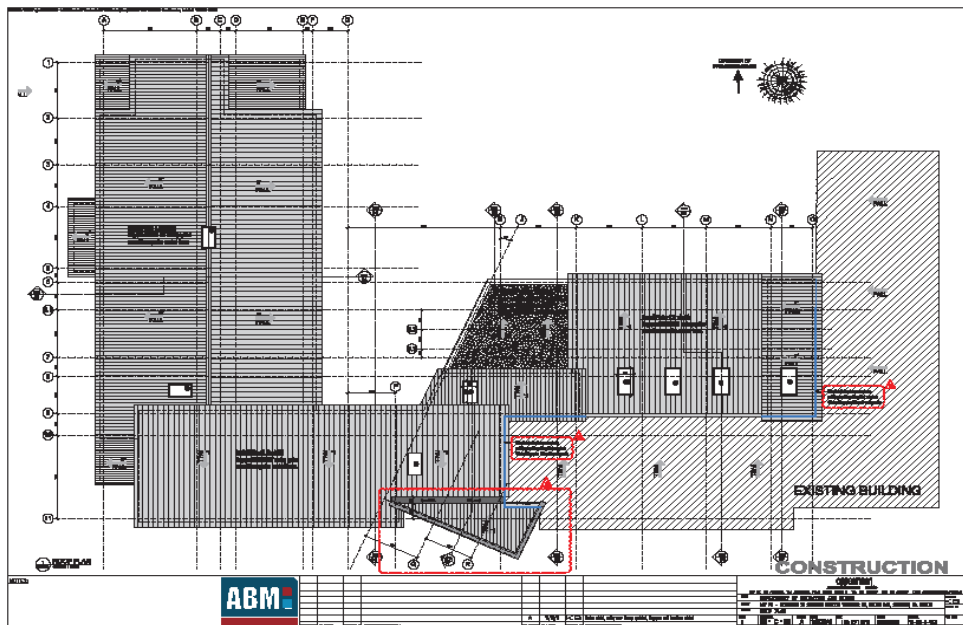


Image 13 – Roof Plan

Air Pressure Results

Air Permeability @ 50 Pa 2.19

Air Leakage Coefficient C_L (m³/hr/Pa_n) 417.7

Correlation Coefficient (r_2) 99.41

Air Volume Flow @ 50 Pa m³/hr 8286

Air Flow Coefficient C_{env} (m³/hr/Pa_n) 415.9

The test measured an air permeability of 2.19 (m³/hr)/m² at 50 Pa building pressure



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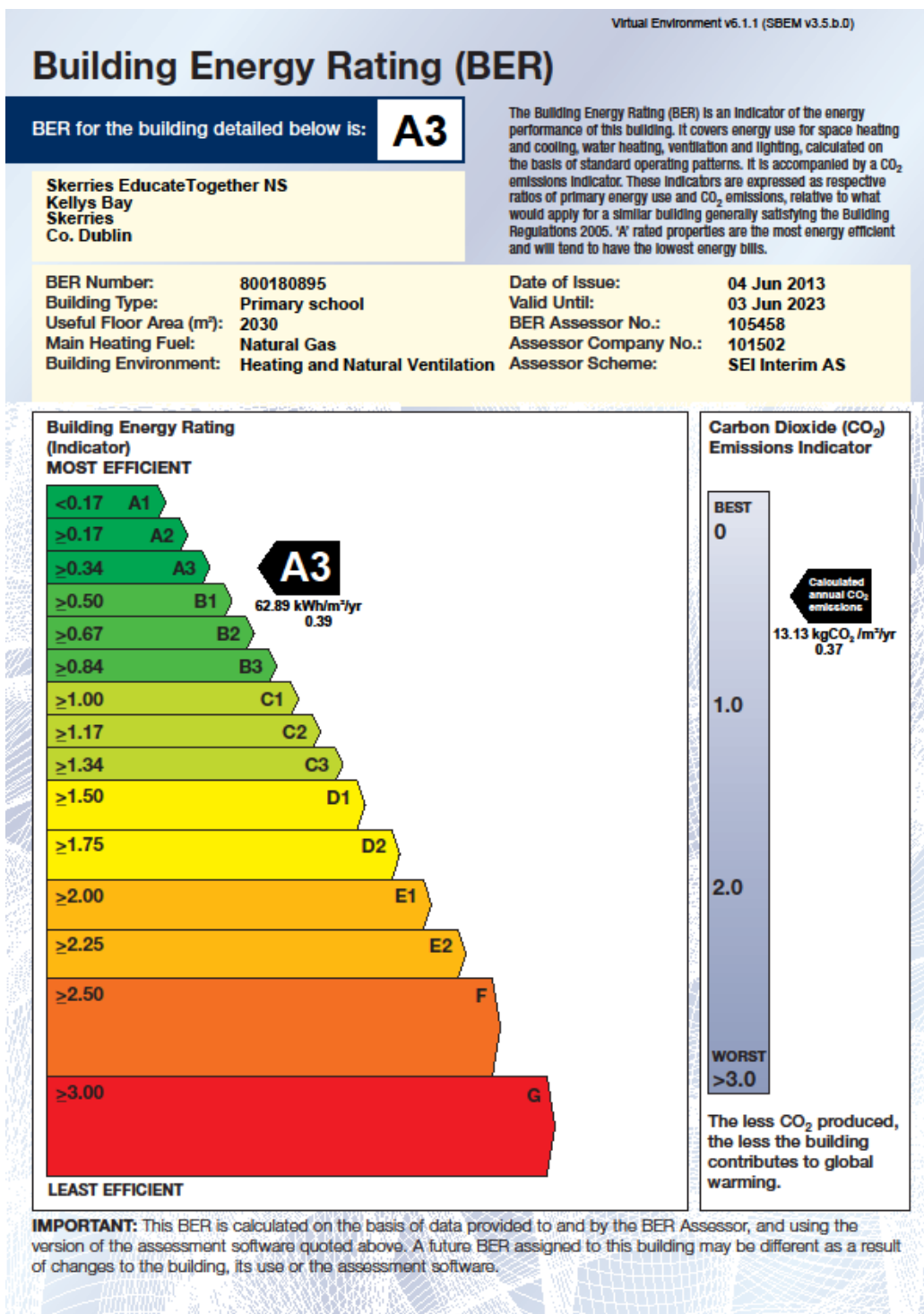
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A building energy rating certificate and advisory report formed part of the original TGD documents. The BER is an indicator of energy performance covering energy use for space heating and cooling, water heating, ventilation and lighting, calculated on the basis of standard operating patterns.

It is accompanied by a CO₂ emissions indicator.

The Building energy rating survey was carried out in June 2013 which resulted in the building receiving a highly sustainable building energy rating band of A3.

The estimated annual energy consumption is a highly efficient value of 62.89kWh/m²/yr and the annual estimated CO₂ consumption is estimated to be 13.13 kgCO₂/m²/yr.





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Skerries Educate Together National School Extension was completed in June 2013



Image 14 – School Entrance