

SOUTHEND AIRPORT Air Traffic Control Tower

Southend Airport's new £3m control tower is up and running. The 32m high, six-storey tower replaces the old two-storey structure that was built in the 1960s. This impressive new air traffic control tower has been constructed in a location to give the visual control room an elevated operational view of approaching aircraft, together with existing and proposed runways, taxiways and aprons.

As design consultant, Fairhurst determined the location of the control tower, height of the building and lines of sight in accordance with CAA requirements. A Fairhurst geotechnical interpretative report was produced to enable foundation and floor slab detailed design, with reinforced concrete detailing, structural steelwork, drainage, car park and access road design completing the commission.

The expansion of Southend Airport by Stobart Developments (in conjunction with Stobart Air) is intended to cater for longer haul flights and create an airport with a direct hub link to the London 2012 Olympics. The new control tower forms an integral part of this expansion, which also includes a new railway station, passenger terminal building and runway extension.

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NORTH SHIELDS Fish Quay

ice | award winner 2011
Institution of Civil Engineers



Fairhurst's Ports and Harbours team in conjunction with local Contractor Southbay Civils submitted an alternative design for this 300m length of public quay located in North Shields, at the mouth of the River Tyne. The guaranteed maximum price of £5.5m for this scheme was accepted by the Clients. The innovative design involved driving 190 steel piles through the existing dilapidated quay and constructing a new concrete deck slab on top. The new construction provides improved berthing, mooring and

refuelling facilities for the local fishing community. A cathodic protection system was also designed to protect the new structure in the aggressive marine environment.

The Clients are very pleased with the completed quay, which is vital for the regeneration of the area, providing both industrial support to the fishing fleet and recreational use for the general public.

The success of this collaboration was recognised at the ICE North East Robert Stephenson Awards 2011, where the project team won the award in the major projects category.

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ABERDEEN Arena

Aberdeen Arena, a 21,000 capacity all-seated stadium on the outskirts of the city, is to be the new home of Aberdeen Football Club. The Arena will be a multi-purpose venue, capable of hosting a variety of events, including football and rugby. Facilities such as bars, hospitality boxes and suites will also allow the Arena to function outwith match days, providing opportunities for hosting dinners and corporate events.



Fairhurst are delighted to have provided Aberdeen Football Club with full civil and structural engineering services in connection with the design of the stadium and the associated external roads and car/coach parks. Geotechnical and Environmental design input was also provided by Fairhurst. The design meets all current standards and guidelines set by UEFA and fully accords with The Green Guide (The Guide to Safety at Sports Grounds). The stadium will deliver much enhanced facilities for both sports fans and the public. Architect for the project is The Miller Partnership.

At the initial stage, prior to Planning Consent, Fairhurst were heavily involved in providing transportation advice to assist in securing the consent in what is a very difficult transportation corridor. Our comprehensive approach to problem solving in this sector assisted Aberdeen Football Club in achieving the consent. Local knowledge of the transportation issues and of other developments within the area added a unique and enhanced value in support of the application.

We are also providing a full service for the planned adjacent stadium for Cove Rangers which incorporates training facilities for Aberdeen Football Club and are advising the Club on transportation and environmental issues, in connection with the sale of the existing Pittodrie Stadium.



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WELCOME



It is very encouraging for Fairhurst to be able to send out another issue of the Fairhurst Focus which, as you will see, again illustrates the varied nature and type of projects with which we have been involved throughout Britain.

I firmly believe that the range of services that we offer, coupled with our geographic spread and our diverse client base, have all assisted us in these times of continued uncertainty within the construction industry.

At times such as these it is especially pleasing to be able to report positive progress. As a result of continued expansion in London we have moved office and are now based in Buckingham Palace Road. The London office, which is a joint venture with our sister company Gary Gabriel Associates, was established in Autumn 2007 and now houses approximately twenty staff.

Thank you for your ongoing loyalty and support.

Bob McCracken
Senior Partner

FRENCH LYCEE London Grade II Listed School

Fairhurst were appointed as civil and structural engineers for the refurbishment and extension of an existing Victorian Grade II listed school. The original building was designed by E R Robson, circa 1876, as part of a series of new Board Schools. The new French Lycee is due to open for new pupils in September 2011 and will provide teaching space for 650 pupils both at Primary and Secondary School level.

The project includes the introduction of new internal lift and stair cores, a new entrance lobby area and the removal of old cores to provide new teaching space. A number of extensions are being built around the central courtyard to provide additional classroom space and dining rooms. The new and existing spaces are linked by an external covered walkway with exposed steel trusses, designed to be sympathetic to the original Victorian trusses found on site.



Due to the historic nature of the building, the design of the new structural elements have carefully considered both the form and fabric of the existing structure. Any new structure has been carefully integrated with the existing building to ensure that as much of the original fabric is retained as possible. Any repair works have been aimed at local remediation rather than wide scale replacement.



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CLYDE WIND FARM Europe's largest onshore wind farm

The renewables market grows daily, as does Fairhurst's experience as a leading designer of wind farm infrastructure.

Clyde Wind Farm, straddling the M74 motorway near Beattock Summit in South Lanarkshire has been the catalyst for the development of Fairhurst's wind farm skills base in the Glasgow office. Clyde Wind Farm is the largest consented onshore wind farm in Europe, comprising 152 reinforced concrete gravity bases for Siemens' 2.3MW turbines with hub heights of 80m and blade diameters of 90m. This £600m development by Scottish & Southern Energy Renewables (SSER) which commenced on site in 2009 should see all turbines in operation by early 2012, providing a total generation capacity to power over 200,000 homes.

Fairhurst's role on the project has grown since the initial involvement as designer to Morgan Est for an enabling works contract. Now working direct to SSER across the whole site (and novated to Hanson Contracting in the Central Section), Fairhurst has provided a wide spectrum of design, supervision and Technical Advisor services including wind turbine bases, drainage, earthworks, tracks, operations buildings, substations, bridges and culverts. This valuable experience will help drive forward Fairhurst's renewables business over the coming years.

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CRIC Little France Edinburgh

The Clinical Research Imaging Centre (CRIC) is recognised as being a world-leading research centre in using the latest scanning technology to advance the diagnosis and treatment of conditions such as cancer, heart disease, multiple sclerosis and mental health problems. The facility is located within the basement of the existing Queen's Medical Research Institute (QMRI) at Little France (pictured). Fairhurst were responsible for all structural and civils works on the £32m development for the QMRI.

The unit at CRIC comprises three key scanning machines: the Magnetic Resonance Imaging (MRI) scanner; the Positron Emission and Computer Tomography (PET/CT) scanner; and a state of the art Computer Tomography (CT) scanner. Also included in the development is a cyclotron as well as associated laboratory, support and admin areas.



The structural works covered; the massive reinforced concrete vault to house the cyclotron (the walls and the roof being two metres thick); the construction of the reinforced concrete cells for patient treatment areas; the installation of a new lift pit, lift shaft and new main access stair; the formation of new areas of floor within the existing full height atrium; all builders work associated with housing the PET/CT scanners and the MRI scanner and providing the associated support areas.

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