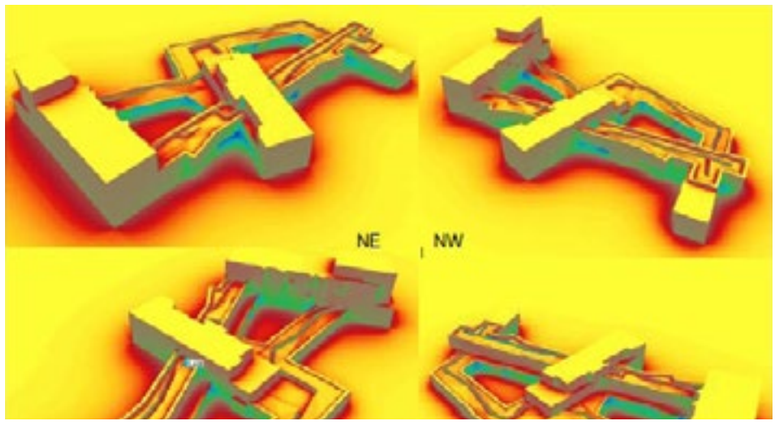
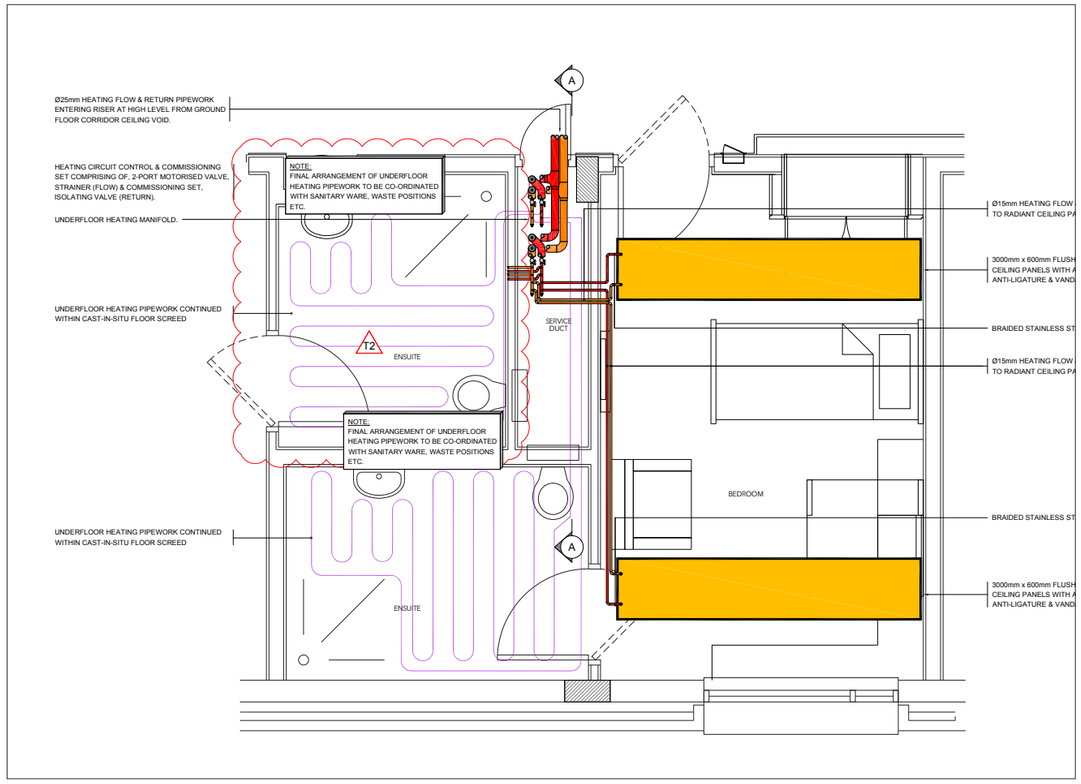
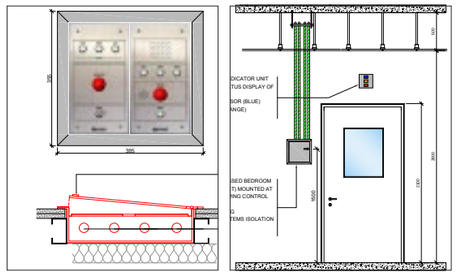
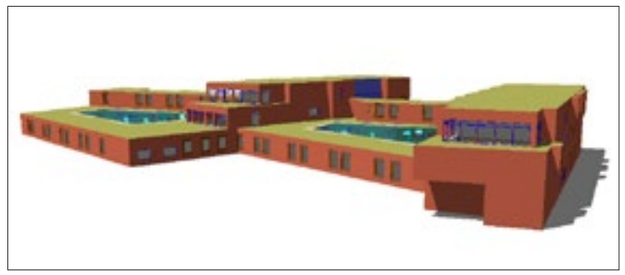
RIAI Healthcare Building of the Year 2013









Phoenix Care Centre Mental Health Facilities, Grangegorman, Dublin 7

Client: HSE / Grangegorman Development Agency
Architect: Moloney O'Beirne Architects
Complete: February 2013
Value: €15.5m

IN2 was responsible for the successful delivery of the Phoenix Mental Health Facility, Grangegorman Campus Dublin which is now recognised as setting new standards in the design of Mental Health facilities in Ireland. The facility is a new build, state-of-the-Art 7,000m^2 60 Bed low/medium/secure Psychiatric Unit. This low energy facility will initially be standalone, but eventually will be heated and powered from the Campus Central Bio Fuel Powered Plant. IN2 Engineering was responsible for the Environmental, Mechanical and Electrical service design for this Mental Health facility, including a bespoke natural ventilation strategy and anti-ligature design of both mechanical and electrical services. Anti-ligature standards as determined in the HTM design standards were surpassed by bespoke designed radiant panels, anti-ligature LED lighting and an aspirated fire detection system which enabled maintenance to take place outside the secure patient areas. In addition, a unique nurse call system was designed in conjunction with the nursing staff. This system improved patient monitoring and communication, as well as incorporating the necessary room isolation facilities.

IN2 advised the project architects on orientation, fenestration, window opening size, location and design, and building shade, and created a daylight model for the building which ensured that daylight was maximised throughout internal spaces. IN2 demonstrated that the internal courtyards complied with BRE's criteria for overshadowing in courtyard spaces. IN2 developed a design solution for automated opening windows within the secure bedrooms.

Sustainable Design

Sustainability was a key driver in the building design from initial concept stage. The building achieved an A3 energy rating whilst providing optimum comfort for patient care. IN2 carried out daylighting and natural ventilation analysis on the building. The design includes:

- Natural ventilation strategy for the majority of the building through the use of thermal dynamic simulation
- Low energy efficient mechanical services
  - *high efficiency boilers*
  - *fans*
  - *solar water panels*
  - *energy efficient lighting*

Quality Assurance/Control

Quality and workmanship was monitored and recorded through site reports which described any items of unsatisfactory workmanship and highlighted where quality needed to be improved. The reports were tracked at technical services meetings and revised on an ongoing basis, resulting in the reduction of defects at pre-handover.

FM and Maintenance

The services are designed to ensure ease of maintenance without the need to encroach on secure patient areas

Experience and Approach

- Incorporating high security seclusion rooms
- Single Bedroom accommodation in secure wards around central courtyards
- Rehabilitation spaces, learning kitchen and classrooms