

Swansea / Abertawe



Did you know

- Abertawe translates to “mouth of the Tawe”
- Coastal City in South Wales located on 5 miles of sweeping bay and mouth of river, stretching back up the valley and across the breath taking Gower peninsula
- Swansea is Wales 2nd City & has a footprint of 150 sq. miles
- Swansea is home to 2 major Hospitals, DVLA and 3 Universities
- Population of 245,000 representing 8% of the Welsh population, growth rate of 9% and 3rd largest annual GR in Wales
- Recent recipients of £1.3 billion City deal investment

Interesting facts

- Swansea was founded by King Sweyn Forkbeard of Denmark during his reign of 986-1014
- During the 18th Century Swansea was a world leader in the Copper industry with the region commonly known as Copperopolis
- TripAdvisor voted Rhossili Bay best beach in the UK and 9th best beach in the world in 2014
- Swansea was the birth place of Dylan Thomas who famously labelled the City “an ugly lovely town”
- Swansea is the only Welsh premier league football team

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Context

- Swansea Council is a Member led organisation
- Swansea have a retained Housing stock of 13,587 homes
- Swansea have direct labour organisations to deliver its services across the Place directorate
- Corporate Building & Property Services (CB&PS) deliver all building & property related functions across the Authority's Housing stock and 620 Public buildings.
- CB&PS annual turnover is approximately £65m - £30m internally delivered with a further £30m to £35m procured externally
- CB&PS employ 720 staff and 50 apprentices across a wide and varied scope of manual and professional disciplines. Over the last 10 years CB&PS have replaced 30% of its ageing trade resource through its apprenticeship program

The Drivers

- Acute Housing shortage, over the next 7 years Swansea forecasting 2,000 more homes per year, over life of LDP.
- Change in legislation April 2015 allowing Council's to build houses
 - self –financing rent system
 - Rent Policy
- Key Political priority - tackling fuel poverty
- A Political will and desire to “lead by example” explore opportunities and make the most of energy / reduce consumption
- Direct link with achieving WHQS by 2020.
- Wider economic benefits.

Passivhaus

- The term Passivhaus refers to a low energy construction standard developed by Dr. Wolfgang Feist of the Passivhaus Institute, Germany in the 1990s
- **The Passivhaus – definition** “A Passivhaus is a building, for which thermal comfort can be achieved solely by post heating or post-cooling of the fresh air mass, which is required to achieve sufficient indoor air quality conditions – without the need for additional recirculation of air.”
- Very high levels of insulation
- Extremely high performance windows with insulated frames
- Airtight building fabric
- ‘Thermal bridge free’ construction
- A mechanical ventilation system with highly efficient heat recovery
- Orientation and maximised window apertures

The Challenges

- First Council Houses to be built in a generation
- Lack of experience in fast track innovative building methodology
- The pilot project - inform a wider strategy / House building program
- Steep learning curves when upgrading of associated skill sets
- Assurances with in the supply chain
- Legalities of procuring on an International level
- PassivHaus is a life style choice, how to adapt for social housing

Delivering the Project





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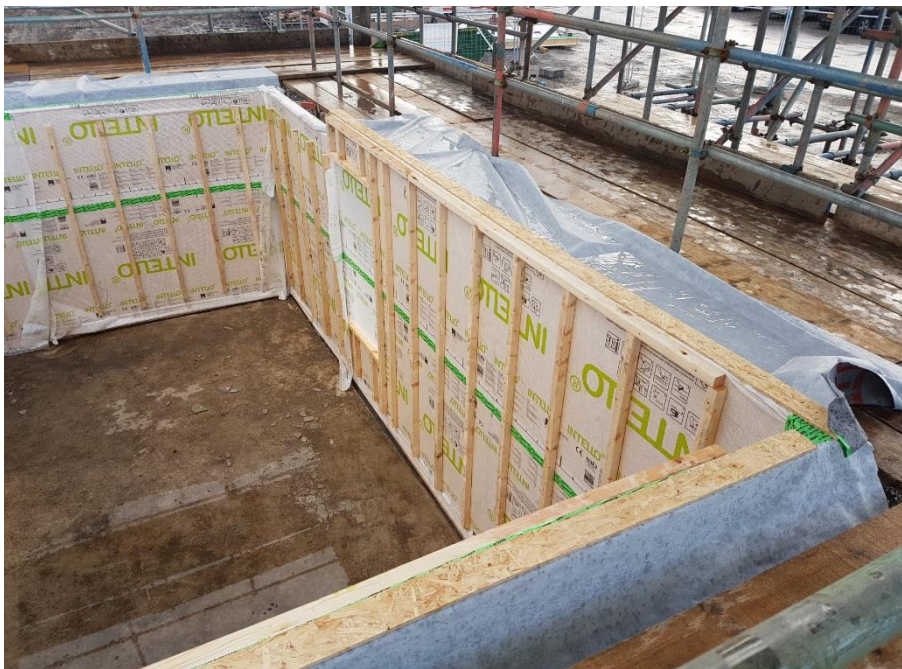
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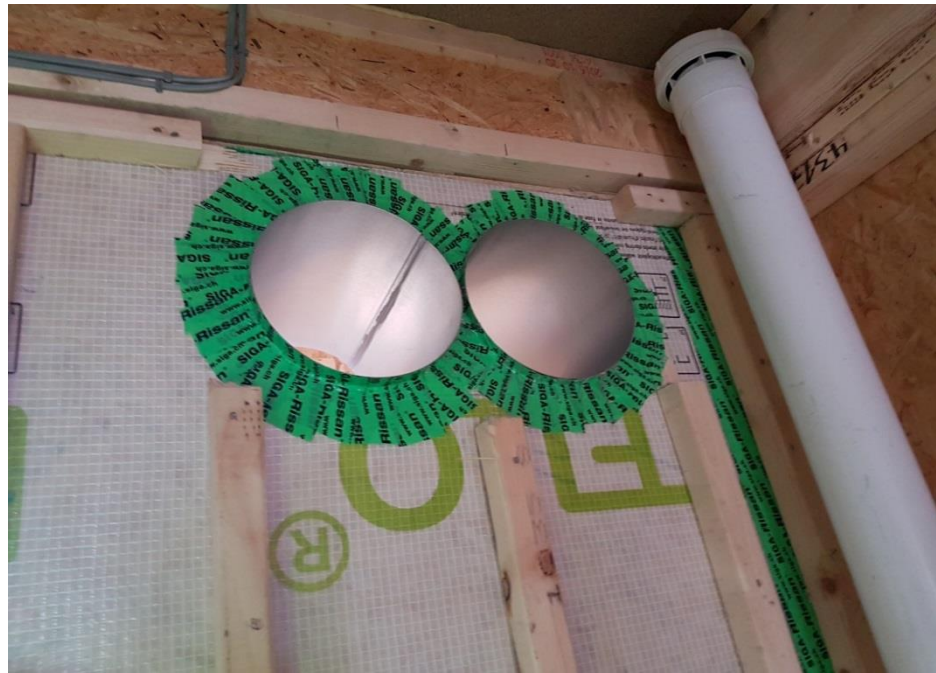
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Lessons learnt

- Educate yourself
- Early engagement with the supply chain
- Tender documentation to include air pressure testing
- Air tightness champion
- Internally deliver services where you can
- Develop an awareness campaign as part of site induction
- Industry experts don't always deliver

Expected benefits/tenant challenge

- Lower fuel bills – 70% more efficient than current regs
- Prevention of mould, condensation, cold spots
- Positive health impacts on conditions such as eczema, asthmas and allergies or chest conditions

- This is a pilot – gauge tenant feedback with WSA
- Monitor temperature throughout the year/seasons
- Lifestyle – opening windows and doors reduce efficiency?
- Will it deliver what is expected?

Future aspirations

“Homes as power stations”

- 60% Reduction in energy usage
- Standardised design (Cost effective)
- Localised renewable generation
- 3,000 New Build Homes
- 7,500 Retrofit projects
- Flexible & adaptable design approach
- Localised indigenous supply chain
- Jobs creation 4,512
- Whole house performance (Evaluation/monitoring)
- Legacy/route to energy positive/ zero carbon homes

