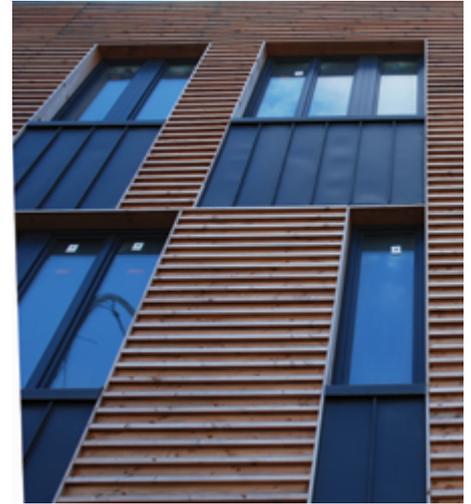


Princedale

High Performance Façade System for Multi-Storey Buildings



Elia Head Office block

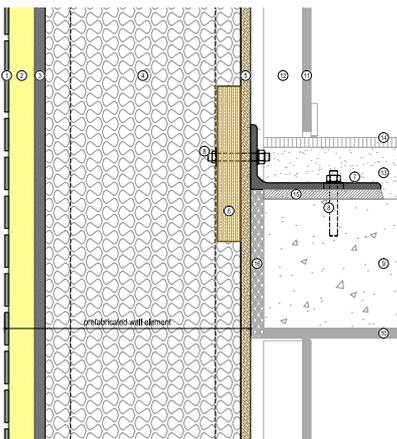


Town hall

Princedale's system delivers a fully clad, airtight, insulated, breathable building envelope for concrete and steel framed buildings. Developed over 7 years, the system was designed specifically for multi-storey Passivhaus construction and has been used on a variety of low-energy buildings from schools and offices to high-rise accommodation and public buildings. Not only does it deliver high performance but it is flexible enough to reflect a wide variety of architectural styles, preserving the architect's vision. Additionally, it delivers added value for the client and end user through reduced service requirements and lower running costs. We design, manufacture and install in an extremely efficient and cost-effective process.

This is more than an off the shelf panel system, this is a bespoke solution, delivered with technical expertise. We work in collaboration with Client, Architect, QS, M&E and Structural engineers to design and manufacture the system to the requirements and specification. We then take responsibility for installation and delivery of an airtight building envelope. Each build is unique, with its own set of challenges. We accumulate knowledge with each project resulting in a system that evolves and improves with each project.

We start with detailed technical design and planning to ensure that any issues with airtightness, thermal bridging, condensation and insulation are pre-empted and designed out. The panels are then millimetre-precision prefabricated, in a zero-carbon facility, including pre-installation of windows and the application of external cladding such as render, timber, metal or brick slips ready for delivery to the site. Installation is fast and efficient utilising a small team, even on large buildings.



Typical façade connection detail showing connection to frame

System Benefits

- Bespoke system
- High quality control – panels fabricated in a clean dry factory
- Sustainable materials and production method
- Low frame load, reduced frame engineering costs
- No scaffolding required for preclad units
- Fewer crane requirements
- Shorter site time – lower costs on equipment hire, on-site man hours
- Faster turnaround – quicker delivery and occupancy
- Lower overall site and project management time
- On-site logistics easier – fewer individual elements to manage.
- Complete system – no need to manage multiple contractors
- Greater accountability – we take responsibility for the building envelope and guarantee the performance
- Contributes significantly to BREEAM
- Lower capex than either concrete sandwich panels or glazed curtain walling
- Proven use – multiple large scale buildings, including the largest Passivhaus building in Europe designed and constructed by us, with this system.



Affordable housing



Mixed use retail/office unit

Technical and performance information

- Capable of delivering a u-value of 0.1 to a large building
- Delivers a fully airtight building envelope
- High acoustic performance
- Carried by the concrete/steel frame and does not need support from foundations
- Low frame load, reducing ground beam and frame size requirements
- Designed to eliminate build-up of interstitial condensation
- Factory fabricated to any thickness and level of insulation
- Constructed with insulation and windows pre-installed including blinds and/or shading, delivering an exceptional fit and finish, and minimising site time
- Fast construction: in a very short period of time, allowing multiple storeys to be constructed quickly and economically, offering a clear cost-saving, in particular in site labour required.

Constructing in this way offers complete flexibility to building requirements.

This system is capable of delivering any performance specification up to and including Passivhaus, which has a number of benefits of its own

- Passivhaus is increasingly a selling point – customers looking for sustainable/ environmentally friendly solutions
- Genuine low-energy solution – no bolt-ons or ecobling
- No need for central heating – remove a whole requirement from the budget, and/ or remove associated costs of involvement with district heating
- For rental units and affordable housing:
 - More appealing to tenants through lower overall cost
 - Heating cost included in rent/management cost – no need for time and admin hassle of billing or chasing up unpaid heating bills
 - Rent arrears significantly drop¹
- Delivers greater acoustic performance through triple glazed windows and airtightness, with no need for additional noise reduction measures
- Health benefits of fresh, filtered air
- Lower ongoing maintenance
- No gas services needed in the building.

Princedale

Princedale is a technical design and build business, delivering high performance prefabricated façades for multi-storey buildings.

More than just supplying the building envelope, we offer real technical expertise at the design stage, helping resolve the tension between aesthetic, cost and performance so that all the objectives are not only achieved, but maximised as far as possible. Working as a collaborative team with Client, Architect, QS, M&E and Main Contractor with everyone focussed on the overall goals, in addition to being more productive, it unifies objectives and provides greater transparency and accountability.

Our approach offers added value through reduced costs, timeframes, logistics management and greater accountability.

We believe in innovation and continual improvement and actively develop systems and product for greater cost, time and performance efficiencies.

We believe in delivering true sustainability right the way through from materials and production processes to delivering an inherently low energy building using a Fabric First approach.

We bring expertise and experience, with a particular specialism in Passivhaus. Our technical director has over 400 Passivhaus builds to his name, including the Elia Head Office in Brussels, which is currently the largest Passivhaus building in Europe. The 6,600m² façade was installed by a team of six, in six days..

Our systems are suitable for high rise housing, offices, schools, hotels, and care homes.

1. www.insidehousing.co.uk/arrears-drop-in-passivhaus-schemes/7002092.article

