Dublin City Council ‘A’ Rated homes with natural gas

Located at St. Helena’s, Finglas, this Dublin City Council development meets all Part L building regulations using natural gas combined with renewable technology.

Gas Boiler complete with Photovoltaic (PV) Panels:

- Economical energy solution for New Build Housing
- Easy to operate and maintain
- Tried and tested natural gas system
- Cost effective solution for meeting Part L

Dublin City Council New Build Homes with Natural Gas

This Dublin City Council rapid build project used off-site manufacturing techniques and steel frame (LGSF) technology to expedite the building process. Built to a very high standard, 39 families will now call this development home.

This development was built utilizing the services of ABM Construction, who provided an integrated turn-key design, construction and project management service, as well as Clean Energy Ireland who designed, supplied and fitted the Solar PV systems and carried out the air tightness testing.

“Gas Networks Ireland’s commitment to new Local Authority Housing Projects, made the connection process efficient.”

Brian Curran, Dublin City Council
**90% efficient boiler**

A Glow-worm gas boiler operates at 90% efficiency. This highly efficient boiler has zone control for 3 heating zones.

**Solar photovoltaic panels**

Photovoltaic systems convert solar radiation into free electricity. This kind of panel works all year round not just on sunny days providing free electricity to the homeowner.

**162 litre water cylinder**

A 162 litre water cylinder with good levels of insulation makes the heating system very economical to run.

**System features**

- 90% efficient boiler
- 2-5 solar PV panels
- 162 litre water cylinder
- High levels of insulation with triple glazed windows

**Building Fabric: Compliant with U-Value Requirements**

<table>
<thead>
<tr>
<th>Component</th>
<th>U-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor</td>
<td>0.11 W/m².K</td>
</tr>
<tr>
<td>Walls</td>
<td>0.16 W/m².K</td>
</tr>
<tr>
<td>Roof</td>
<td>0.10 W/m².K</td>
</tr>
<tr>
<td>Windows</td>
<td>0.95 W/m².K</td>
</tr>
</tbody>
</table>

**Heating System: ≥90% efficient boiler**

**Main Heating System**

90% efficient gas fired condensing boiler with standard size radiators.

**Heating Controls and Water Storage**

Time and temperature zone controls in conjunction with an insulated 162 litre water cylinder.

**Ventilation: Natural Ventilation throughout the house**

These houses contain triple glazed windows with natural ventilation and an air tightness value of just over 0.099 air changes per hour of floor area.

**Renewable Energy Contribution:**

≥10 kWh Thermal Renewable Energy per metre squared per year

This development required each house to have between 2-5 solar PV 310W panels. St Helena’s easily complies with the renewable energy contribution with a thermal equivalent of 15.25 kWh per metre squared per year.

**Performance Coefficients:**

<table>
<thead>
<tr>
<th>Performance Coefficient</th>
<th>Part L Requirement</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Performance Coefficient (CPC)</td>
<td>&lt;0.46</td>
<td>0.350</td>
</tr>
<tr>
<td>Energy Performance Coefficient (EPC)</td>
<td>&lt;0.4</td>
<td>0.386</td>
</tr>
</tbody>
</table>

**Meets Part L compliance easily**

The combination of natural gas, renewable technology and insulation means this development surpasses all of the Part L Building Regulation requirements in using a cost effective approach. With natural gas, homeowners are guaranteed a fully proven ‘A’ rated solution.
**Windows and air tightness**

A-rated air tightness tapes and sealants are installed around all windows, doors and openings. Clean Energy Ireland performed an air tightness test on each building in the development to get an accurate air permeability of the building envelope.

---

**Time and Temperature Zone Control**

With time and temperature zone control it is possible to program the heating times of at least two space heating zones independently in addition to independent temperature controls.

---

**What is Rapid Build Housing?**

Rapid-delivery houses are typically factory-built structures in either wood, steel or modular form. Due to the construction method, houses can be constructed off-site and transported to the project site for completion. This single transport method cuts down the need for a wide range of machinery and personnel on the construction site. All materials can be more efficiently measured, cut and constructed ensuring reduced waste of build materials.

---

**What is Photovoltaic Technology?**

Photovoltaic (PV) panels generate electrical power by converting solar radiation into free electricity for the homeowner. The photovoltaic system provided by Clean Energy Ireland consists of solar panels collecting light energy from the sun that is then converted to supply electricity to the home.

---

**Easy to operate and maintain**

Owners of these homes will be able to come in, switch the heating on and enjoy instant and controllable space heating and hot water thanks to natural gas. A modern solution for a modern home.

Servicing a gas boiler is a simple process which is performed on an annual basis by one of the many 2,500 Registered Gas Installers (RGIs) around Ireland, traditionally ensuring a prolonged life cycle of 20-25 years.
Working with Gas Networks Ireland in order to provide a really cost effective sustainable energy solution for Local Authority New Build Projects in conjunction with Dublin City Council means Clean Energy Ireland can take pride in providing a really good product."

Patrick Wycherly, Clean Energy Ireland

---

Builder

ABM Construction
Unit 2B
Feltrim Business Park
Drynam Road
Swords
Co Dublin
Tel: 353 (0)1 890 0919
Email: construction@abmeurope.com

Photovoltaic Panel Supplier & Air Tightness Testing

Clean Energy Ireland Ltd
Aherla
Co. Cork
Tel: 021 428 94 07
Email: info@cleanenergyireland.ie

The contact details for Gas Networks Ireland are:

Networks Services Centre,
St. Margaret’s Road, Finglas, Dublin 11,
D11 Y895.

General Enquiries:
1850 200 694

24hr Emergency Service:
1850 20 50 50
networksinfo@gasnetworks.ie
gasnetworks.ie

This information is only a guideline to the different products available for use with natural gas in new development construction. Users should ensure that products are suitable for the specific circumstances in which they seek to apply them. Contact the supplier or manufacturer directly for specific information on building requirements and materials needed for installation. Professional advice specific to the project should always be sought. The current Irish Gas Standards and Technical Guidance Documents (Building Regulations) override all contents. Users should ensure they always have the most up to date information.