



Energy Statement

Former Oakenrod School, Rochdale

Proposed Development for 46 Dwellings

August 2026 | Version 1



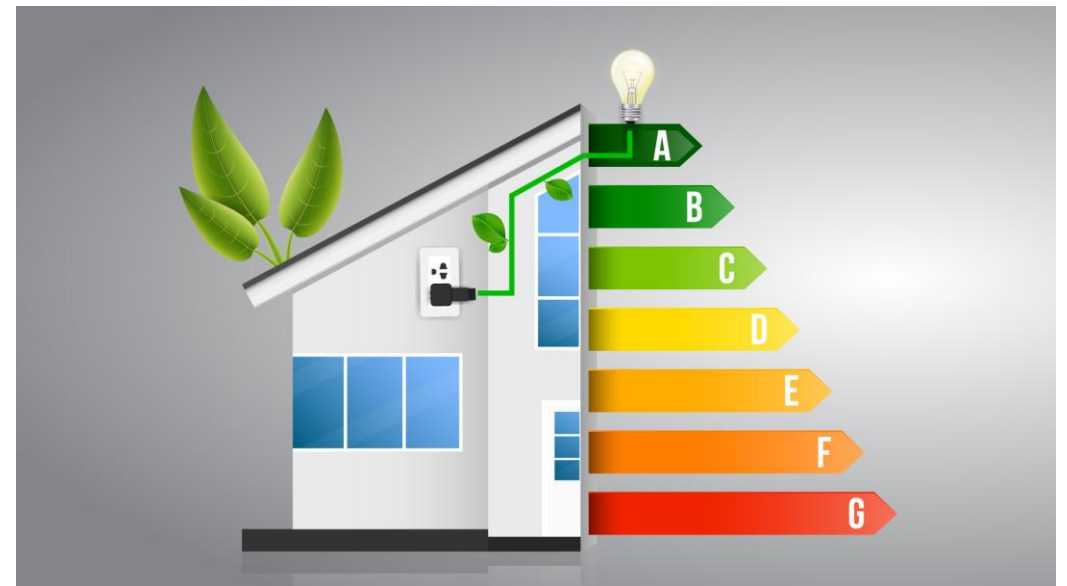
This report is designed to evaluate the energy efficiencies of the proposed dwellings against Part L 2022 Building Regulations. The report also assesses the schemes compliance with adopted planning policy relating to carbon and energy, namely PfE Policy JP-S2.

It will consider:

- Fabric Efficiencies of all elements
- Heating and hot water efficiencies
- Ventilation design
- Thermal Bridging details
- Lighting and appliances
- Air Leakage
- Photovoltaics (PV)

Summary of Part L requirements:

- CO2 emissions need to reduce by at least 31% compared to 2013 regs.
- Regulations active from June 2022.



Places for Everyone **Policy JP-S2** relates to Carbon and Energy. The policy supports delivering a carbon neutral GM through the following measures:

- Promoting the retrofitting of existing buildings;
- Promoting the use of life cycle cost and carbon assessment tools;
- Taking a positive approach to renewable and low carbon energy schemes;
- Increasing the range of nature-based solutions;
- An expectation that new development will, unless it can be demonstrated that it is not practicable or financially viable:
 - a) Be net zero carbon:
 - o From adoption - to regulated operational carbon emissions
 - o From 2028 – to all emissions ‘in construction’.

From 2025 development should also calculate and minimise carbon emissions from unregulated emissions alongside regulated emissions, in line with the energy hierarchy. The policy goes on to state:

“From 2025 any residual carbon emissions that cannot be fully mitigated on-site should be offset, in agreement with the relevant local planning authority through a financial contribution to a carbon offset fund. As an interim measure, development should be consistent with the 2022 Part L Building Regulations unless superseded by changes to building regulations and/or national or local planning policies.”

Paragraph 5.14 sets out supporting text to the policy and states:

Part L 2021 of national Building Regulations took effect on 15 June 2022 and is a stepping stone to Future Homes and Future Building Standards (FHS), which is currently being consulted on in 2024 and is expected to be introduced in 2025. In the interim, the policy will follow the trajectory of FHS in relation to carbon reduction with applicants demonstrating how savings have been maximised following the energy hierarchy. From 2025, applicants will need to demonstrate carbon reductions have been maximised with an opportunity to offset any residual carbon to a carbon offset fund. The approach will be reviewed in line with future standards as they are introduced.

It should be noted that the FHS has not yet come into force, and it is currently expected to do so from March 2027.



- The policy seeks to achieve energy demand reductions in terms of space heat demand; hot water energy demand and the delivery of on-site renewable energy generation, in accordance with Table 5.1

Table 5.1 Best Practice Thresholds for Reducing Energy Demand and Onsite Renewable Energy Generation within residential developments

-	Space Heat Demand ²⁵	Hot Water Energy Demand ²⁶	Renewable Energy Generation Targets
2021 - 2025	Houses (30kWh/m2) Flats (25kWh/m2)	20% energy demand reduction in the total heat required for water heating	*Photovoltaic installation: 20% ground floorspace
2025 - onwards	Houses (20kWh/m2) Flats (15kWh/m2)	^20% energy demand reduction in the total heat required for water heating	*Photovoltaic installation: 40% ground floorspace

- The energy hierarchy in order of importance seeks to:

- i. Minimise energy demand;
 - ii. Maximise energy efficiency;
 - iii. Use renewable energy;
 - iv. Use low carbon energy; and
 - v. Utilise other energy sources.

Energy and Carbon Proforma

- An energy and low carbon proforma has been prepared and submitted (via excel spreadsheet) to assess the scheme against compliance with PfE policy JP-S2.
- It should be noted that values for all house types is not yet known as detailed design and modelling work is ongoing for this particular scheme. Where the values are not known, they have been marked ‘to be confirmed’. Any further information that becomes available during the application process will be shared with the LPA by way of an updated proforma.



It is the applicant's position that it is not practical or viable for the proposed development to achieve net zero and nor is the extant permission required to do so. However, the energy hierarchy has been considered in the spirit of seeking to address the climate crisis.

- **Minimise Energy Demand**

- Windows are sized and orientated to manage heat gain and loss.
- All homes are built from timberframe and insulated to the latest building regs requirements, reducing upfront carbon emissions.
- All plots feature a positive input ventilation system to assist with air flow through the dwellings.
- All homes feature PV Panels with energy obtained re-used in the home.
- All homes feature Waste Water Heat Recovery, sending warm waste water into the boiler system and in turn reducing the energy needed to heat water.

- **Maximising Energy Efficiency**

- Energy efficient white goods where provided.
- Energy efficient boiler and heating system.
- All homes feature EV chargers, with smart technology to charge off-peak.

- **Renewable energy**

- All homes feature PV panels, the amount of which is informed by SAP calculations.

- **Low Carbon Heat**

- The site is not located within a Heat Network Opportunity Area and so this has not been considered
- Measures to be delivered across the proposed development are set out in the following slides.



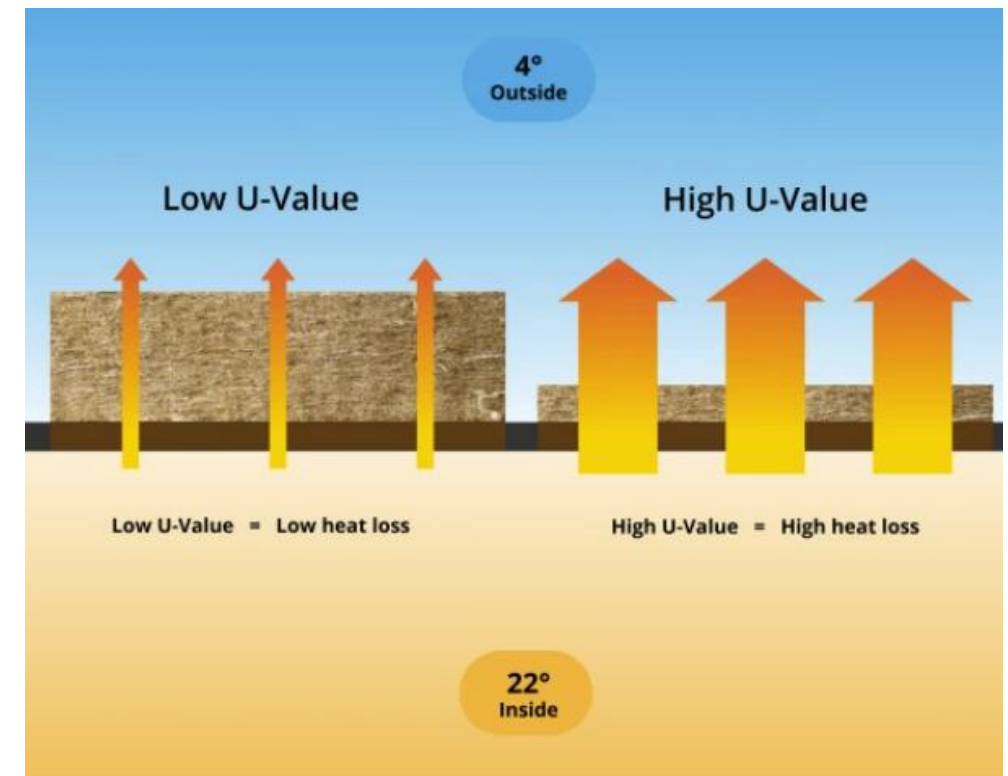
- Floor $U = 0.15$
- Wall $U = 0.18$
- Roof $U = 0.09$
- Windows $U = 1.2$
- Front Door $U = 1.1$
- Air leakage = $4\text{m}^2/\text{m}^3\text{hr}$
- Boiler = 90% efficient
- Zone valves
- Weather compensator
- PIV ventilation
- Accredited junction details
- PV Solar Panels to all housetypes
- Shower Heat Recovery System



SAP Calculation for all submitted housetypes can be provided.



- Walls are factory insulated to maintain high levels of installation quality and to achieve U values of 0.18.
- Windows use highly efficient double glazing to achieve U values of 1.2.
- Composite external doors achieve U values as little as 1.1.
- Foiled Vapour Control Layers help us to achieve air leakage figures of less than 4 AC. Every plot is tested to prove compliance.
- The thermal junctions of the dwellings are built to a minimum of Accredited Details standard.
- Many junctions have been refined to decrease the Psi value and increase thermal efficiency.



All houses utilise efficient condensing modulating gas boilers.

- All house designs use 2 zone heating to maximise efficiencies.
- Boilers are linked to weather compensators to allow the boiler to assess outside conditions, and work to achieve inside requirements.

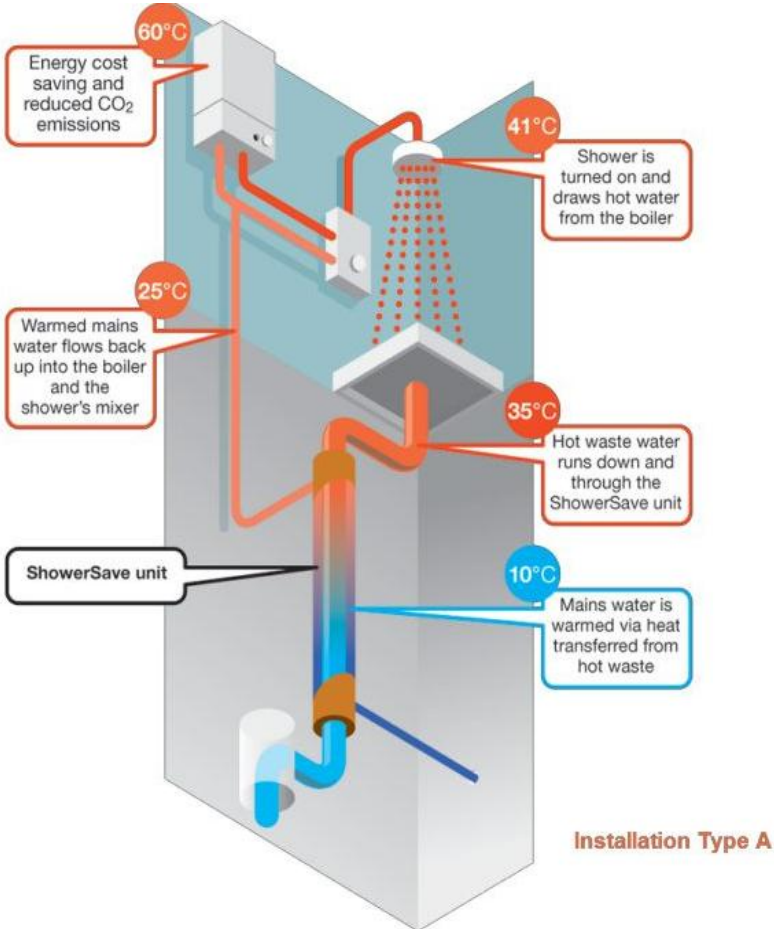
Radiators and pipe runs designed to accommodate future change to a heat pump for the house owner.

All dwellings use water saving sanitary ware.

- These include aerating taps, aerating showers, and low flush toilets.
- This allows dwellings to improve upon the Building Reg minima of 125 litres of water per person per day.
- This allows a more efficient SAP calculation.

All dwellings to use Shower Wastewater Heat Recovery (SWWHR)

Technical data	25kW combi
Article number	0010020392
Gas Council Number	47-044-71
PCDB Number	017958
Boiler dimensions (HxWxD)	702 x 390 x 295
Flue options	Top / rear
Maximum flue length in metres (60/100) h/v	10 / 10
Maximum flue length in metres (80/125) h/v	25 / 25
Boiler lift weight (kg) - dry boiler	32
Nominal heat output range at 50/30°C (kW)	5.3 - 19.1
Nominal heat output range at 80/60°C (kW)	5.1 - 18.3
Maximum flow temperature (°C)	80
Flow temperature range (°C)	10 - 80
Domestic hot water flow rate l/hr (at ΔT = 35K)	10.4
Flow temperature factory setting (°C)	75
PCDB seasonal efficiency (SAP 2012) (%)	89.3
ErP efficiency (%)	93
ErP rating (heating/hot water)	A / A
Sound power/ErP decibel rating dB(A)	49
NOx mg/kWh (En 15502-2-1)	38.9

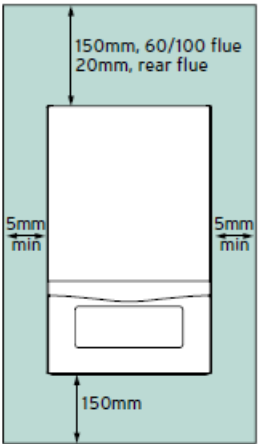


Technical data

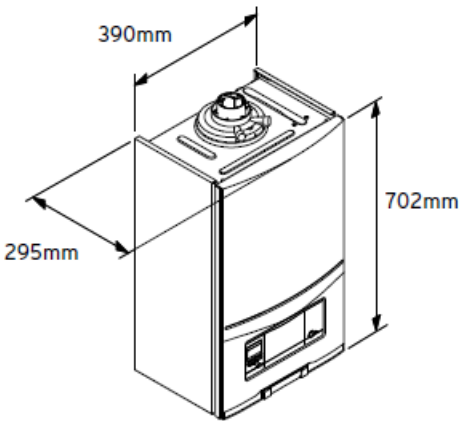
ecoFIT sustain combination boiler 825, 830 and 835



Clearances:



Dimensions:



Ventilation, Thermal Bridging, Lighting and Appliances, Air Leakage & PV

Stonebond

Ventilation:

- PIV systems are incorporated within every dwelling.
- PIV systems benefit from the freely warmed air in roof spaces.
- This air is blown into the property and helps to maintain a healthy environment for the occupier.

Thermal Bridging:

- All junctions are thermally designed.
- They meet Accredited Details as a minimum.
- The junctions are further improved where possible to achieve an overall lower ψ value.

Lighting and Appliances:

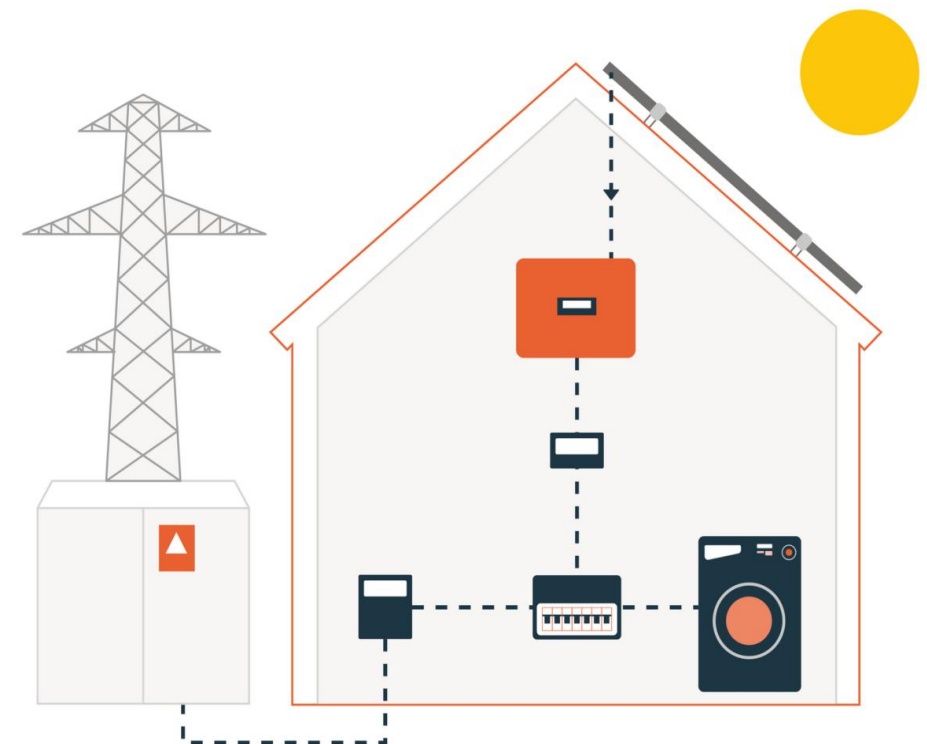
- Energy efficient lighting is used throughout every dwelling, both internal and external.
- Energy efficient appliances (A and A+) are utilised

Air Leakage:

- All houses are designed to a maximum air leakage of $4\text{m}^3/\text{m}^2/\text{hr}$
- All houses will be tested to ensure compliance.

Photovoltaics (PV):

- Roof mounted PV will be installed on every plot.
- These must be on the Southern most practical elevation.
- PV arrays will be approximately 1.2kW which consists of 4 no. 300W panels.





Stonebond 