

Sustainability Statement

Report to Discharge Condition 13 Planning Permission (Ref: APP/25/00639)

Former SSE Depot
Bartons Road
Havant
Hampshire

Stonebond Properties (Guildford) Limited

Report No: DC-ES-SB-BR-26-01

Report Date: July 2026

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1. PROJECT DETAILS

Item	Details
Project Name	Former SSE Depot, Bartons Road, Havant
Project Address	Former SSE Depot, Bartons Road, Havant, Hampshire
Project Description of Approved Planning Permission	Erection of 90 dwellings with associated landscaping, parking and improved access.
Applicant	Stonebond Properties (Guildford) Limited
Applicant's Address	1 Bishops Wharf, Walnut Tree Close, Guildford, Surrey, GU1 4UP
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Report Issue Number	Date	Reason	Author
01	29/07/26	For Issue	MH
02			
03			

2. EXECUTIVE SUMMARY

Introduction

Abbey Consultants (Southern) Ltd have prepared this report on behalf of Stonebond Properties (Guildford) Limited to support the discharging of Condition 13 of the full planning permission (Ref: APP/25/00639) for the development located at Former SSE Depot, Bartons Road, Havant, Hampshire. The site is located within the administrative boundaries of Havant Borough Council.

The approved planning proposal of the development is as detailed below:

“Erection of 90 dwellings with associated landscaping, parking and improved access.”

Planning Permission (Ref: APP/25/00639) for the development was granted by Havant Borough Council on 28th May 2026 subject to several conditions. This report responds only to Condition 13 which has been reproduced below:

13. No development shall commence until a sustainability statement has been submitted to and approved in writing by the Local Planning Authority. The sustainability statement shall detail how the dwellings shall incorporate low carbon and renewable technology. The statement shall detail how the development will follow an energy hierarchy, design out carbon and follow fabric first principles. As a minimum the development shall achieve a reduction in CO2 emissions of at least 31% of the Dwelling Emission Rate (DER) compared to the Target Emission Rate (TER) of Part L of the 2022 Building Regulations. The development shall be carried out in full accordance with the approved details.

In order to respond effectively to the requirements of Condition 13, this report sets out how the proposed development will follow the energy hierarchy, incorporate fabric-first design principles and utilise low-carbon technology. Sample SAP calculations have been undertaken for representative dwelling types to assess the anticipated regulated carbon dioxide emissions from the development and to demonstrate that the proposed specification is capable of achieving a reduction of at least 31% in the Dwelling Emission Rate relative to the corresponding Target Emission Rate, in accordance with the requirements of the condition.

Energy Strategy

The strategy for reducing energy use and associated carbon emissions through the design of the scheme follows the energy hierarchy of ‘Be Lean’, ‘Be Clean and ‘Be Green’.

The proposed development has been assessed using Elmhurst Energy’s latest version of their Standard Assessment Procedure (SAP) software (Design SAP 10) which uses the SAP 10.2 methodology. This assessment has determined the Building Regulations Part L baseline, to which the scheme must comply with, and each stage of the energy hierarchy will be compared against.

Firstly, the energy demand is reduced at the ‘Be Lean’ stage of the energy hierarchy. This includes a set of energy efficiency measures, including the following:

- The thermal performance of the proposed fabric will exceed Part L (2021) minimum requirements in terms of U-values and air tightness.
- Orientation has been considered in the design of the façades to ensure energy use is balanced through daylight provision and thermal comfort.
- Where applicable, the detailed design will independently assess the thermal junctions to ensure insulation continuity for minimising thermal bridging.
- Solar control glass will be utilised to ensure solar gains are balanced to lower the heat demand but also assist in mitigating the risk of overheating.
- Light fittings of low energy types will be specified throughout the scheme.

The 'Be Clean' stage of the energy strategy explores the potential for a district heat network to serve this scheme. However, this development proposal is deemed unsuitable for this type of heat network. Alternatively, individual heating systems have been specified for the dwellings.

The 'Be Green' stage of the energy hierarchy introduces low carbon energy supply systems to the houses in the form of individual air source heat pumps. These will efficiently supply the houses with space heating and hot water. The apartments will also benefit from heat pump technology in the form of domestic hot water heat pump, which will serve the apartment as a low carbon solution to supplying hot water. Although the proposed heating system will rely on electricity to provide power for the heat pumps, it will support the shift towards carbon neutrality. This is due to the ongoing decarbonisation of the electricity grid, meaning that grid electricity will eventually be generated solely through renewable sources. Therefore, this scheme will be less dependent on fossil fuels and will be future proofed against any future ban of gas heating.

Carbon Reductions

Through implementation of the energy strategy, the table below details the regulated carbon dioxide emissions and savings that are anticipated at each stage of the energy hierarchy.

Table 1: Summary of CO₂ emissions savings

Stage of Energy Hierarchy	Regulated CO ₂ Emissions (tonnes/year)
Total Part L 2021 Baseline	93.41
Total After 'Be Lean'	93.59
Total After 'Be Green'	31.46
Total Saving	61.95
Total Improvement	66%

The proposed energy strategy achieves an estimated site-wide reduction of 66% in regulated carbon dioxide emissions relative to the Part L 2021 baseline, equivalent to an estimated annual saving of 61.95 tonnes of regulated CO₂. In responding to Condition 13, the development:

- **Follows the energy hierarchy** by reducing energy demand at the Be Lean stage, considering efficient energy supply at the Be Clean stage and incorporating low-carbon technology at the Be Green stage;
- **Designs out carbon** through passive design, reduced energy demand and the avoidance of on-site fossil-fuel combustion;
- **Applies fabric-first principles** through an enhanced building-fabric specification, controlled air permeability and improved thermal-bridging performance;
- **Incorporates low-carbon technology** through the use of efficient air source and domestic hot-water heat pump systems; and
- **Exceeds the minimum carbon-reduction requirement** by achieving an estimated 66% reduction in regulated CO₂ emissions, compared with the minimum 31% reduction in the DER relative to the corresponding TER required by Condition 13.

The development is therefore considered to address all of the requirements of Condition 13 and is to be carried out in accordance with the specifications and measures set out within this report.

This report considers the layout, residential use and energy requirements of the development and sets out an appropriate energy strategy for discharging Condition 13. The strategy prioritises reductions in energy demand through fabric-first design, considers efficient energy supply in accordance with the energy hierarchy and incorporates suitable low-carbon technology to achieve the required reduction in regulated CO2 emissions.

4. PLANNING CONDITION

The following report sets out the intentions of Stonebond Properties (Guildford) Limited, with regards to the to the discharging of Condition 8 of Runnymede Borough Council's full planning permission (Ref: RU.22/1535) for the development located at Former SSE Depot, Bartons Road, Havant, Hampshire.

The Condition reads as below:

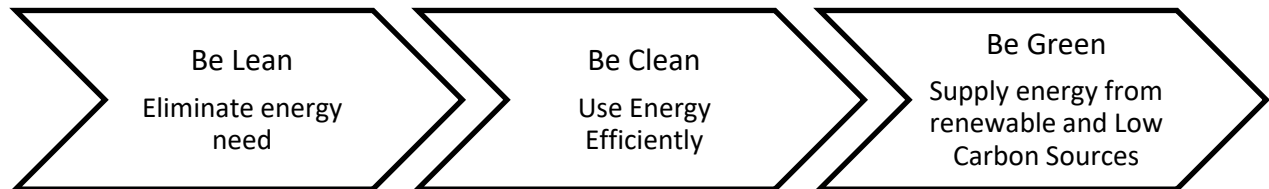
13. *No development shall commence until a sustainability statement has been submitted to and approved in writing by the Local Planning Authority. The sustainability statement shall detail how the dwellings shall incorporate low carbon and renewable technology. The statement shall detail how the development will follow an energy hierarchy, design out carbon and follow fabric first principles. As a minimum the development shall achieve a reduction in CO2 emissions of at least 31% of the Dwelling Emission Rate (DER) compared to the Target Emission Rate (TER) of Part L of the 2022 Building Regulations. The development shall be carried out in full accordance with the approved details.*

Reason: In the interest of sustainability and having regards to the Council's Climate Change Strategy and Action Plan and policies CS13, CS11 and CS14 of the Havant Borough Local Plan (Core Strategy) 2011 and the National Planning Policy Framework. This is a pre-commencement condition as it goes to the heart of the permission.

5. ENERGY ASSESSMENT

5.1. ENERGY HIERARCHY

The proposed energy strategy follows the established and widely accepted Energy Hierarchy of eliminate energy need (Be Lean), Use energy efficiently (Be Clean) and supply energy from renewable and low carbon sources (Be Green) to enable the maximum viable reductions in regulated and total CO₂ emissions over the baseline.



The proposed energy supply solutions aim to match energy profiles of the development ensuring effective use. The proposed solutions consider viability and flexibility of the scheme from both a technical and economic point of view by identifying best combination of energy efficiency measures as well as decentralised and renewable energy supply solutions.

Using these principles, Stonebond Properties (Guildford) Limited will deliver the following objectives:

- Comply with the relevant regulatory requirements.
- To reduce energy and CO₂ demand through fabric and energy efficiency measures.
- To propose to reduce energy consumption and carbon dioxide emissions further through the use of on-site renewable or low and zero carbon technologies (LZC).

5.2. ASSESSMENT METHODOLOGY

Elmhurst Energy software, which uses the Standard Assessment Procedure (SAP) 10.2 methodology to assess compliance with Part L1 2021, has been used to evaluate an initial CO₂ performance of representative residential dwellings. To assess energy performance of the entire residential development, an energy and carbon assessment model has been produced, which extrapolates the results of the SAP analysis using the floor area weighted average method detailed within Part L1 2021 to predict the energy consumption and CO₂ performance of the residential development.

Although the produced data detailed within this report provides estimations of possible energy and carbon performance of the development, it is not intended to be used as a detailed design tool.

5.3. ESTABLISHING THE BASELINE CO₂ EMISSIONS

In order to assess the energy demand and CO₂ performance of the proposed energy strategy, a baseline needs to be established. This section sets out the approach taken to calculating the baseline CO₂ emissions for the development.

The total baseline CO₂ emissions for the proposed development is defined as regulated CO₂ emissions, which is covered by Building Regulations Part L. Regulated CO₂ emissions are calculated from the CO₂ emissions associated with space heating, hot water and fixed electrical demands (for lights, fans and pumps).

Unregulated CO₂ emissions are those that are associated with appliances. Unregulated CO₂ emissions are not covered by Part L and are therefore not included as part of the assessment detailed within this energy strategy.

CO₂ Conversion Factors have been applied in accordance with the requirements of Building Regulations Part L 2021. These were detailed in the previous section of this report.

The residential baseline CO₂ performance is based on the Part L1 2021 Target Emission Rate (TER) performance of representative dwellings. The baseline CO₂ performance has been determined by carrying out SAP 10.2 modelling to establish the TERs of sample dwellings. The TER sets a minimum allowable standard for the energy performance of

a building and is defined by the annual CO₂ emissions of a notional building of the same type, size and shape to the proposed building. The specification of the notional building used to calculate the TER is defined within Building Regulations Part L 2021. The representative dwellings presented in the following table were used to carry out the SAP assessment.

Table 2: Representative Sample SAP Dwellings

Sample SAP Type Reference	No. of Units
1 BED M4(3) FLAT	1
1 BED MF FLAT	2
1 BED MF/ER FLAT	2
1 BED TF FLAT	6
2 BED EF FLAT	2
2 BED GF FLAT	4
2 BED M4(3) FLAT	1
2 BED MF FLAT	5
2 BED MF/ER FLAT	7
2 BED TF FLAT	2
M2.3 ET	6
M2.3 MT	6
M3.11 ET	1
M3.12 ET	13
M3.12 MT	15
M3.13 ET	7
M4.12 ET	8
M4.12 MT	2
TOTAL:	90

The calculated TER of the representative dwellings can be found on the SAP sheets within the appendices. The TER results of the SAP assessments from the representative dwellings have been extrapolated using a Carbon Emissions Reporting Spreadsheet. This then determines the total baseline for the residential element of the proposed development.

5.4. TOTAL BASELINE CO₂ EMISSIONS

The total baseline regulated CO₂ emissions for the development are summarised below.

Table 3: Total Baseline CO₂ emissions

Stage of Energy Hierarchy	Regulated CO ₂ Emissions (tonnes/year)
Part L 2021 Baseline	93.91

6. DEMAND REDUCTION (BE LEAN)



In accordance with the Energy Hierarchy, the energy demands of the development should be reduced as much as practically viable, prior to considering low carbon or renewable measures.

A range passive design and active design measures to reduce CO₂ emissions and increase resilience to climate change are proposed. These proposals are detailed within the following sections.

6.1. PASSIVE DESIGN

Passive design measures, including optimising orientation and site layout, natural ventilation and lighting, thermal mass and solar shading have been integrated in the design.

6.1.1. BUILDING ORIENTATION

Orientation varies across the proposed development. Orientation has been considered in the design of the façades to ensure energy use is balanced through daylight provision and thermal comfort.

6.1.2. SOLAR GAIN AND DAYLIGHT

The make-up of the proposed façades has balanced proportion of solid wall to glazing, thus providing optimum amount of daylight and winter solar heating, while limiting excessive solar gains in the summer. Some external shading will be provided in the form of balconies and deep window reveals, and this will be combined with high performance glass is proposed throughout the scheme for additional solar control.

6.1.3. BUILDING FABRIC

To reduce demand for space heating, emphasis has been placed on providing a very high standard of fabric efficiency and reducing heat loss through the building envelope. Approved Document Part L 2021 sets out the limiting fabric parameters for each of the building elements. Each stated value represents the area-weighted average U-value. The following table details the proposed U-values to be used in the described exposed element within the fabric of the development. The proposed U-values will be achieved through use of high performance insulation.

Table 4: Proposed Fabric Specification

Element	Part L1 2021 Minimum Fabric Requirements	Proposed Specification
Ground Floor	0.18 W/m ² K	0.12 W/m ² K
Exposed Floor	0.18 W/m ² K	0.12 W/m ² K
External Wall (to houses)	0.26 W/m ² K	0.18 W/m ² K
External Wall (to apartments)	0.26 W/m ² K	0.19 W/m ² K
Communal Wall	0.26 W/m ² K	0.28 W/m ² K
Party Wall	0.20 W/m ² K	0.00 W/m ² K
Cold Roof (insulated at ceiling)	0.16 W/m ² K	0.08 W/m ² K
Sloping Roof (insulated at slope)	0.16 W/m ² K	0.16 W/m ² K
Flat Roof	0.16 W/m ² K	0.13 W/m ² K

Windows	1.60 W/m ² K	U-Value = 1.30 W/m ² K G-Value = 0.44 BFRC Certificate
Bi-Fold/Patio Doors (to houses)	1.60 W/m ² K	U-Value = 1.40 W/m ² K G-Value = 0.29 BFRC Certificate
Bi-Fold/Patio Doors (to apartments)	1.60 W/m ² K	U-Value = 1.30 W/m ² K G-Value = 0.35 BFRC Certificate
Entrance Doors	1.60 W/m ² K	1.00-1.20 W/m ² K

6.1.4. THERMAL BRIDGING

Where applicable, the thermal junctions will be independently assessed. This will minimise the effects of non-repeating thermal bridging and reduce heat loss further. By specifying and ensuring that appropriate detailing is designed into the build, CO₂ emissions can be greatly reduced. It is also proposed that the openings will have Hi-Therm lintels installed to maximise thermal efficiency and further reduce heat loss.

6.1.5. AIR TIGHTNESS

High levels of air tightness are proposed for the buildings. The target for each residential dwelling will be set at 4.50m³/h/m². This is a significant improvement upon the Part L 2021 minimum requirement of 8.00m³/h/m². This means that air infiltration between the internal and external environment will be largely controlled and space heating demand further reduced.

6.2. ACTIVE DESIGN

After reducing the energy demand of the development, the next stage is to use energy efficient building services systems, low energy lighting and controls throughout the scheme to reduce energy consumption and the associated CO₂ emissions.

6.2.1. SPACE HEATING AND HOT WATER

It is proposed that the dwellings will have their heating and hot water supplied through highly efficient individual air source heat pumps. These will be supplemented with highly insulated hot water cylinders to ensure that the heat loss per day is kept to a minimum, thereby using less energy and keeping carbon emissions reduced.

The apartments will have their heating supplied via direct acting electric panel heaters and their hot water supplied through domestic hot water heat pumps.

Due to the nature of the energy hierarchy being adhered to within this energy strategy, the CO₂ emissions improvements that are achieved as a result of heat pump technology should only be accounted for at the 'Be Green' stage of the energy hierarchy. This is because heat pumps are considered a renewable/low carbon energy source. Therefore, for the purpose of reporting the 'Be Lean' figures, the notional building system type will be used as specified in the Part L 2021 baseline.

6.2.2. VENTILATION

The residential dwellings will utilise continuously running decentralised extract fans (system 3) to all wet rooms and kitchens. This will ensure the airtightness of the dwellings can be kept low, without compromising on the necessity for good ventilation.

6.2.3. COOLING

It is currently assumed that the cooling requirements during the hot summer months will be met via openable windows/patio doors and mechanical ventilation with enhanced ventilation rates (where applicable). The development will be subject to an overheating assessment which will be carried out at the detailed design stage, whereby the overheating mitigation strategy will be finalised.

6.2.4. LIGHTING

The proposed windows aim to maximise daylight to minimise the need for artificial lighting. The electricity consumption associated with lighting will be further reduced by effectively controlling the lighting systems by:

- Using energy efficient lamps and luminaires. Low energy lamps and LED's are proposed throughout.
- Lighting controls (e.g. PIR sensors) will be provided in communal areas to reduce energy consumption.
- Having appropriately commissioned lighting systems.

6.2.5. SMART CONTROLS & ENERGY METERING

It is expected that the dwellings will be provided with an individual, programmable, zoned, control system, together with smart energy meters.

This will allow the display of energy use within individual units as required, assisting occupants to understand the way in which they consume energy and how much it costs. This will encourage them to turn off non-essential equipment or run equipment at a lower capacity during times of peak demand.

6.3. CO₂ SAVINGS AFTER 'BE LEAN' MEASURES

After implementing all the passive and active energy efficiency measures for the 'Be Lean' stage of the energy hierarchy, the regulated carbon dioxide emissions for the proposed development are reduced by an estimated 0.32 tonnes per year. The total 'Be Lean' CO₂ emissions have been summarised below and compared against the baseline figure.

Table 5: Total 'Be Lean' CO₂ emissions

Stage of Energy Hierarchy	Regulated CO ₂ Emissions (tonnes/year)
Total Part L 2021 Baseline	93.91
Total After 'Be Lean'	93.59
Total Saving	0.32

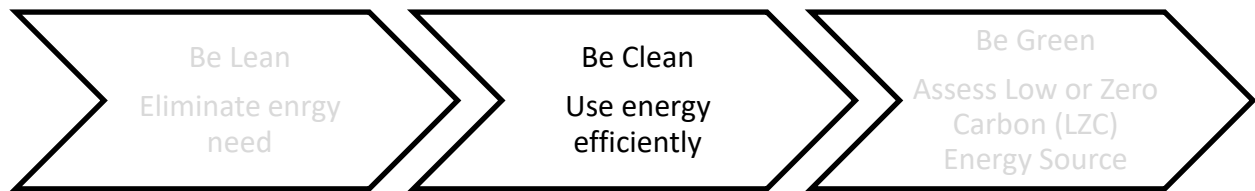
The Target Fabric Energy Efficiency rate is the minimum energy performance requirement, as stipulated by Building Regulations Part L1 2021, for all new residential dwellings. It is expressed as the amount of energy demand in units of kilowatt-hours per square metre of floor area per year. This performance metric is influenced by the fabric only, which is why it can be reported at this stage of the energy hierarchy.

The energy strategy has reduced energy demand through fabric and energy efficiency measures. The demand has been shown to have been reduced by an average of 5%, as detailed in the table below.

Table 6: FEE Performance

Element	Target Fabric Energy Efficiency (TFEE) kWh/m ² /year	Dwelling Fabric Energy Efficiency (DFEE) kWh/m ² /year	Improvement (%)
Site Wide Average	35.34	33.65	5%

7. SUPPLY ENERGY EFFICIENTLY (BE CLEAN)



The Be Clean stage of the energy hierarchy considers whether the development can be supplied with energy more efficiently through connection to an existing or planned heat network, or through the provision of a site-wide communal energy system.

Consistent with the approach established within the approved planning-stage Energy & Sustainability Statement, a communal or district heating system is not proposed for the development. The scheme comprises new-build residential dwellings that can be served more appropriately through individual dwelling-level heating and hot-water systems.

A communal heat network would introduce additional distribution losses, infrastructure, management requirements and operational costs without providing a clear carbon benefit for the proposed development. The use of gas-fired communal heating or combined heat and power would also be inconsistent with the transition away from fossil-fuel-based heating.

The development will therefore retain individual energy systems at dwelling level. Low-carbon heat pump technologies are introduced at the subsequent Be Green stage of the energy hierarchy, following the implementation of the fabric-first and energy-efficiency measures described at the Be Lean stage.

8. RENEWABLE ENERGY (BE GREEN)



The following low and zero carbon technologies have been considered for this scheme:

- Air Source Heat Pump (ASHP)
- Domestic Hot Water Heat Pumps
- Photovoltaic Panels (PV)
- Ground Source Heat Pump (GSHP)
- Wind Turbines
- Biomass Boiler
- Solar Thermal

The assessment has shown that individual air source heat pumps and domestic hot water heat pumps are considered to be the most suitable renewable/low carbon energy solutions for this development.

All other renewable energy technology options are summarised in the appendices and have, at this stage, been deemed as not appropriate for this development.

8.1. AIR SOURCE HEAT PUMPS (ASHP)

Air at any temperature above absolute zero contains some energy. An air source heat pump transfers some of this energy as heat from one place to another, for example, between the outside and inside of a building. This can provide space heating and hot water. A system can be designed to transfer heat in either direction, to heat or cool the interior of the building in winter and summer respectively. For simplicity, the description below focuses on use for interior heating.

The technology is similar to a refrigerator/freezer or air conditioning unit. The different effect is due to the physical location of the different system components. Just as the pipes on the back of a refrigerator become warm as the interior cools, so an ASHP warms the inside of a building whilst cooling the outside air.

The main components of an ASHP are:

- An outdoor heat exchanger coil, which extracts heat from ambient air.
- An indoor heat exchanger coil, which transfers the heat into hot air ducts, an indoor heating system such as water-filled radiators or underfloor circuits and a domestic hot water tank.

Some of the key advantages of ASHPs are listed below:

- ASHPs save carbon emissions. Unlike burning oil, gas, LPG or biomass, a heat pump produces no carbon emissions on-site (and no carbon emissions at all, if a renewable energy source is used to power them).
- They save space. There are no fuel storage requirements.
- They require less maintenance than combustion-based heating systems.
- Heat pumps can provide cooling in summer, as well as heating in winter.
- There is no combustion involved and no direct emission of harmful gases.

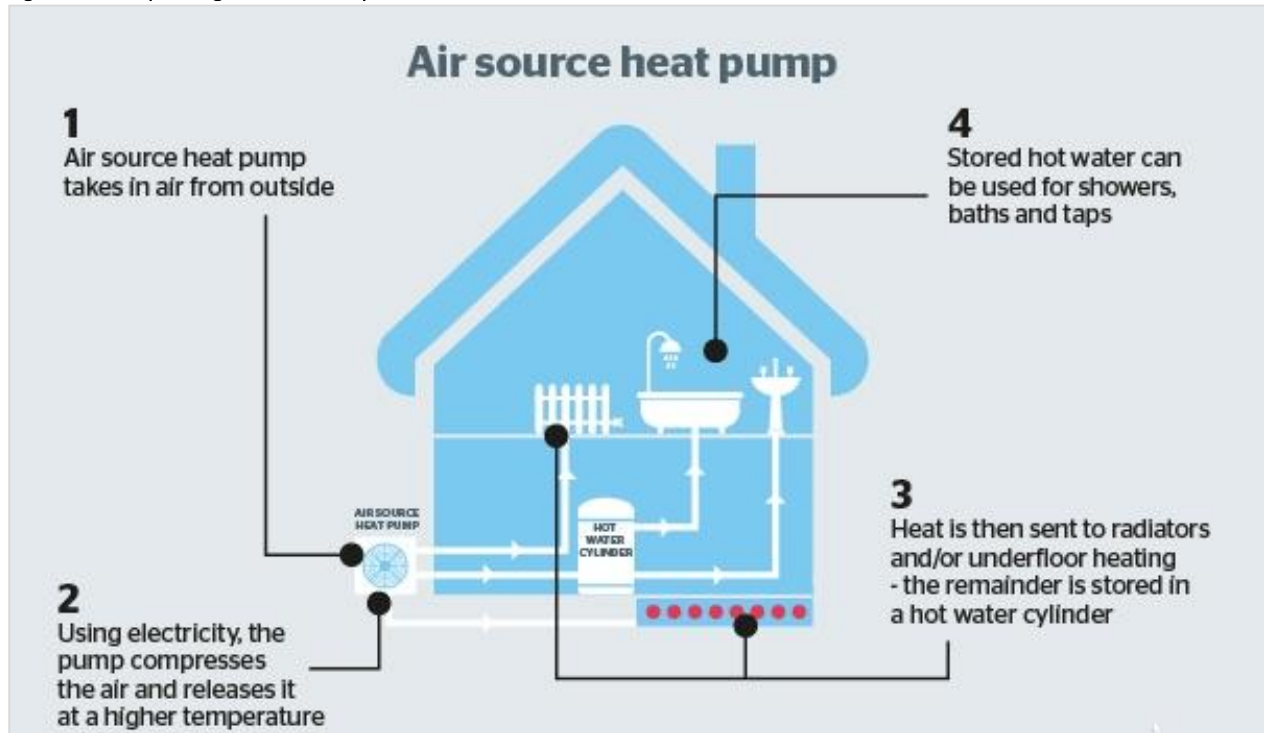
The use of individual Air Source Heat Pumps (ASHP) is proposed for this development to efficiently supply the houses with space heating and hot water. The ASHP are to be discreetly located within the boundary of each plot. Highly insulated hot water cylinders will be installed in conjunction with the ASHPs as part of the heating system of each dwelling.

ASHPs will require electricity to operate, however this electricity can be supplied by renewable sources. This will future proof the home against the decarbonisation of the electricity grid.

A datasheet for the ASHP specified within the sample SAP calculations has been included within the appendices. The full design of this system will be further developed during the detailed design stage.

The figure below demonstrates the typical operation of an ASHP system used to supply space heating and hot water to a property.

Figure 2: Example diagram of ASHP System



8.2. VAILLANT AROSTOR DOMESTIC HOT WATER HEAT PUMP

Incredibly efficient and sustainable, aroSTOR uses thermal energy to heat hot water collected via an external air duct or it can be recycle hot air from within the room where it's installed. The only other energy needed is the electricity to run the appliance.

aroSTOR heat pumps use only R290 natural refrigerant, which is used widely in household appliances such as domestic fridge freezers. With R290, aroSTOR gives excellent performance for water heating as it can deliver 60° in the cylinder without any need for a back-up heater, whilst still providing strong efficiency levels.

Some of the features and benefits of the aroSTOR hot water heat pump are listed below:

- Flexible siting options – a small footprint and range of 360° air duct accessories offers flexible options for siting of the appliance.
- Highly energy efficient and reliable – gives high COP of >3.19 and best possible ErP label of A+.
- Controls – comes with integrated control.
- High quality material and components – stainless steel tank comes with a five year warranty (two years for other components).
- Extremely quiet operation – advanced insulation and use of rubber on the compressor for quiet operation.
- Hot water on demand – self-managing hot water comfort with electrical back up heater for hot water boost (and Legionella protection).

The use of the Vaillant aroSTOR (200 litre) is proposed for the apartments on this development to efficiently supply their hot water demand. The space heating for the apartments will be supplied through the use of electric panel heaters.

Although the electric panel heaters and aroSTOR heat pumps will require electricity to operate, the shift towards carbon neutrality will mean the electricity can eventually be generated solely through renewable sources. Therefore, there is less dependence on fossil fuels and this will future proof the homes against the ongoing decarbonisation of the electricity grid.

Figure 3: Diagram of the Vaillant aroSTOR



8.3. SUMMARY OF PROPOSED BUILDING SERVICES

The building services and systems to be employed within the dwellings are summarised in the following table.

Table 7: Summary of Proposed Building Services for the Houses

Building Service Element	Specification
Heating:	Air Source Heat Pumps Vaillant aroTHERM plus range (appropriate heat pump to be selected based on size of each property)
Heating Emitter:	Radiators
Secondary Heating:	None
Heating Hot Water Controls:	Time and Temperature Zone Control Delayed Start Stat No Weather Compensation
Cylinder: Heat Loss:	Hot water cylinder (capacity to be confirmed) 1.0 – 1.6 kWh/24 Hr
Mechanical Ventilation:	Mechanical Ventilation System 3 dMEV fans to wet rooms and kitchens
Waste Water Heat Recovery:	None
Showers:	Flow rate – 8 litres per minute

Table 8: Summary of Building Services for the apartments

Building Service Element	Specification
Heating:	Electric Panel Heaters
Hot Water:	Vaillant aroSTOR (200 litre) domestic hot water heat pump
Heating Hot Water Controls:	Time and Temperature Zone Control Delayed Start Stat No Weather Compensation
Mechanical Ventilation:	Mechanical Ventilation System 3 dMEV fans to wet rooms and kitchens
Showers:	Flow rate – 8 litres per minute

8.4. CO₂ SAVINGS AFTER 'BE GREEN' MEASURES

The following table presents the carbon savings achieved after the 'Be Green' stage of the energy hierarchy. This shows that a 66% reduction is achieved in comparison to the Building Regulations Part L baseline. This is in excess of the minimum 31% reduction required by Condition 13 of the approved planning permission (Ref: APP/25/00639) for the development.

Table 9: Total 'Be Green' CO₂ emissions

Stage of Energy Hierarchy	Regulated CO ₂ Emissions (tonnes/year)
Total Part L 2021 Baseline	93.41
Total After 'Be Lean'	93.59
Total After 'Be Green'	31.46
Total Saving	61.95
Total Improvement	66%

9. ENERGY STRATEGY SUMMARY AND CONCLUSIONS

The energy strategy has followed the energy hierarchy of 'Be Lean', 'Be Clean' and 'Be Green'. The energy strategy proposed for the development has been summarised as below.

Table 10: Proposed Energy Strategy

Element	Measure
Passive	Optimised design to enable controlled solar gain and improved direct and indirect natural lighting.
Fabric	Building fabric U values have been enhanced over and above those detailed with Part L 2021
Heating	Houses – Individual Air Source Heat Pumps Apartments – Electric Panel Heaters
Hot Water	Houses – Hot Water Cylinders (water heated via ASHP) Apartments – Vaillant aroSTOR Domestic Hot Water Heat Pump
Ventilation	Low design air permeability (DAP) Mechanical extract ventilation (system 3)
Lighting	Energy efficient LED Lighting where applicable
Low and Zero Carbon Technology	Heat pump technology to be deployed (as detailed above)

9.1. TOTAL REGULATED CO₂ SAVINGS

The summary of the overall reduction in regulated CO₂ emissions after each stage of the energy hierarchy is summarised in the table below.

Table 11: Energy Strategy Carbon Emissions Summary

Stage of Energy Hierarchy	Regulated CO ₂ Emissions (tonnes/year)
Total Part L 2021 Baseline	93.41
Total After 'Be Lean'	93.59
Total After 'Be Green'	31.46
Total Saving	61.95
Total Improvement	66%

The proposed energy strategy demonstrates compliance with the requirements of Condition 13. In particular, the strategy:

- Follows the energy hierarchy by reducing demand at the Be Lean stage, considering efficient energy supply at the Be Clean stage and incorporating low-carbon technology at the Be Green stage.
- Applies fabric-first principles through enhanced building-fabric performance, controlled air permeability, improved thermal-bridging performance and energy-efficient building services.
- Designs out carbon by reducing the underlying energy demand and avoiding reliance on on-site fossil-fuel combustion for heating and hot-water generation.
- Incorporates appropriate low-carbon technology through individual air source heat pumps serving the houses and domestic hot-water heat pumps serving the apartments.
- Is capable of achieving an estimated site-wide reduction of 66% in regulated CO₂ emissions relative to the Part L 2021 baseline, equivalent to an estimated annual saving of 61.95 tonnes of regulated CO₂ and exceeding the minimum 31% DER reduction required by the condition.
- Accordingly, the proposed development follows the energy hierarchy, designs out carbon, applies fabric-first principles, incorporates low-carbon technology and demonstrates compliance with the carbon-reduction requirement of Condition 13. The development is to be carried out in accordance with the specifications and measures set out within this report.

10. APPENDICIES

The following pages detail:

- Appendix A: Alternative Renewable Energy Options
- Appendix B: Vaillant aroTHERM Plus Technical Datasheet
- Appendix C: Vaillant aroSTOR Technical Datasheet
- Appendix D: Sample SAP Summary Information Sheets (Be Lean)
- Appendix E: Sample SAP Summary Information Sheets (Be Green)

10.1. APPENDIX A: ALTERNATIVE RENEWABLE ENERGY OPTIONS

The following alternative options to supply low carbon and renewable energy generation have been explored and discounted based on the following reasons:

Wind Turbines

Wind turbines come in a variety of sizes and shapes. Turbines of 1 Kw can be installed to single house and large-scale turbines of 1-2 MW can be installed on a development to generate electricity to multiple dwellings and other buildings. In both instances the electricity generated can be used on site or exported to the grid. Vertical- or horizontal-axis turbines are available.

A roof-mounted 1 kW micro wind system costs up to £3,000. A 2.5 kW pole-mounted system costs between £9,900 and £19,000. A 6 kW pole-mounted system costs between £21,000 and £30,000 (taken from the Energy Saving Trust, TBC by supplier)

- Local average wind speed is a determining factor. A minimum average wind speed of 6 m/s is required.
- Noise considerations can be an issue dependent on density and build-up of the surrounding area.
- Buildings in the immediate area can disrupt wind speed and reduce performance of the system.
- Planning permission will be required along with suitable space to site the turbine, whether ground installed or roof mounted.

Wind turbines have been discounted due to concerns over reliable wind resources. The use of wind turbines is likely to present aesthetic as well as nuisance issues.

Biomass Boilers

Providing a heating system fuelled by plant-based materials such as wood, crops or food waste. Biomass boilers generate heat for space heating and domestic hot water through the combustion of biofuels, such as woodchip, wood pellets or potentially biofuel or bio diesel. Biomass is considered to be virtually zero carbon. They can be used on an individual scale or for multiple dwellings as part of a district-heating network. A back-up heat source should be provided as consistent delivery of fuel is necessary for continued operation.

Biomass is considered a technically-viable option for this development scheme as there are no apparent physical constraints on site in terms of installing biomass boilers or storing a sufficient supply. There are, however, concerns regarding a sustainable supply of biomass to the site. The capital installation cost would also be high which leads us to the conclusion that biomass would not be a commercially-viable option for this development scheme.

Solar Thermal

Solar Thermal generates domestic hot water from the sun's radiation. Glycol circulates within either flat plate or evacuated tube panels, absorbing heat from the sun, and transferring this energy to a water cylinder. A well designed solar thermal system will account for 50-60% of a dwelling's annual hot water demand. Sizing the system to meet a higher demand will lead to excess heat generation in the summer months and overheating of the system.

High installation costs and dependency on sunlight has meant that this option has been discounted for this development.

Ground Source Heat Pumps (GSHP)

Ground Source Heat Pumps (GSHPs) operate on the same principle as an Air Source Heat Pump (ASHP) in that they extract heat from a source (in this instance the ground) and compress this energy to increase temperature for space heating and hot water. Pipework is installed into the ground, either through coils or in bore holes and piles, circulating a mix of water and antifreeze to extract energy from the ground, where the year-round temperature is relatively consistent (approx. 10°C at 4 metres depth). This leads to a reliable source of heat for the building.

Again, an electrically powered pump circulates the liquid and powers the compressor, however annual efficiencies for GSHPs tend to be higher than those of ASHPs.

With regards to capital cost, GSHPs are more expensive to install than ASHP and also rely on the use of energy to pump fluid around the pipework.

GSHPs have been discounted for this scheme as they are considered to be more complex, technically risky and costly, than the alternative ASHP option.

Photovoltaic Panels (PV)

Photovoltaic panels (PV) capture the sun's energy and convert it into electricity. This could be a solution to reduce CO₂ emissions to satisfy building regulations, however, the efficient building fabric and use of air source heat pumps ensures compliance is met without the need for PV. Subject to the anticipated construction programme, some dwellings may need to include PV panels in order to further reduce carbon emissions in accordance with the incoming Future Homes and Buildings Standard. Furthermore, the use of PV panels may be explored further at the detailed design stage as a suitable alternative to air source heat pumps.

10.2. APPENDIX B: VAILLANT aroTHERM PLUS TECHNICAL DATASHEET

Figure 4: Vaillant aroTHERM Plus Technical Datasheet

aroTHERM plus	Unit	3.5kW VWL 35 / 6	5kW VWL 55 / 6	7kW VWL 75 / 6	10kW VWL 105 / 6	12kW VWL 125 / 6
General						
Width	mm	1,100				
Height	mm	765		965	1,565	
Depth	mm	450				
Weight, ready for operation	kg	114		128	194	
Connection, heating circuit		G 1 1/4"				
Rated voltage	V	230 V (+10%/- 15%), 50 Hz, 1~/N/PE				
Rated current, maximum	A	14.3		15.0	23.3	
Fuse size		16			25	
Fuse type	A	C/D				
RCD type		A				
eBUS (2-core communication cable)	mm2	0.75				
Maximum length eBUS cable (communication cable)	m	50				
IP rating		IP 15 B				
Fan, power consumption	W	40			50	
Fan quantity		1			2	
Fan, air flow , maximum	m³ /h	2,300			5,100	
Heating pump, power consumption	W	2 - 50			3 - 87	
Heating circuit						
Heating water temperature, minimum/maximum	° C	20 - 75				
Basic length of the heating water pipe, maximum, between the outdoor unit and indoor unit	m	20				
Operating pressure, minimum	bar	0.50				
Operating pressure, maximum	bar	3.00				
Volume flow, minimum	l/h	400		540	995	
Volume flow, maximum	l/h	860		1,205	2,065	
Water volume, in the outdoor unit	l	1.5		2.0	2.5	
Water volume, in the heating circuit, minimum, thawing mode, activated/deactivated back-up heater	l	15 / 40		20 / 55	45 / 150	
Remaining feed pressure, hydraulic	kPa (mbar)	56.0 (560.0)		44.0 (440.0)	55.0 (550.0)	
Refrigerant circuit						
Fluid type		R290				
Fluid fill quantity	kg	0.6		0.9	1.3	
Refrigerant, Global Warming Potential (GWP)		3				
CO ₂ equivalent	t	0.0018		0.0027	0.0039	
Permissible operating pressure	bar	31.5				
Compressor type		Rotary piston			Scroll compressor	
Compressor oil type		Specific polyalkylene glycol (PAG)				
Compressor, control		Electronic				

Noise emissions, heating mode				
Sound power, EN 12102, EN 14511 LWA, A7/W35	dB(A)	51	53	58
Sound power, EN 12102, EN 14511 LWA, A7/W45	dB(A)	53		58
Sound power, EN 12102, EN 14511 LWA, A7/W55	dB(A)	54	55	60

Efficiency		
Energy efficiency class 35°C	(A+++ to F)	A+++
Energy efficiency class 55°C	(A+++ to F)	A++

Combination with uniTOWER		
Energy efficiency class	(A+++ to F)	A++
Energy efficiency class for hot water supply	(A+ to F)	A

SCOP and heating output

aroTHERM output		35°C flow		40°C flow		45°C flow		50°C flow		55°C flow	
		Output	SCOP	Output	SCOP	Output	SCOP	Output	SCOP	Output	SCOP
3.5kW	-5°C	4.2	4.41	4.1	4.03	4	3.65	3.9	3.37	3.8	3.10
	-3°C	4.6		4.4		4.3		4.2		4	
	0°C	4.7		4.7		4.6		4.5		4.4	
	2°C	4.9		4.9		4.9		4.7		4.6	
5kW	-5°C	6.3	4.48	6	4.13	5.6	3.77	5.5	3.41	5.4	3.06
	-3°C	6.8		6.4		6.1		5.9		5.8	
	0°C	6.9		6.7		6.6		6.4		6.2	
	2°C	7.1		7		6.9		6.7		6.5	
7kW	-5°C	8.2	4.36	8.1	4.13	8	3.91	7.5	3.65	7	3.39
	-3°C	8.8		8.6		8.4		7.9		7.4	
	0°C	9.5		9.3		9.1		8.6		8.1	
	2°C	10		9.8		9.6		9		8.5	
10kW	-5°C	9.9	5.03	9.7	4.58	9.4	4.13	9.1	3.85	8.8	3.58
	-3°C	10.7		10.3		10		9.6		9.2	
	0°C	11.9		11.6		11.3		10.7		10.2	
	2°C	12.8		12.5		12.1		11.5		10.9	
12kW	-5°C	13.1	4.88	12.8	4.55	12.5	4.21	11.7	3.92	10.8	3.63
	-3°C	13.9		13.4		12.9		12.1		11.2	
	0°C	15.2		14.6		14.1		13.2		12.3	
	2°C	16		15.5		14.9		13.9		13	

10.3. APPENDIX C: VAILLANT AROSTOR TECHNICAL DATASHEET

Figure 5: Vaillant aroSTOR Technical Datasheet



Vaillant is the leading premium brand for sustainable and responsible system solutions, ensuring your customers experience comfort for their home. Our products have high energy efficiency ratings and low emissions, with an enviable reputation for performance, quality and reliability.

Introducing the domestic hot water heat pump with natural refrigerant: The aroSTOR

The aroSTOR range of domestic hot water heat pumps features 200 and 270 litre models. The range is incredibly efficient and sustainable, using thermal energy to heat hot water. This thermal energy can be collected via an external air duct, or it can recycle hot air from within the room where it's installed, provided there is sufficient ventilation. The only other energy needed is the electricity to run the appliance.



Visit www.vaillant.co.uk/aroSTOR to find out more

Technical data

aroSTOR heat pump 200 and 270 litres

	aroSTOR 200 litre	aroSTOR 270 litre
General		
Nominal capacity	200l	270l
Outer diameter	634 mm	634 mm
Height	1,458 mm	1,783 mm
Weight (when empty)	55kg	68kg
Weight (filled)	255kg	338kg
Cylinder material	Stainless steel	Stainless steel
Heat insulation	Polyurethane foam 50 mm	Polyurethane foam 50 mm
Type of electric heater	Immersion / Ti	Immersion / Ti
Thermal losses 55°C	1,61 kW/24h	1,77 kW/24h
DHW temperature range (HP only)	30 to 60°C	30 to 60°C
Max. temperature of DHW HP inlet domestic water	70°C	70°C
Minimal air flow range	320 m3/h	320 m3/h
Nominal air flow range	350 m3/h	350 m3/h
Maximum air flow range (non ducted)	400 m3/h	400 m3/h
Maximum pressure	6 bar	6 bar
Max. hot water temperature (HP + back up heater)	65°C	65°C
Maximum pressure of the T&P relief valve	7 bar	7 bar
Maximum temperature of the T&P relief valve	90°C	90°C
Electrical specifications		
Max. power consumption (HP + back up heater)	1900 watts	1900 watts
Max. power consumption (HP only)	700 watts	700 watts
Voltage and frequency of the product's power supply	230v - 50Hz	230v - 50Hz
Max amperage of the power supply circuit	8 amp	8 amp
Length of the electrical cable supplied	1.5m	1.5m
IP rating	IPX4	IPX4
Nominal heat output of the electric back-up heater	1.2kW	1.2kW
Connections		
Connections for the hot water circuit	M 3/4"	M 3/4"
Connecting the temperature and pressure relief valve	M 3/4"	M 3/4"
Max. flexible air duct length	10m	10m
Max. rigid air duct length	20m	20m
Min. distance between product and adjacent structures	0mm	0mm
Fuse size	13 amp	13 amp
Specifications for the heat pump (in accordance with EN 16147:2017)		
Refrigerant type	R290	R290
Refrigerant volume for complete filling	0.15kg	0.15kg
Minimum and maximum air temperatures	-7 to 35°C	-7 to 35°C
Sound power level	52 dB	52 dB
Coefficient of performance	3.19	3.14
Maximum usable domestic hot water at 54°C	247 litres	349 litres
Full re-heat time at A7	7.04 hr	10.15 hr
(in accordance with EN 16147:2017)		
Tapping profile	L	L
ErP rating (A+ - F)	A+	A+
Seasonal efficiency	132%	130%

10.4. APPENDIX D: SAMPLE SAP SUMMARY INFORMATION SHEETS (BE LEAN)

Summary for Input Data

Plot Reference	1 BED MF/ER FLAT (PLOT 76)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	1 BED MF/ER FLAT (PLOT 76)	
Plot Address	1 BED MF/ER FLAT (PLOT 76)		SAP Version	10.2

SAP Rating	83 B	DER	17.89	TER	16.87
Environmental	88 B	% DER < TER			-6.05
CO ₂ Emissions (t/year)	0.86	DFEE	37.03	TFEE	42.07
Compliance Check	See BREL	% DFEE < TFEE			11.98
% DPER < TPER	-11.09	DPER	99.97	TPER	89.99

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenure	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Mid-floor flat
Which Floor	2
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	227.98 kJ/m ² K
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 16.81 m	Internal Floor Area 52.48 m ²	Average Storey Height 2.58 m
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8.0 Living Area	24.60 m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	41.18	31.65	0.00	None	9.53	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	5.88	3.76	0.90	Stairwell Access Corridor 4	2.12	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	35.28	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	96.48

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Terrace Above	External Flat Roof	Plasterboard, insulated flat roof	0.13	9.00	16.82	16.82	None	0.00	Enter Gross Area	0.00

10.1 Party Ceilings

Summary for Input Data

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	35.66

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete planks floor, screed, carpeted	40.00	52.48

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	North	5.71	
W02	Window	Brickwork	East	3.82	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	6.46	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	21.00	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	18.89	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	2.58	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	7.74	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	22.76	0.00	0.00 Table K1	No
E3 Sill	Independently assessed	2.10	0.02	0.02 Knauf	No
E25 Staggered party wall between dwellings	Independently assessed	2.58	0.03	0.03 RCD	No
E15 Flat roof with parapet	Table K1 - Default	14.71	0.30	0.30	No
E24 Eaves (insulation at ceiling level - inverted)	Table K1 - Default	12.25	0.15	0.15	No
P4 Party wall - Roof (insulation at ceiling level)	Table K1 - Default	2.46	0.48	0.48	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>

Summary for Input Data

Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m²/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	4
	Downlight	75.00	10.00	750.00	14
	Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

Controls SAP Code

Controls description

Delayed Start Stat

Burner Control

Flue Type

Fan Assisted Flue

Is MHS Pumped

Heating Pump Age

Heat Emitter

Flow Temperature

Flow Temperature Value

Boiler Interlock

Combi boiler type

Combi keep hot type

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Summary for Input Data

Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>
Solar Panel	<input type="text" value="No"/>
Water use <= 125 litres/person/day	<input type="text" value="Yes"/>
Cold Water Source	<input type="text" value="From mains"/>
Bath Count	<input type="text" value="1"/>

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	<input type="text" value="None"/>
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34.0 Small-scale Hydro	<input type="text" value="None"/>
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Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	2 BED MF/ER FLAT (PLOT 80)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED MF/ER FLAT (PLOT 80)	
Plot Address	2 BED MF/ER FLAT (PLOT 80)		SAP Version	10.2

SAP Rating	84 B	DER	14.80	TER	13.70
Environmental	88 B	% DER < TER			-8.03
CO ₂ Emissions (t/year)	0.99	DFEE	31.82	TFEE	35.74
Compliance Check	See BREL	% DFEE < TFEE			10.98
% DPER < TPER	-14.07	DPER	82.90	TPER	72.67

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenure	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Mid-floor flat
Which Floor	2
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	203.77 kJ/m ² K
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 26.18 m	Internal Floor Area 72.95 m ²	Average Storey Height 2.58 m
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8.0 Living Area	25.39 m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	51.30	38.92	0.00	None	12.38	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	4.30	2.18	0.90	Stairwell Access Corridor 4	2.12	Enter Gross Area
Wall to Stair Core	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	17.71	17.71	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	22.52	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	140.22

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Terrace Above	External Flat Roof	Plasterboard, insulated flat roof	0.13	9.00	21.36	21.36	None	0.00	Enter Gross Area	0.00

Summary for Input Data

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	51.56

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete planks floor, screed, carpeted	40.00	72.95

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	Manufacturer BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	4.76	
D02	Patio Door	Brickwork	South	3.80	
W02	Window	Brickwork	East	3.82	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	7.36	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	23.10	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	31.02	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	5.16	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	5.16	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	14.57	0.00	0.00 Table K1	No
E3 Sill	Independently assessed	1.05	0.02	0.02 Knauf	No
E23 Balcony within or between dwellings, balcony support penetrates wall insulation	Independently assessed	3.05	0.35	0.35 Estimated	No
E24 Eaves (insulation at ceiling level - inverted)	Table K1 - Default	14.43	0.15	0.15	No
P4 Party wall - Roof (insulation at ceiling level)	Table K1 - Default	1.51	0.48	0.48	No
E15 Flat roof with parapet	Table K1 - Default	18.29	0.30	0.30	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Summary for Input Data

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting	No				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	4
	Downlight	75.00	10.00	750.00	14
	Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

Controls SAP Code

Controls description

Delayed Start Stat

Burner Control

Flue Type

Fan Assisted Flue

Is MHS Pumped

Heating Pump Age

Heat Emitter

Flow Temperature

Flow Temperature Value

Boiler Interlock

Combi boiler type

Combi keep hot type

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Summary for Input Data

Flue Gas Heat Recovery System	No
Waste Water Heat Recovery Instantaneous System 1	No
Waste Water Heat Recovery Instantaneous System 2	No
Waste Water Heat Recovery Storage System	No
Solar Panel	No
Water use <= 125 litres/person/day	Yes
Cold Water Source	From mains
Bath Count	1

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	None
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34.0 Small-scale Hydro	None
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Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	1 BED M4(3) FLAT (PLOT 60)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	1 BED M4(3) FLAT (PLOT 60)	
Plot Address	1 BED M4(3) FLAT (PLOT 60)		SAP Version	10.2

SAP Rating	84 B	DER	14.66	TER	13.42
Environmental	88 B	% DER < TER			-9.24
CO ₂ Emissions (t/year)	0.96	DFEE	31.71	TFEE	34.58
Compliance Check	See BREL	% DFEE < TFEE			8.31
% DPER < TPER	-15.44	DPER	82.11	TPER	71.13

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenure	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Ground-floor flat
Which Floor	0
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	236.72 kJ/m ² K
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 18.77 m	Internal Floor Area 71.56 m ²	Average Storey Height 2.58 m
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8.0 Living Area	28.72 m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	47.66	30.52	0.00	None	17.14	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	4.89	2.77	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	42.77	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	117.58

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	71.56

Description	Type	Storey Index	Construction	U-Value (W/m ² K)	Shelter Code	Shelter Factor	Kappa (kJ/m ² K)	Area (m ²)
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Summary for Input Data

Suspended Ground Floor Ground Floor - Solid Lowest occupied Suspended concrete floor, carpeted 0.12 None 0.00 75.00 71.56

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	5.71	
W02	Window	Brickwork	West	7.62	
D02	Patio Door	Brickwork	North	3.80	

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

No

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	9.17	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	29.40	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	18.77	0.06	0.06 Bison Jetfloor	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	18.77	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	2.58	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	7.74	0.04	0.04 RCD	No
P1 Party wall - Ground floor	Independently assessed	15.27	0.05	0.05 Bison Tech	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	15.27	0.00	0.00 Table K1	No
E25 Staggered party wall between dwellings	Non Gov Approved Schemes	2.58	0.03	0.03 RCD	No

Y-value 0.03 W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	2

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0

Summary for Input Data

Number of passive vents

Number of flueless gas fires

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting
No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendant	75.00	10.00	750.00	4
Downlight	75.00	10.00	750.00	14
Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

Controls SAP Code

Controls description

Delayed Start Stat

Burner Control

Flue Type

Fan Assisted Flue

Is MHS Pumped

Heating Pump Age

Heat Emitter

Flow Temperature

Flow Temperature Value

Boiler Interlock

Combi boiler type

Combi keep hot type

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Summary for Input Data



Bath Count

1

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

None

34.0 Small-scale Hydro

None

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	1 BED MF FLAT (PLOT 67)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	1 BED MF FLAT (PLOT 67)	
Plot Address	1 BED MF FLAT (PLOT 67)		SAP Version	10.2

SAP Rating	84 B	DER	15.84	TER	14.02
Environmental	89 B	% DER < TER			-12.98
CO ₂ Emissions (t/year)	0.77	DFEE	27.84	TFEE	29.17
Compliance Check	See BREL	% DFEE < TFEE			4.55
% DPER < TPER	-19.12	DPER	88.92	TPER	74.65

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	Flat, End-Terrace	
Position of Flat	Mid-floor flat	
Which Floor	1	
2.0 Number of Storeys	1	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	234.71	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements	Ground floor:	Heat Loss Perimeter 16.81 m	Internal Floor Area 52.48 m ²	Average Storey Height 2.58 m
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8.0 Living Area	24.60	m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	41.18	31.65	0.00	None	9.53	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	5.88	3.76	0.90	Stairwell Access Corridor 4	2.12	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	35.28	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	96.48

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	52.48

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
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Summary for Input Data

Party Floor 1 Lowest occupied Precast concrete planks floor, screed, carpeted 40.00 52.48

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	North	5.71	
W02	Window	Brickwork	East	3.82	

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

No

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	6.46	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	21.00	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	33.62	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	2.58	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	7.74	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	45.20	0.00	0.00 Table K1	No
E3 Sill	Independently assessed	2.10	0.02	0.02 Knauf	No
E25 Staggered party wall between dwellings	Independently assessed	2.58	0.03	0.03 RCD	No

Y-value 0.06 W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	2

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0

Summary for Input Data

Number of flueless gas fires

0

21.0 Fixed Cooling System

No

22.0 Pressure Testing

Yes

Designed AP₅₀

4.50

m³/(h.m²) @ 50 Pa

Test Method

Blower Door

22.0 Lighting

No Fixed Lighting

No

Name	Efficacy	Power	Capacity	Count
Pendant	75.00	10.00	750.00	4
Downlight	75.00	10.00	750.00	14
Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Manufacturer

Percentage of Heat

100.00

%

Fuel Type

Mains gas

SAP Code

104

In Winter

88.90

In Summer

80.30

Model Name

Gas

Manufacturer

Gas

Controls SAP Code

2110

Controls description

Time and temperature zone control by arrangement

Delayed Start Stat

Yes

Burner Control

Modulating

Flue Type

Balanced

Fan Assisted Flue

Yes

Is MHS Pumped

Pump in heated space

Heating Pump Age

2013 or later

Heat Emitter

Radiators

Flow Temperature

Enter value

Flow Temperature Value

55.00

Boiler Interlock

Yes

Combi boiler type

Standard Combi

Combi keep hot type

None

25.0 Main Heating 2

None

26.0 Heat Networks

None

27.0 Secondary Heating

None

28.0 Water Heating

Water Heating

Main Heating 1

SAP Code

901

Flue Gas Heat Recovery System

No

Waste Water Heat Recovery Instantaneous System 1

No

Waste Water Heat Recovery Instantaneous System 2

No

Waste Water Heat Recovery Storage System

No

Solar Panel

No

Water use <= 125 litres/person/day

Yes

Cold Water Source

From mains

Bath Count

1

Summary for Input Data



28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	None
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34.0 Small-scale Hydro				None							
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	1 BED TF FLAT (PLOT 89)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	1 BED TF FLAT (PLOT 89)	
Plot Address	1 BED TF FLAT (PLOT 89)		SAP Version	10.2

SAP Rating	82 B	DER	19.13	TER	17.78
Environmental	87 B	% DER < TER			-7.59
CO ₂ Emissions (t/year)	0.91	DFEE	41.53	TFEE	45.62
Compliance Check	See BREL	% DFEE < TFEE			8.96
% DPER < TPER	-12.39	DPER	106.67	TPER	94.91

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	Flat, End-Terrace	
Position of Flat	Top-floor flat	
Which Floor	3	
2.0 Number of Storeys	1	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	156.09	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements		Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	Ground floor:	22.27 m	51.26 m ²	2.58 m

8.0 Living Area	21.88	m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Cladding Wall	Steel Frame	Steel frame wall (warm frame or hybrid construction)	0.19	14.00	40.28	31.70	0.00	None	8.58	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	4.63	2.51	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area
Wall to Stair Core	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	17.44	17.44	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	18.22	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	94.11

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Flat Roof	External Flat Roof	Plasterboard, insulated flat roof	0.13	9.00	51.26	51.26	None	0.00	Enter Gross Area	0.00

Summary for Input Data

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete planks floor, screed, carpeted	40.00	51.26

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Cladding Wall	South	4.76	
W02	Window	Cladding Wall	East	3.82	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	5.55	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	18.90	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	22.27	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	5.16	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	5.16	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	6.51	0.00	0.00 Table K1	No
E3 Sill	Independently assessed	1.05	0.02	0.02 Knauf	No
P4 Party wall - Roof (insulation at ceiling level)	Table K1 - Default	6.51	0.48	0.48	No
E15 Flat roof with parapet	Table K1 - Default	22.27	0.30	0.30	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>

Summary for Input Data

Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting
No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendant	75.00	10.00	750.00	4
Downlight	75.00	10.00	750.00	14
Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

Controls SAP Code

Controls description

Delayed Start Stat

Burner Control

Flue Type

Fan Assisted Flue

Is MHS Pumped

Heating Pump Age

Heat Emitter

Flow Temperature

Flow Temperature Value

Boiler Interlock

Combi boiler type

Combi keep hot type

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating
Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Summary for Input Data



Cold Water Source

From mains

Bath Count

1

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

None

34.0 Small-scale Hydro

None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	2 BED EF FLAT (PLOT 73)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED EF FLAT (PLOT 73)	
Plot Address	2 BED EF FLAT (PLOT 73)		SAP Version	10.2

SAP Rating	83 B	DER	17.14	TER	15.10
Environmental	86 B	% DER < TER			-13.51
CO ₂ Emissions (t/year)	1.13	DFEE	42.07	TFEE	41.63
Compliance Check	See BREL	% DFEE < TFEE			-1.08
% DPER < TPER	-19.13	DPER	95.59	TPER	80.24

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	Flat, End-Terrace	
Position of Flat	Mid-floor flat	
Which Floor	1	
2.0 Number of Storeys	1	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	253.15	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements		Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	Ground floor:	28.82 m	72.30 m ²	2.58 m

8.0 Living Area	29.34	m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	49.40	38.93	0.00	None	10.47	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	9.67	7.55	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area
Wall to Stair Core	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	21.62	21.62	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	18.12	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	136.37

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	72.30

11.0 Heat Loss Floors

Summary for Input Data



Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Over Plant Room/Cycle Store	Exposed Floor - Solid	Lowest occupied	Other	0.12	None	0.00	75.00	72.30

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	1.91	
D02	Patio Door	Brickwork	East	3.80	
W02	Window	Brickwork	East	4.76	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	6.45	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	18.90	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	28.81	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	5.16	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	2.58	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	6.47	0.00	0.00 Table K1	No
E25 Staggered party wall between dwellings	Non Gov Approved Schemes	2.58	0.03	0.03 RCD	No
E3 Sill	Independently assessed	1.05	0.02	0.02 Knauf	No
E20 Exposed floor (normal)	Table K1 - Default	25.74	0.32	0.32	No
P8 Party Wall - Exposed floor (inverted)	Table K1 - Default	6.47	0.48	0.48	No
E23 Balcony within or between dwellings, balcony support penetrates wall insulation	Independently assessed	3.08	0.35	0.35 Estimated	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>

Summary for Input Data

Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m²/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendant	75.00	10.00	750.00	4
Downlight	75.00	10.00	750.00	14
Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Manufacturer

Percentage of Heat %

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

Controls SAP Code

Controls description

Delayed Start Stat

Burner Control

Flue Type

Fan Assisted Flue

Is MHS Pumped

Heating Pump Age

Heat Emitter

Flow Temperature

Flow Temperature Value

Boiler Interlock

Combi boiler type

Combi keep hot type

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Summary for Input Data



Solar Panel	<input type="text" value="No"/>
Water use <= 125 litres/person/day	<input type="text" value="Yes"/>
Cold Water Source	<input type="text" value="From mains"/>
Bath Count	<input type="text" value="1"/>

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	<input type="text" value="None"/>
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34.0 Small-scale Hydro

34.0 Small-scale Hydro					<div>None</div>							
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	2 BED GF FLAT (PLOT 64)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED GF FLAT (PLOT 64)	
Plot Address	2 BED GF FLAT (PLOT 64)		SAP Version	10.2

SAP Rating	85 B	DER	14.39	TER	13.25
Environmental	88 B	% DER < TER			-8.60
CO ₂ Emissions (t/year)	0.96	DFEE	30.20	TFEE	33.83
Compliance Check	See BREL	% DFEE < TFEE			10.73
% DPER < TPER	-14.84	DPER	80.66	TPER	70.24

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	Flat, End-Terrace	
Position of Flat	Ground-floor flat	
Which Floor	0	
2.0 Number of Storeys	1	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	243.50	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements		Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	Ground floor:	26.18 m	72.95 m ²	2.58 m

8.0 Living Area	25.39	m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	51.30	37.96	0.00	None	13.33	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	4.30	2.18	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area
Wall to Stairwell/Lift	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	17.71	17.71	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	22.52	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	140.22

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	72.95

11.0 Heat Loss Floors

Summary for Input Data

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Suspended Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	72.95

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	5.71	
W02	Window	Brickwork	East	3.82	
D02	Patio Door	Brickwork	South	3.80	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	7.36	0.06	0.06	HiTherm	No
E4 Jamb	Independently assessed	25.20	0.01	0.01	Knauf	No
E5 Ground floor (normal)	Independently assessed	26.18	0.06	0.06	Bison Jetfloor	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	26.18	0.05	0.05	Knauf	No
E16 Corner (normal)	Independently assessed	5.16	0.05	0.05	Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	5.16	0.04	0.04	RCD	No
P1 Party wall - Ground floor	Independently assessed	8.04	0.05	0.05	Bison Tech	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	8.04	0.00	0.00	Table K1	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>

Summary for Input Data

Number of passive vents

Number of flueless gas fires

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting
No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendant	75.00	10.00	750.00	4
Downlight	75.00	10.00	750.00	14
Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

Controls SAP Code

Controls description

Delayed Start Stat

Burner Control

Flue Type

Fan Assisted Flue

Is MHS Pumped

Heating Pump Age

Heat Emitter

Flow Temperature

Flow Temperature Value

Boiler Interlock

Combi boiler type

Combi keep hot type

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Summary for Input Data



Bath Count

1

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

None

34.0 Small-scale Hydro

None

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	2 BED M4(3) FLAT (PLOT 59)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED M4(3) FLAT (PLOT 59)	
Plot Address	2 BED M4(3) FLAT (PLOT 59)		SAP Version	10.2

SAP Rating	85 B	DER	13.44	TER	12.23
Environmental	88 B	% DER < TER			-9.89
CO ₂ Emissions (t/year)	1.3	DFEE	34.54	TFEE	36.91
Compliance Check	See BREL	% DFEE < TFEE			6.41
% DPER < TPER	-16.31	DPER	75.27	TPER	64.71

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	Flat, End-Terrace	
Position of Flat	Ground-floor flat	
Which Floor	0	
2.0 Number of Storeys	1	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	255.16	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
		39.65 m	106.49 m ²	2.58 m

8.0 Living Area	38.18	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	61.79	49.89	0.00	None	11.90	Enter Gross Area
	Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	30.56	28.44	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area
	Wall to Plant Room	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	18.67	18.67	0.00	None	0.00	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	21.52	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Internal Timber Partition	Plasterboard on timber frame	9.00	165.53
	Block Partition	Dense block, plasterboard on dabs	75.00	19.50

10.1 Party Ceilings	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	106.49

Summary for Input Data

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Suspended Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	106.49

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	7.62	
D02	Patio Door	Brickwork	North	4.27	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	6.68	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	21.00	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	39.65	0.06	0.06 Bison Jetfloor	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	39.65	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	7.74	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	2.58	0.04	0.04 RCD	No
P1 Party wall - Ground floor	Independently assessed	7.69	0.05	0.05 Bison Tech	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	7.69	0.00	0.00 Table K1	No
E25 Staggered party wall between dwellings	Non Gov Approved Schemes	2.58	0.03	0.03 RCD	No
E17 Corner (inverted – internal area greater than external area)	Independently assessed	2.58	-0.09	-0.09 Knauf	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="3"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	2
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>

Summary for Input Data

Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System	<input type="text" value="No"/>
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22.0 Pressure Testing	<input type="text" value="Yes"/>	
Designed AP ₅₀	<input type="text" value="4.50"/>	m ³ /(h.m ²) @ 50 Pa
Test Method	<input type="text" value="Blower Door"/>	

22.0 Lighting	<input type="text" value="No"/>				
No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	4
	Downlight	75.00	10.00	750.00	14
	Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1	<input type="text" value="Manufacturer"/>	
Percentage of Heat	<input type="text" value="100.00"/>	%
Fuel Type	<input type="text" value="Mains gas"/>	
SAP Code	<input type="text" value="104"/>	
In Winter	<input type="text" value="88.90"/>	
In Summer	<input type="text" value="80.30"/>	
Model Name	<input type="text" value="Gas"/>	
Manufacturer	<input type="text" value="Gas"/>	
Controls SAP Code	<input type="text" value="2110"/>	
Controls description	<input type="text" value="Time and temperature zone control by arrangement"/>	
Delayed Start Stat	<input type="text" value="Yes"/>	
Burner Control	<input type="text" value="Modulating"/>	
Flue Type	<input type="text" value="Balanced"/>	
Fan Assisted Flue	<input type="text" value="Yes"/>	
Is MHS Pumped	<input type="text" value="Pump in heated space"/>	
Heating Pump Age	<input type="text" value="2013 or later"/>	
Heat Emitter	<input type="text" value="Radiators"/>	
Flow Temperature	<input type="text" value="Enter value"/>	
Flow Temperature Value	<input type="text" value="55.00"/>	
Boiler Interlock	<input type="text" value="Yes"/>	
Combi boiler type	<input type="text" value="Standard Combi"/>	
Combi keep hot type	<input type="text" value="None"/>	

25.0 Main Heating 2	<input type="text" value="None"/>
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26.0 Heat Networks	<input type="text" value="None"/>
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27.0 Secondary Heating	<input type="text" value="None"/>
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28.0 Water Heating	
Water Heating	<input type="text" value="Main Heating 1"/>
SAP Code	<input type="text" value="901"/>
Flue Gas Heat Recovery System	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 1	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>
Solar Panel	<input type="text" value="No"/>

Summary for Input Data

Water use <= 125 litres/person/day

Cold Water Source

Bath Count

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

34.0 Small-scale Hydro

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	2 BED MF FLAT (PLOT 71)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED MF FLAT (PLOT 71)	
Plot Address	2 BED MF FLAT (PLOT 71)		SAP Version	10.2

SAP Rating	85 B	DER	13.21	TER	11.36
Environmental	89 B	% DER < TER			-16.29
CO ₂ Emissions (t/year)	0.89	DFEE	24.60	TFEE	25.10
Compliance Check	See BREL	% DFEE < TFEE			2.03
% DPER < TPER	-23.71	DPER	74.34	TPER	60.09

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	Flat, End-Terrace	
Position of Flat	Mid-floor flat	
Which Floor	1	
2.0 Number of Storeys	1	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	209.94	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements		Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	Ground floor:	26.18 m	72.95 m ²	2.58 m

8.0 Living Area	25.39	m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	51.30	38.92	0.00	None	12.38	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	4.30	2.18	0.90	Stairwell Access Corridor 4	2.12	Enter Gross Area
Wall to Stair Core	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	17.71	17.71	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	22.52	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	140.22

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	72.95

11.1 Party Floors

Summary for Input Data

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete planks floor, screed, carpeted	40.00	72.95

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFCR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFCR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	4.76	
D02	Patio Door	Brickwork	South	3.80	
W02	Window	Brickwork	East	3.82	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	7.36	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	23.10	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	49.32	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	5.16	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	5.16	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	16.08	0.00	0.00 Table K1	No
E3 Sill	Independently assessed	1.05	0.02	0.02 Knauf	No
E23 Balcony within or between dwellings, balcony support penetrates wall insulation	Independently assessed	3.05	0.35	0.35 Estimated	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>

Summary for Input Data

Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting
No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendant	75.00	10.00	750.00	4
Downlight	75.00	10.00	750.00	14
Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

Controls SAP Code

Controls description

Delayed Start Stat

Burner Control

Flue Type

Fan Assisted Flue

Is MHS Pumped

Heating Pump Age

Heat Emitter

Flow Temperature

Flow Temperature Value

Boiler Interlock

Combi boiler type

Combi keep hot type

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Summary for Input Data



Cold Water Source

From mains

Bath Count

1

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

None

34.0 Small-scale Hydro

None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	2 BED TF FLAT (PLOT 85)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED TF FLAT (PLOT 85)	
Plot Address	2 BED TF FLAT (PLOT 85)		SAP Version	10.2

SAP Rating	82 B	DER	17.76	TER	16.69
Environmental	86 B	% DER < TER			-6.41
CO ₂ Emissions (t/year)	1.17	DFEE	44.87	TFEE	49.47
Compliance Check	See BREL	% DFEE < TFEE			9.31
% DPER < TPER	-11.36	DPER	98.83	TPER	88.74

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenture	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Top-floor flat
Which Floor	3
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	129.72

kJ/m²K

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
		32.80 m	71.28 m ²	2.58 m

8.0 Living Area	26.06	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Cladding Wall	Steel Frame	Steel frame wall (warm frame or hybrid construction)	0.19	14.00	67.37	54.04	0.00	None	13.33	Enter Gross Area
	Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	10.15	8.03	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area
	Wall to Stair Core	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	14.33	14.33	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	13.34	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Internal Timber Partition	Plasterboard on timber frame	9.00	118.91

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Flat Roof	External Flat Roof	Plasterboard, insulated flat roof	0.13	9.00	71.28	71.28	None	0.00	Calculate Wall Area	0.00

Summary for Input Data

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete planks floor, screed, carpeted	40.00	71.28

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Cladding Wall	South	1.91	
W02	Window	Cladding Wall	East	9.51	
W03	Window	Cladding Wall	North	1.91	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	7.36	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	25.20	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	32.80	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	7.74	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	2.58	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	4.76	0.00	0.00 Table K1	No
P4 Party wall - Roof (insulation at ceiling level)	Table K1 - Default	4.76	0.48	0.48	No
E15 Flat roof with parapet	Table K1 - Default	32.80	0.30	0.30	No
E25 Staggered party wall between dwellings	Non Gov Approved Schemes	2.58	0.03	0.03 RCD	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>

Summary for Input Data

Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System	<input type="text" value="No"/>
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22.0 Pressure Testing	<input type="text" value="Yes"/>	
Designed AP ₅₀	<input type="text" value="4.50"/>	m ³ /(h.m ²) @ 50 Pa
Test Method	<input type="text" value="Blower Door"/>	

22.0 Lighting	<input type="text" value="No"/>				
No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	4
	Downlight	75.00	10.00	750.00	14
	Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1	<input type="text" value="Manufacturer"/>	
Percentage of Heat	<input type="text" value="100.00"/>	%
Fuel Type	<input type="text" value="Mains gas"/>	
SAP Code	<input type="text" value="104"/>	
In Winter	<input type="text" value="88.90"/>	
In Summer	<input type="text" value="80.30"/>	
Model Name	<input type="text" value="Gas"/>	
Manufacturer	<input type="text" value="Gas"/>	
Controls SAP Code	<input type="text" value="2110"/>	
Controls description	<input type="text" value="Time and temperature zone control by arrangement"/>	
Delayed Start Stat	<input type="text" value="Yes"/>	
Burner Control	<input type="text" value="Modulating"/>	
Flue Type	<input type="text" value="Balanced"/>	
Fan Assisted Flue	<input type="text" value="Yes"/>	
Is MHS Pumped	<input type="text" value="Pump in heated space"/>	
Heating Pump Age	<input type="text" value="2013 or later"/>	
Heat Emitter	<input type="text" value="Radiators"/>	
Flow Temperature	<input type="text" value="Enter value"/>	
Flow Temperature Value	<input type="text" value="55.00"/>	
Boiler Interlock	<input type="text" value="Yes"/>	
Combi boiler type	<input type="text" value="Standard Combi"/>	
Combi keep hot type	<input type="text" value="None"/>	

25.0 Main Heating 2	<input type="text" value="None"/>
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26.0 Heat Networks	<input type="text" value="None"/>
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27.0 Secondary Heating	<input type="text" value="None"/>
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28.0 Water Heating	
Water Heating	<input type="text" value="Main Heating 1"/>
SAP Code	<input type="text" value="901"/>
Flue Gas Heat Recovery System	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 1	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>
Solar Panel	<input type="text" value="No"/>

Summary for Input Data



Water use <= 125 litres/person/day

Yes

Cold Water Source

From mains

Bath Count

1

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

None

34.0 Small-scale Hydro

None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	M2.3 ET	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M2.3 ET
Plot Address	M2.3 ET, M2.3 ET	SAP Version	10.2

SAP Rating	84 B	DER	14.69	TER	11.56
Environmental	88 B	% DER < TER			-27.08
CO ₂ Emissions (t/year)	1.1	DFEE	32.72	TFEE	35.53
Compliance Check	See BREL	% DFEE < TFEE			7.92
% DPER < TPER	-36.07	DPER	82.19	TPER	60.40

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	188.77	kJ/m²

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	Yes

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	18.15 m	40.81 m ²	2.46 m
		18.15 m	40.81 m ²	2.69 m

8.0 Living Area	30.72	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	93.45	78.84	0.00	None	14.61	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	42.42	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Stud Partitions	Plasterboard on timber frame	9.00	164.52

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	40.81	40.81	None	0.00	Calculate Wall Area	0.00

10.2 Internal Ceilings	Description	Storey	Construction	Kappa	Area (m ²)
	Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	40.81

11.0 Heat Loss Floors	Description	Type	Storey Index	Construction	U-Value (W/m ² K)	Shelter Code	Shelter Factor	Kappa (kJ/m ² K)	Area (m ²)
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Summary for Input Data

Suspended Ground Floor Ground Floor - Solid Lowest occupied Suspended concrete floor, carpeted 0.12 None 0.00 75.00 40.81

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	40.81

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.29			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
W01	Window	Brick	North	3.33	
D02	Patio Door	Brick	South	4.61	
W02	Window	Brick	South	3.70	
W03	Window	Brick	East	0.82	

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

No

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E10 Eaves (insulation at ceiling level)	Independently assessed	9.91	0.07	0.07	Knauf	No
E12 Gable (insulation at ceiling level)	Independently assessed	8.24	0.05	0.05	Knauf	No
E1 Steel lintel with perforated steel base plate	Independently assessed	9.99	0.07	0.07	HiTherm	No
E3 Sill	Independently assessed	7.16	0.02	0.02	Knauf	No
E4 Jamb	Independently assessed	30.02	0.01	0.01	Knauf	No
E5 Ground floor (normal)	Independently assessed	18.15	0.06	0.06	Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	18.15	0.00	0.00	Knauf	No
P1 Party wall - Ground floor	Independently assessed	8.24	0.04	0.04	Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Independently assessed	8.24	0.00	0.00		No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	8.24	0.04	0.04	Knauf	No
E16 Corner (normal)	Independently assessed	10.30	0.04	0.04	Knauf	No
E18 Party wall between dwellings	Independently assessed	10.30	0.04	0.04	RCD	No

Y-value 0.03 W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	No
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	4

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan	1
	Kitchen	
0.15	In Room Fan Other	3
	Wet Room	
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other	0
	Wet Room	
0.11	Through Wall Fan	0
	Kitchen	
0.14	Through Wall Fan	0
	Other Wet Room	

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0

Summary for Input Data

Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System	<input type="text" value="No"/>
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22.0 Pressure Testing	<input type="text" value="Yes"/>	
Designed AP ₅₀	<input type="text" value="4.50"/>	m ² /(h.m ²) @ 50 Pa
Test Method	<input type="text" value="Blower Door"/>	

22.0 Lighting	<input type="text" value="No"/>				
No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	6
	Downlight	75.00	10.00	750.00	11

24.0 Main Heating 1	<input type="text" value="Manufacturer"/>	
Percentage of Heat	<input type="text" value="100.00"/>	%
Fuel Type	<input type="text" value="Mains gas"/>	
SAP Code	<input type="text" value="104"/>	
In Winter	<input type="text" value="88.90"/>	
In Summer	<input type="text" value="80.30"/>	
Model Name	<input type="text" value="Gas"/>	
Manufacturer	<input type="text" value="Gas"/>	
Controls SAP Code	<input type="text" value="2110"/>	
Controls description	<input type="text" value="Time and temperature zone control by arrangement"/>	
Delayed Start Stat	<input type="text" value="Yes"/>	
Burner Control	<input type="text" value="Modulating"/>	
Flue Type	<input type="text" value="Balanced"/>	
Fan Assisted Flue	<input type="text" value="Yes"/>	
Is MHS Pumped	<input type="text" value="Pump in heated space"/>	
Heating Pump Age	<input type="text" value="2013 or later"/>	
Heat Emitter	<input type="text" value="Radiators"/>	
Flow Temperature	<input type="text" value="Enter value"/>	
Flow Temperature Value	<input type="text" value="55.00"/>	
Boiler Interlock	<input type="text" value="Yes"/>	
Combi boiler type	<input type="text" value="Standard Combi"/>	
Combi keep hot type	<input type="text" value="None"/>	

25.0 Main Heating 2	<input type="text" value="None"/>
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26.0 Heat Networks	<input type="text" value="None"/>
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27.0 Secondary Heating	<input type="text" value="None"/>
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28.0 Water Heating	<input type="text" value="Main Heating 1"/>
Water Heating	<input type="text" value="Main Heating 1"/>
SAP Code	<input type="text" value="901"/>
Flue Gas Heat Recovery System	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 1	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>
Solar Panel	<input type="text" value="No"/>

Summary for Input Data

Water use <= 125 litres/person/day

Yes

Cold Water Source

From mains

Bath Count

1

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	9.00		No	
En-suite	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

None

34.0 Small-scale Hydro

None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	M2.3 MT	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M2.3 MT
Plot Address	M2.3 MT, M2.3 MT	SAP Version	10.2

SAP Rating	85 B	DER	13.82	TER	10.77
Environmental	88 B	% DER < TER			-28.32
CO ₂ Emissions (t/year)	1.03	DFEE	28.91	TFEE	31.79
Compliance Check	See BREL	% DFEE < TFEE			9.06
% DPER < TPER	-38.06	DPER	77.56	TPER	56.18

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Mid-Terrace	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	259.75	kJ/m²

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	Yes

7.0 Measurements		Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	Ground floor:	9.96 m	40.81 m²	2.46 m
	1st Storey:	9.96 m	40.81 m²	2.69 m

8.0 Living Area	30.72	m²
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Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	65.91	52.13	0.00	None	13.78	Enter Gross Area

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	109.66	0.00	None

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Stud Partitions	Plasterboard on timber frame	9.00	164.52

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	40.81	40.81	None	0.00	Calculate Wall Area	0.00

Description	Storey	Construction	Kappa	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	40.81

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
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Summary for Input Data

Suspended Ground Floor Ground Floor - Solid Lowest occupied Suspended concrete floor, carpeted 0.12 None 0.00 75.00 40.81

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	40.81

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.29			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
W01	Window	Brick	North	3.33	
D02	Patio Door	Brick	South	4.61	
W02	Window	Brick	South	3.70	

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

No

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E10 Eaves (insulation at ceiling level)	Independently assessed	9.91	0.07	0.07 Knauf	No
E12 Gable (insulation at ceiling level)	Independently assessed	8.24	0.05	0.05 Knauf	No
E1 Steel lintel with perforated steel base plate	Independently assessed	9.31	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	6.48	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	30.02	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	9.96	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	9.96	0.00	0.00 Knauf	No
P1 Party wall - Ground floor	Independently assessed	16.48	0.04	0.04 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Independently assessed	16.48	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	16.48	0.04	0.04 Knauf	No
E18 Party wall between dwellings	Independently assessed	20.60	0.04	0.04 RCD	No

Y-value 0.03 W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	No
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	4

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	3
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0

Summary for Input Data

Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System	<input type="text" value="No"/>
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22.0 Pressure Testing	<input type="text" value="Yes"/>	
Designed AP ₅₀	<input type="text" value="4.50"/>	m ³ /(h.m ²) @ 50 Pa
Test Method	<input type="text" value="Blower Door"/>	

22.0 Lighting	<input type="text" value="No"/>				
No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	6
	Downlight	75.00	10.00	750.00	11

24.0 Main Heating 1	<input type="text" value="Manufacturer"/>	
Percentage of Heat	<input type="text" value="100.00"/>	%
Fuel Type	<input type="text" value="Mains gas"/>	
SAP Code	<input type="text" value="104"/>	
In Winter	<input type="text" value="88.90"/>	
In Summer	<input type="text" value="80.30"/>	
Model Name	<input type="text" value="Gas"/>	
Manufacturer	<input type="text" value="Gas"/>	
Controls SAP Code	<input type="text" value="2110"/>	
Controls description	<input type="text" value="Time and temperature zone control by arrangement"/>	
Delayed Start Stat	<input type="text" value="Yes"/>	
Burner Control	<input type="text" value="Modulating"/>	
Flue Type	<input type="text" value="Balanced"/>	
Fan Assisted Flue	<input type="text" value="Yes"/>	
Is MHS Pumped	<input type="text" value="Pump in heated space"/>	
Heating Pump Age	<input type="text" value="2013 or later"/>	
Heat Emitter	<input type="text" value="Radiators"/>	
Flow Temperature	<input type="text" value="Enter value"/>	
Flow Temperature Value	<input type="text" value="55.00"/>	
Boiler Interlock	<input type="text" value="Yes"/>	
Combi boiler type	<input type="text" value="Standard Combi"/>	
Combi keep hot type	<input type="text" value="None"/>	

25.0 Main Heating 2	<input type="text" value="None"/>
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26.0 Heat Networks	<input type="text" value="None"/>
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27.0 Secondary Heating	<input type="text" value="None"/>
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28.0 Water Heating	<input type="text" value="Main Heating 1"/>
Water Heating	<input type="text" value="Main Heating 1"/>
SAP Code	<input type="text" value="901"/>
Flue Gas Heat Recovery System	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 1	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>
Solar Panel	<input type="text" value="No"/>
Water use <= 125 litres/person/day	<input type="text" value="Yes"/>

Summary for Input Data



Cold Water Source

From mains

Bath Count

1

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	9.00		No	
En-suite	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

None

34.0 Small-scale Hydro

None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	M3.11 ET	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M3.11 ET
Plot Address	M3.11 ET, M3.11 ET	SAP Version	10.2

SAP Rating	85 B	DER	13.45	TER	10.30
Environmental	88 B	% DER < TER			-30.58
CO ₂ Emissions (t/year)	1.2	DFEE	30.92	TFEE	33.44
Compliance Check	See BREL	% DFEE < TFEE			7.55
% DPER < TPER	-40.20	DPER	75.45	TPER	53.82

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	184.76	kJ/m²

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	Yes

7.0 Measurements	Ground floor: 1st Storey:	Heat Loss Perimeter 19.57 m 19.57 m	Internal Floor Area 48.50 m ² 48.50 m ²	Average Storey Height 2.46 m 2.69 m
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8.0 Living Area	24.24	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	84.14	73.85	0.00	None	10.29	Enter Gross Area
	Weatherboard	Cavity Wall	Cavity wall : dense plaster, AAC block, filled cavity, any outside structure	0.19	70.00	17.06	14.81	0.00	None	2.25	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	48.08	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Stud Partitions	Plasterboard on timber frame	9.00	197.93

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	48.50	48.50	None	0.00	Calculate Wall Area	0.00

10.2 Internal Ceilings	Description	Storey	Construction	Kappa	Area (m ²)
	Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	48.50

11.0 Heat Loss Floors

Summary for Input Data

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Suspended Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	48.50

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	48.50

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.29			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
W01	Window	Brick	North	1.07	
D02	Patio Door	Brick	South	4.61	
W02	Window	Brick	South	2.46	
W03	Window	Weatherboard	North	2.25	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E10 Eaves (insulation at ceiling level)	Independently assessed	10.36	0.07	0.07 Knauf	No
E12 Gable (insulation at ceiling level)	Independently assessed	9.36	0.05	0.05 Knauf	No
E1 Steel lintel with perforated steel base plate	Independently assessed	8.29	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	5.45	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	25.20	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	19.57	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	19.57	0.00	0.00 Knauf	No
P1 Party wall - Ground floor	Independently assessed	9.36	0.04	0.04 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Independently assessed	9.36	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	9.36	0.04	0.04 Knauf	No
E16 Corner (normal)	Independently assessed	10.30	0.04	0.04 Knauf	No
E18 Party wall between dwellings	Independently assessed	10.30	0.04	0.04 RCD	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="No"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="3"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan	1
	Kitchen	
0.15	In Room Fan Other	2
	Wet Room	
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other	0
	Wet Room	
0.11	Through Wall Fan	0
	Kitchen	
0.14	Through Wall Fan	0
	Other Wet Room	

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>

Summary for Input Data

Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP ₅₀	<input type="text" value="4.50"/>	m ³ /(h.m ²) @ 50 Pa
Test Method	<input type="text" value="Blower Door"/>	

22.0 Lighting

No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	6
	Downlight	75.00	10.00	750.00	11

24.0 Main Heating 1

Percentage of Heat	<input type="text" value="100.00"/>	%
Fuel Type	<input type="text" value="Mains gas"/>	
SAP Code	<input type="text" value="104"/>	
In Winter	<input type="text" value="88.90"/>	
In Summer	<input type="text" value="80.30"/>	
Model Name	<input type="text" value="Gas"/>	
Manufacturer	<input type="text" value="Gas"/>	
Controls SAP Code	<input type="text" value="2110"/>	
Controls description	<input type="text" value="Time and temperature zone control by arrangement"/>	
Delayed Start Stat	<input type="text" value="Yes"/>	
Burner Control	<input type="text" value="Modulating"/>	
Flue Type	<input type="text" value="Balanced"/>	
Fan Assisted Flue	<input type="text" value="Yes"/>	
Is MHS Pumped	<input type="text" value="Pump in heated space"/>	
Heating Pump Age	<input type="text" value="2013 or later"/>	
Heat Emitter	<input type="text" value="Radiators"/>	
Flow Temperature	<input type="text" value="Enter value"/>	
Flow Temperature Value	<input type="text" value="55.00"/>	
Boiler Interlock	<input type="text" value="Yes"/>	
Combi boiler type	<input type="text" value="Standard Combi"/>	
Combi keep hot type	<input type="text" value="None"/>	

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating	<input type="text" value="Main Heating 1"/>
SAP Code	<input type="text" value="901"/>
Flue Gas Heat Recovery System	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 1	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>

Summary for Input Data

Solar Panel	<input type="text" value="No"/>
Water use <= 125 litres/person/day	<input type="text" value="Yes"/>
Cold Water Source	<input type="text" value="From mains"/>
Bath Count	<input type="text" value="1"/>

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	9.00		No	
En-suite	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	<input type="text" value="None"/>
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34.0 Small-scale Hydro

<input type="text" value="None"/>												
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	M3.12 ET	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M3.12 ET
Plot Address	M3.12 ET	SAP Version	10.2

SAP Rating	85 B	DER	13.93	TER	11.47
Environmental	87 B	% DER < TER			-21.45
CO ₂ Emissions (t/year)	1.28	DFEE	35.99	TFEE	36.71
Compliance Check	See BREL	% DFEE < TFEE			1.97
% DPER < TPER	-29.60	DPER	77.80	TPER	60.03

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	3	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	182.00	kJ/m²K
<hr/>		
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	17.36 m	37.67 m²	2.46 m
	2nd Storey:	17.36 m	37.67 m²	2.69 m
		16.76 m	25.96 m²	2.55 m

8.0 Living Area	16.50	m²
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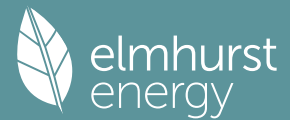
9.0 External Walls	Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	103.64	88.68	0.00	None	14.96	Enter Gross Area
	Timber Stud Wall	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	22.17	22.17	0.50	Room In Roof	0.00	Enter Gross Area
	Dormer Cheek	Timber Frame	Timber framed wall (one layer of plasterboard)	0.26	9.00	4.74	3.11	0.00	None	1.63	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	58.15	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m²K)	Area (m²)
	Internal Steel Partition	Plasterboard on timber frame	9.00	176.93

10.0 External Roofs	Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	17.31	17.31	None	0.00	Enter Gross Area	0.00
	Dormer Roof	External Flat	Plasterboard, insulated flat roof	0.19	9.00	2.11	2.11	None	0.00	Enter Gross Area	0.00
	Exposed Ceiling	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	11.66	11.66	Room In Roof	0.50	Enter Gross Area	0.00

Summary for Input Data



Sloping Roof	External Slope Roof	Plasterboard, insulated slope	0.16	9.00	9.25	8.49	None	0.00	Enter Gross Area	0.76
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10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	37.67
Internal Ceiling 2	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	25.96

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	37.67

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	37.67
Internal Floor 2	+2	Plasterboard ceiling, carpeted chipboard floor	18.00	25.96

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.29			1.40
Roof Window	Manufacturer	Roof Window	Double Low-E Soft 0.05			0.53		0.70	1.30
Storage Door	Manufacturer	Solid Door				0.00			1.20
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Dormer Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.41			1.30

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
D02	Patio Door	Brick	South	3.80	
W01	Window	Brick	North	4.14	
W02	Window	Dormer Cheek	North	1.63	
R01	Roof Window	Sloping Roof	South	0.76	45
W03	Window	Brick	East	2.16	
W04	Window	Brick	South	2.71	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E12 Gable (insulation at ceiling level)	Independently assessed	6.94	0.05	0.05 Knauf	No
E2 Other lintels (including other steel lintels)	Independently assessed	11.58	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	8.75	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	32.40	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	17.36	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	34.12	0.00	0.00 Knauf	No
E16 Corner (normal)	Independently assessed	10.29	0.04	0.04 Knauf	No
E17 Corner (inverted – internal area greater than external area)	Table K1 - Default	6.38	0.00	0.00 Table K1-Timber/timber	No
R9 Roof to wall (flat ceiling)	Independently assessed	4.50	0.06	0.06 AES	No
R7 Flat ceiling (inverted)	Independently assessed	1.33	0.03	0.03 AES	No
R6 Flat ceiling	Independently assessed	8.79	0.02	0.02 AES	No
R8 Roof to wall (rafter)	Independently assessed	7.55	0.05	0.05 Superglass Insulation	No
R1 Head of roof window	Independently assessed	0.78	0.12	0.12 AES	No
R2 Sill of roof window	Independently assessed	0.78	0.11	0.11 AES	No
R3 Jamb of roof window	Independently assessed	1.96	0.04	0.04 AES	No
E13 Gable (insulation at rafter level)	Independently assessed	1.64	0.09	0.09 AES	No
P1 Party wall - Ground floor	Independently assessed	8.57	0.07	0.07 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	14.06	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	7.04	0.07	0.07 Knauf	No
P5 Party wall - Roof (insulation at rafter level)	Non Gov Approved Schemes	1.54	0.04	0.04 AES	No
E18 Party wall between dwellings	Independently assessed	10.30	0.04	0.04 RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	8.79	0.07	0.07 Knauf	No
E16 Corner (normal)	Table K1 - Default	3.89	0.18	0.18 Table K1-Brick/Timber	No
E16 Corner (normal)	Table K1 - Default	3.91	0.18	0.18 Table K1-Dormer	No
E18 Party wall between dwellings	Table K1 - Default	3.89	0.24	0.24 Table K1-Block/Timber	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

Approved Installation

Summary for Input Data

Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	4

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan	1
	Kitchen	
0.15	In Room Fan Other	2
	Wet Room	
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other	0
	Wet Room	
0.11	Through Wall Fan	0
	Kitchen	
0.14	Through Wall Fan	1
	Other Wet Room	

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System

No

22.0 Pressure Testing

Yes

Designed AP ₅₀	4.50	m ³ /(h.m ²) @ 50 Pa
Test Method	Blower Door	

22.0 Lighting

No Fixed Lighting	No
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Name	Efficacy	Power	Capacity	Count
Pendants	75.00	10.00	750.00	9
Downlighters	75.00	10.00	750.00	4
Batten Holder	75.00	10.00	750.00	1
Track light Fitting	75.00	10.00	750.00	3
Splash Proof Downlighter	75.00	10.00	750.00	1

24.0 Main Heating 1

Manufacturer		
Percentage of Heat	100.00	%
Fuel Type	Mains gas	
SAP Code	104	
In Winter	88.90	
In Summer	80.30	
Model Name	Gas	
Manufacturer	Gas	
Controls SAP Code	2110	
Controls description	Time and temperature zone control by arrangement	
Delayed Start Stat	Yes	
Burner Control	Modulating	
Flue Type	Balanced	
Fan Assisted Flue	Yes	

Summary for Input Data

Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	55.00
Boiler Interlock	Yes
Combi boiler type	Standard Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating	Main Heating 1
SAP Code	901
Flue Gas Heat Recovery System	No
Waste Water Heat Recovery Instantaneous System 1	No
Waste Water Heat Recovery Instantaneous System 2	No
Waste Water Heat Recovery Storage System	No
Solar Panel	No
Water use <= 125 litres/person/day	Yes
Cold Water Source	From mains
Bath Count	1

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

34.0 Small-scale Hydro

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	M3.12 MT	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M3.12 MT
Plot Address	M3.12 MT	SAP Version	10.2

SAP Rating	85 B	DER	13.14	TER	10.58
Environmental	88 B	% DER < TER			-24.20
CO ₂ Emissions (t/year)	1.21	DFEE	32.21	TFEE	32.31
Compliance Check	See BREL	% DFEE < TFEE			0.30
% DPER < TPER	-33.06	DPER	73.62	TPER	55.33

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenture	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	House, Mid-Terrace
2.0 Number of Storeys	3
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	200.00 kJ/m ² K

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	8.79 m	37.67 m ²	2.46 m
	2nd Storey:	11.18 m	25.96 m ²	2.55 m

8.0 Living Area	16.50 m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	67.12	54.31	0.00	None	12.81	Enter Gross Area
	Timber Stud Wall	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	22.17	22.17	0.50	Room In Roof	0.00	Enter Gross Area
	Dormer Cheek	Timber Frame	Timber framed wall (one layer of plasterboard)	0.26	9.00	4.74	3.11	0.00	None	1.63	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	93.47	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Internal Steel Partition	Plasterboard on timber frame	9.00	176.93

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	17.31	17.31	None	0.00	Enter Gross Area	0.00
	Dormer Roof	External Flat	Plasterboard, insulated flat roof	0.19	9.00	2.11	2.11	None	0.00	Enter Gross Area	0.00
	Exposed Ceiling	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	11.66	11.66	Room In Roof	0.50	Enter Gross Area	0.00

Summary for Input Data



Sloping Roof	External Slope Roof	Plasterboard, insulated slope	0.16	9.00	9.25	8.49	None	0.00	Enter Gross Area	0.76
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10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	37.67
Internal Ceiling 2	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	25.96

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	37.67

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	37.67
Internal Floor 2	+2	Plasterboard ceiling, carpeted chipboard floor	18.00	25.96

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.29			1.40
Roof Window	Manufacturer	Roof Window	Double Low-E Soft 0.05			0.53		0.70	1.30
Storage Door	Manufacturer	Solid Door				0.00			1.20
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Dormer Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.41			1.30

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
D02	Patio Door	Brick	South	3.80	
W01	Window	Brick	North	4.14	
W02	Window	Dormer Cheek	North	1.63	
R01	Roof Window	Sloping Roof	South	0.76	45
W04	Window	Brick	South	2.71	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	9.52	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	6.69	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	26.10	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	8.79	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	19.97	0.00	0.00 Knauf	No
E17 Corner (inverted – internal area greater than external area)	Table K1 - Default	6.38	0.00	0.00 Table K1-Timber/timber	No
R9 Roof to wall (flat ceiling)	Independently assessed	4.50	0.06	0.06 AES	No
R7 Flat ceiling (inverted)	Independently assessed	1.33	0.03	0.03 AES	No
R6 Flat ceiling	Independently assessed	8.79	0.02	0.02 AES	No
R8 Roof to wall (rafter)	Independently assessed	7.55	0.05	0.05 Superglass Insulation	No
R1 Head of roof window	Independently assessed	0.78	0.12	0.12 AES	No
R2 Sill of roof window	Independently assessed	0.78	0.11	0.11 AES	No
R3 Jamb of roof window	Independently assessed	1.96	0.04	0.04 AES	No
P1 Party wall - Ground floor	Independently assessed	17.15	0.07	0.07 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	28.22	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	13.96	0.07	0.07 Knauf	No
P5 Party wall - Roof (insulation at rafter level)	Non Gov Approved Schemes	3.17	0.04	0.04 AES	No
E18 Party wall between dwellings	Independently assessed	23.27	0.04	0.04 RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	8.79	0.07	0.07 Knauf	No
E16 Corner (normal)	Table K1 - Default	3.91	0.18	0.18 Table K1-Dormer	No
E18 Party wall between dwellings	Table K1 - Default	7.78	0.24	0.24 Table K1-Block/Timber	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>

Summary for Input Data

MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	4

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	2
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	1

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System

No

22.0 Pressure Testing

Yes

Designed AP ₅₀	4.50	m ³ /(h.m ²) @ 50 Pa
Test Method	Blower Door	

22.0 Lighting

No Fixed Lighting

No

Name	Efficacy	Power	Capacity	Count
Pendants	75.00	10.00	750.00	9
Downlighters	75.00	10.00	750.00	4
Batten Holder	75.00	10.00	750.00	1
Track light Fitting	75.00	10.00	750.00	3
Splash Proof Downlighter	75.00	10.00	750.00	1

24.0 Main Heating 1

Manufacturer	
Percentage of Heat	100.00 %
Fuel Type	Mains gas
SAP Code	104
In Winter	88.90
In Summer	80.30
Model Name	Gas
Manufacturer	Gas
Controls SAP Code	2110
Controls description	Time and temperature zone control by arrangement
Delayed Start Stat	Yes
Burner Control	Modulating
Flue Type	Balanced
Fan Assisted Flue	Yes
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later

Summary for Input Data

Heat Emitter	<input type="text" value="Radiators"/>
Flow Temperature	<input type="text" value="Enter value"/>
Flow Temperature Value	<input type="text" value="55.00"/>
Boiler Interlock	<input type="text" value="Yes"/>
Combi boiler type	<input type="text" value="Standard Combi"/>
Combi keep hot type	<input type="text" value="None"/>

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating	<input type="text" value="Main Heating 1"/>
SAP Code	<input type="text" value="901"/>
Flue Gas Heat Recovery System	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 1	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>
Solar Panel	<input type="text" value="No"/>
Water use <= 125 litres/person/day	<input type="text" value="Yes"/>
Cold Water Source	<input type="text" value="From mains"/>
Bath Count	<input type="text" value="1"/>

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

34.0 Small-scale Hydro

<input type="text" value="None"/>											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	M3.13 ET	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M3.11 ET
Plot Address	M3.11 ET, M3.11 ET	SAP Version	10.2

SAP Rating	85 B	DER	14.30	TER	11.19
Environmental	87 B	% DER < TER			-27.79
CO ₂ Emissions (t/year)	1.27	DFEE	35.77	TFEE	38.57
Compliance Check	See BREL	% DFEE < TFEE			7.26
% DPER < TPER	-36.67	DPER	79.82	TPER	58.40

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	186.47	kJ/m²

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	Yes

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	19.76 m	48.66 m ²	2.46 m
		19.76 m	48.66 m ²	2.69 m

8.0 Living Area	17.07	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	48.60	37.42	0.00	None	11.18	Enter Gross Area
	Weatherboard	Cavity Wall	Cavity wall : dense plaster, AAC block, filled cavity, any outside structure	0.19	70.00	53.15	44.70	0.00	None	8.45	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	50.36	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Stud Partitions	Plasterboard on timber frame	9.00	203.63

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	48.66	48.66	None	0.00	Calculate Wall Area	0.00

10.2 Internal Ceilings	Description	Storey	Construction	Kappa	Area (m ²)
	Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	48.66

11.0 Heat Loss Floors

Summary for Input Data

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Suspended Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	48.66

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	48.66

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.29			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
W01	Window	Brick	North	3.33	
D02	Patio Door	Brick	West	3.80	
W02	Window	Weatherboard	West	1.23	
W03	Window	Weatherboard	North	5.32	
W04	Window	Weatherboard	East	1.90	
W05	Window	Brick	East	1.90	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E10 Eaves (insulation at ceiling level)	Independently assessed	9.36	0.07	0.07 Knauf	No
E12 Gable (insulation at ceiling level)	Independently assessed	10.40	0.05	0.05 Knauf	No
E1 Steel lintel with perforated steel base plate	Independently assessed	13.51	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	10.68	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	33.90	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	19.76	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	19.76	0.00	0.00 Knauf	No
P1 Party wall - Ground floor	Independently assessed	9.36	0.04	0.04 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Independently assessed	9.36	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	9.36	0.04	0.04 Knauf	No
E16 Corner (normal)	Independently assessed	10.30	0.04	0.04 Knauf	No
E18 Party wall between dwellings	Independently assessed	10.30	0.04	0.04 RCD	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="No"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="3"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan	1
	Kitchen	
0.15	In Room Fan Other	2
	Wet Room	
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other	0
	Wet Room	
0.11	Through Wall Fan	0
	Kitchen	
0.14	Through Wall Fan	0
	Other Wet Room	

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>

Summary for Input Data

Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m²/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	6
	Downlight	75.00	10.00	750.00	11

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

Controls SAP Code

Controls description

Delayed Start Stat

Burner Control

Flue Type

Fan Assisted Flue

Is MHS Pumped

Heating Pump Age

Heat Emitter

Flow Temperature

Flow Temperature Value

Boiler Interlock

Combi boiler type

Combi keep hot type

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Summary for Input Data

Waste Water Heat Recovery Storage System	<input type="text" value="No"/>
Solar Panel	<input type="text" value="No"/>
Water use <= 125 litres/person/day	<input type="text" value="Yes"/>
Cold Water Source	<input type="text" value="From mains"/>
Bath Count	<input type="text" value="1"/>

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	9.00		No	
En-suite	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	<input type="text" value="None"/>
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34.0 Small-scale Hydro	<input type="text" value="None"/>
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Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	M4.12 ET	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M4.12 ET
Plot Address	M4.12 ET	SAP Version	10.2

SAP Rating	85 B	DER	12.91	TER	10.44
Environmental	88 B	% DER < TER			-23.66
CO ₂ Emissions (t/year)	1.46	DFEE	35.35	TFEE	36.42
Compliance Check	See BREL	% DFEE < TFEE			2.93
% DPER < TPER	-32.15	DPER	72.19	TPER	54.63

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	3	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	165.13	kJ/m²K
<hr/>		
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	19.83 m	48.54 m ²	2.46 m
	2nd Storey:	19.83 m	48.54 m ²	2.69 m
		18.21 m	26.41 m ²	2.57 m

8.0 Living Area	36.15	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	113.82	99.17	0.00	None	14.65	Enter Gross Area
	Timber Stud Wall	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	31.90	31.90	0.50	Room In Roof	0.00	Enter Gross Area
	Dormer Cheek	Timber Frame	Timber framed wall (one layer of plasterboard)	0.26	9.00	4.69	3.06	0.00	None	1.63	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	56.38	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Internal Steel Partition	Plasterboard on timber frame	9.00	201.60

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	21.58	21.58	None	0.00	Enter Gross Area	0.00
	Dormer Roof	External Flat	Plasterboard, insulated flat roof	0.19	9.00	2.13	2.13	None	0.00	Enter Gross Area	0.00
	Exposed Ceiling	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	22.12	22.12	Room In Roof	0.50	Enter Gross Area	0.00

Summary for Input Data



Sloping Roof	External Slope Roof	Plasterboard, insulated slope	0.16	9.00	3.83	3.83	None	0.00	Enter Gross Area	0.00
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10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	48.54
Internal Ceiling 2	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	26.41

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	48.54

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	48.54
Internal Floor 2	+2	Plasterboard ceiling, carpeted chipboard floor	18.00	26.41

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.29			1.40
Roof Window	Manufacturer	Roof Window	Double Low-E Soft 0.05			0.53		0.70	1.30
Storage Door	Manufacturer	Solid Door				0.00			1.20
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Dormer Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.41			1.30

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
D02	Patio Door	Brick	South	3.80	
W01	Window	Brick	North	4.14	
W02	Window	Dormer Cheek	North	1.63	
W03	Window	Brick	East	0.72	
W04	Window	Brick	South	3.84	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E12 Gable (insulation at ceiling level)	Independently assessed	8.15	0.05	0.05 Knauf	No
E2 Other lintels (including other steel lintels)	Independently assessed	11.02	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	8.18	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	28.50	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	19.83	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	38.04	0.00	0.00 Knauf	No
E16 Corner (normal)	Independently assessed	10.29	0.04	0.04 Knauf	No
E17 Corner (inverted – internal area greater than external area)	Table K1 - Default	6.23	0.00	0.00 Table K1-Timber/timber	No
R9 Roof to wall (flat ceiling)	Independently assessed	4.53	0.06	0.06 AES	No
R7 Flat ceiling (inverted)	Independently assessed	1.33	0.03	0.03 AES	No
R6 Flat ceiling	Independently assessed	5.52	0.02	0.02 AES	No
R8 Roof to wall (rafter)	Independently assessed	9.94	0.05	0.05 Superglass Insulation	No
E13 Gable (insulation at rafter level)	Independently assessed	0.63	0.09	0.09 AES	No
P1 Party wall - Ground floor	Independently assessed	8.80	0.07	0.07 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	13.11	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	8.41	0.07	0.07 Knauf	No
P5 Party wall - Roof (insulation at rafter level)	Non Gov Approved Schemes	0.39	0.04	0.04 AES	No
E18 Party wall between dwellings	Independently assessed	11.18	0.04	0.04 RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	11.03	0.07	0.07 Knauf	No
E16 Corner (normal)	Table K1 - Default	4.80	0.18	0.18 Table K1-Brick/Timber	No
E16 Corner (normal)	Table K1 - Default	3.86	0.18	0.18 Table K1-Dormer	No
E18 Party wall between dwellings	Table K1 - Default	4.80	0.24	0.24 Table K1-Block/Timber	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>

Summary for Input Data

MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	4

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	2
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	1

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System

No

22.0 Pressure Testing

Yes

Designed AP ₅₀	4.50	m ³ /(h.m ²) @ 50 Pa
Test Method	Blower Door	

22.0 Lighting

No Fixed Lighting

No

Name	Efficacy	Power	Capacity	Count
Pendants	75.00	10.00	750.00	9
Downlighters	75.00	10.00	750.00	4
Batten Holder	75.00	10.00	750.00	1
Track light Fitting	75.00	10.00	750.00	3
Splash Proof Downlighter	75.00	10.00	750.00	1

24.0 Main Heating 1

Manufacturer	
Percentage of Heat	100.00 %
Fuel Type	Mains gas
SAP Code	104
In Winter	88.90
In Summer	80.30
Model Name	Gas
Manufacturer	Gas
Controls SAP Code	2110
Controls description	Time and temperature zone control by arrangement
Delayed Start Stat	Yes
Burner Control	Modulating
Flue Type	Balanced
Fan Assisted Flue	Yes
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later

Summary for Input Data

Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	55.00
Boiler Interlock	Yes
Combi boiler type	Standard Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating	Main Heating 1
SAP Code	901
Flue Gas Heat Recovery System	No
Waste Water Heat Recovery Instantaneous System 1	No
Waste Water Heat Recovery Instantaneous System 2	No
Waste Water Heat Recovery Storage System	No
Solar Panel	No
Water use <= 125 litres/person/day	Yes
Cold Water Source	From mains
Bath Count	1

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

34.0 Small-scale Hydro

<input type="text" value="None"/>											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	M4.12 MT	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M4.12 MT
Plot Address	M4.12 MT	SAP Version	10.2

SAP Rating	86 B	DER	11.93	TER	9.39
Environmental	89 B	% DER < TER			-27.05
CO ₂ Emissions (t/year)	1.34	DFEE	30.91	TFEE	31.47
Compliance Check	See BREL	% DFEE < TFEE			1.78
% DPER < TPER	-36.57	DPER	66.90	TPER	48.99

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Mid-Terrace	
2.0 Number of Storeys	3	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	188.49	kJ/m²

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	11.04 m	48.54 m ²	2.46 m
	2nd Storey:	13.66 m	26.41 m ²	2.57 m

8.0 Living Area	36.15	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	56.82	42.89	0.00	None	13.93	Enter Gross Area
	Timber Stud Wall	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	31.90	31.90	0.50	Room In Roof	0.00	Enter Gross Area
	Dormer Cheek	Timber Frame	Timber framed wall (one layer of plasterboard)	0.26	9.00	4.69	3.06	0.00	None	1.63	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	113.30	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Internal Steel Partition	Plasterboard on timber frame	9.00	201.60

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	21.58	21.58	None	0.00	Enter Gross Area	0.00
	Dormer Roof	External Flat	Plasterboard, insulated flat roof	0.19	9.00	2.13	2.13	None	0.00	Enter Gross Area	0.00
	Exposed Ceiling	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	22.12	22.12	Room In Roof	0.50	Enter Gross Area	0.00

Summary for Input Data



Sloping Roof	External Slope Roof	Plasterboard, insulated slope	0.16	9.00	3.83	3.83	None	0.00	Enter Gross Area	0.00
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10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	48.54
Internal Ceiling 2	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	26.41

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	48.54

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	48.54
Internal Floor 2	+2	Plasterboard ceiling, carpeted chipboard floor	18.00	26.41

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.29			1.40
Roof Window	Manufacturer	Roof Window	Double Low-E Soft 0.05			0.53		0.70	1.30
Storage Door	Manufacturer	Solid Door				0.00			1.20
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Dormer Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.41			1.30

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
D02	Patio Door	Brick	South	3.80	
W01	Window	Brick	North	4.14	
W02	Window	Dormer Cheek	North	1.63	
W03	Window	Brick	South	3.84	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	10.33	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	7.50	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	26.40	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	11.03	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	13.66	0.00	0.00 Knauf	No
E17 Corner (inverted – internal area greater than external area)	Table K1 - Default	6.23	0.00	0.00 Table K1-Timber/timber	No
R9 Roof to wall (flat ceiling)	Independently assessed	4.53	0.06	0.06 AES	No
R7 Flat ceiling (inverted)	Independently assessed	1.33	0.03	0.03 AES	No
R6 Flat ceiling	Independently assessed	5.52	0.02	0.02 AES	No
R8 Roof to wall (rafter)	Independently assessed	9.94	0.05	0.05 Superglass Insulation	No
P1 Party wall - Ground floor	Independently assessed	17.60	0.07	0.07 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	21.91	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	16.56	0.07	0.07 Knauf	No
P5 Party wall - Roof (insulation at rafter level)	Non Gov Approved Schemes	1.03	0.04	0.04 AES	No
E18 Party wall between dwellings	Independently assessed	21.48	0.04	0.04 RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	11.03	0.07	0.07 Knauf	No
E16 Corner (normal)	Table K1 - Default	3.86	0.18	0.18 Table K1-Dormer	No
E18 Party wall between dwellings	Table K1 - Default	9.60	0.24	0.24 Table K1-Block/Timber	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="4"/>

Summary for Input Data

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	2
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	1

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀

m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendants	75.00	10.00	750.00	9
Downlighters	75.00	10.00	750.00	4
Batten Holder	75.00	10.00	750.00	1
Track light Fitting	75.00	10.00	750.00	3
Splash Proof Downlighter	75.00	10.00	750.00	1

24.0 Main Heating 1

Manufacturer	<input type="text" value=""/>
Percentage of Heat	<input type="text" value="100.00"/> %
Fuel Type	<input type="text" value="Mains gas"/>
SAP Code	<input type="text" value="104"/>
In Winter	<input type="text" value="88.90"/>
In Summer	<input type="text" value="80.30"/>
Model Name	<input type="text" value="Gas"/>
Manufacturer	<input type="text" value="Gas"/>
Controls SAP Code	<input type="text" value="2110"/>
Controls description	<input type="text" value="Time and temperature zone control by arrangement"/>
Delayed Start Stat	<input type="text" value="Yes"/>
Burner Control	<input type="text" value="Modulating"/>
Flue Type	<input type="text" value="Balanced"/>
Fan Assisted Flue	<input type="text" value="Yes"/>
Is MHS Pumped	<input type="text" value="Pump in heated space"/>
Heating Pump Age	<input type="text" value="2013 or later"/>
Heat Emitter	<input type="text" value="Radiators"/>
Flow Temperature	<input type="text" value="Enter value"/>
Flow Temperature Value	<input type="text" value="55.00"/>

Summary for Input Data

Boiler Interlock	Yes
Combi boiler type	Standard Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating	Main Heating 1
SAP Code	901
Flue Gas Heat Recovery System	No
Waste Water Heat Recovery Instantaneous System 1	No
Waste Water Heat Recovery Instantaneous System 2	No
Waste Water Heat Recovery Storage System	No
Solar Panel	No
Water use <= 125 litres/person/day	Yes
Cold Water Source	From mains
Bath Count	1

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

34.0 Small-scale Hydro

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

10.5. APPENDIX E: SAMPLE SAP SUMMARY INFORMATION SHEETS (BE GREEN)

Summary for Input Data

Plot Reference	1 BED MF/ER FLAT (PLOT 76)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	1 BED MF/ER FLAT (PLOT 76)	
Plot Address	1 BED MF/ER FLAT (PLOT 76)		SAP Version	10.2

SAP Rating	79 C	DER	6.57	TER	16.23
Environmental	96 A	% DER < TER			59.52
CO ₂ Emissions (t/year)	0.29	DFEE	37.03	TFEE	42.07
Compliance Check	See BREL	% DFEE < TFEE			11.98
% DPER < TPER	21.59	DPER	67.87	TPER	86.56

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	Flat, End-Terrace	
Position of Flat	Mid-floor flat	
Which Floor	2	
2.0 Number of Storeys	1	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements	Ground floor:	Heat Loss Perimeter 16.81 m	Internal Floor Area 52.48 m ²	Average Storey Height 2.58 m
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8.0 Living Area	24.60	m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	41.18	31.65	0.00	None	9.53	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	5.88	3.76	0.90	Stairwell Access Corridor 4	2.12	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	35.28	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	96.48

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Terrace Above	External Flat Roof	Plasterboard, insulated flat roof	0.13	9.00	16.82	16.82	None	0.00	Enter Gross Area	0.00

10.1 Party Ceilings

Summary for Input Data

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	35.66

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete planks floor, screed, carpeted	40.00	52.48

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	North	5.71	
W02	Window	Brickwork	East	3.82	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	6.46	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	21.00	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	18.89	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	2.58	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	7.74	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	22.76	0.00	0.00 Table K1	No
E3 Sill	Independently assessed	2.10	0.02	0.02 Knauf	No
E25 Staggered party wall between dwellings	Independently assessed	2.58	0.03	0.03 RCD	No
E15 Flat roof with parapet	Table K1 - Default	14.71	0.30	0.30	No
E24 Eaves (insulation at ceiling level - inverted)	Table K1 - Default	12.25	0.15	0.15	No
P4 Party wall - Roof (insulation at ceiling level)	Table K1 - Default	2.46	0.48	0.48	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>

Summary for Input Data

Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System	<input type="text" value="No"/>
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22.0 Pressure Testing	<input type="text" value="Yes"/>	
Designed AP ₅₀	<input type="text" value="4.50"/>	m ² /(h.m ²) @ 50 Pa
Test Method	<input type="text" value="Blower Door"/>	

22.0 Lighting	<input type="text" value="No"/>				
No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	4
	Downlight	75.00	10.00	750.00	14
	Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1	<input type="text" value="SAP table"/>	
Percentage of Heat	<input type="text" value="100.00"/>	%
Fuel Type	<input type="text" value="Electricity"/>	
SAP Code	<input type="text" value="691"/>	
Controls SAP Code	<input type="text" value="2605"/>	

25.0 Main Heating 2	<input type="text" value="Database"/>	
Percentage of Heat	<input type="text" value="0.00"/>	%
Database Ref. No.	<input type="text" value="104014"/>	
Fuel Type	<input type="text" value="Electricity"/>	
Model Name	<input type="text" value="aroSTOR 200ltr"/>	
Manufacturer	<input type="text" value="Vaillant Group UK Ltd"/>	
Controls	<input type="text" value="2100"/>	

26.0 Heat Networks	<input type="text" value="None"/>
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27.0 Secondary Heating	<input type="text" value="None"/>
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28.0 Water Heating	<input type="text" value="Main Heating 2"/>
Water Heating	<input type="text" value="Main Heating 2"/>
SAP Code	<input type="text" value="914"/>
Flue Gas Heat Recovery System	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 1	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>
Solar Panel	<input type="text" value="No"/>
Water use <= 125 litres/person/day	<input type="text" value="Yes"/>
Cold Water Source	<input type="text" value="From mains"/>
Bath Count	<input type="text" value="1"/>
Immersion Only Heating Hot Water	<input type="text" value="No"/>

28.1 Showers					
Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	<input type="text" value="Internal Store"/>
Insulation Type	<input type="text" value="Measured Loss"/>

Summary for Input Data



Cylinder Volume	<input type="text" value="200.00"/>	L
Loss	<input type="text" value="1.61"/>	kWh/day

34.0 Small-scale Hydro

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	2 BED MF/ER FLAT (PLOT 80)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED MF/ER FLAT (PLOT 80)	
Plot Address	2 BED MF/ER FLAT (PLOT 80)		SAP Version	10.2

SAP Rating	79 C	DER	5.53	TER	13.24
Environmental	96 A	% DER < TER			58.23
CO ₂ Emissions (t/year)	0.34	DFEE	31.82	TFEE	35.74
Compliance Check	See BREL	% DFEE < TFEE			10.98
% DPER < TPER	18.79	DPER	57.02	TPER	70.21

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenture	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Mid-floor flat
Which Floor	2
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	0.00 kJ/m ² K
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 26.18 m	Internal Floor Area 72.95 m ²	Average Storey Height 2.58 m
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8.0 Living Area	25.39 m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	51.30	38.92	0.00	None	12.38	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	4.30	2.18	0.90	Stairwell Access Corridor 4	2.12	Enter Gross Area
Wall to Stair Core	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	17.71	17.71	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	22.52	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	140.22

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Terrace Above	External Flat Roof	Plasterboard, insulated flat roof	0.13	9.00	21.36	21.36	None	0.00	Enter Gross Area	0.00

Summary for Input Data

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	51.56

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete planks floor, screed, carpeted	40.00	72.95

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	Manufacturer BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	4.76	
D02	Patio Door	Brickwork	South	3.80	
W02	Window	Brickwork	East	3.82	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	7.36	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	23.10	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	31.02	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	5.16	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	5.16	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	14.57	0.00	0.00 Table K1	No
E3 Sill	Independently assessed	1.05	0.02	0.02 Knauf	No
E23 Balcony within or between dwellings, balcony support penetrates wall insulation	Independently assessed	3.05	0.35	0.35 Estimated	No
E24 Eaves (insulation at ceiling level - inverted)	Table K1 - Default	14.43	0.15	0.15	No
P4 Party wall - Roof (insulation at ceiling level)	Table K1 - Default	1.51	0.48	0.48	No
E15 Flat roof with parapet	Table K1 - Default	18.29	0.30	0.30	No

19.0 Mechanical Ventilation

Mechanical Ventilation	
Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys

Summary for Input Data

Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP ₅₀	4.50	m ³ /(h.m ²) @ 50 Pa
Test Method	Blower Door	

22.0 Lighting

No Fixed Lighting	No				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	4
	Downlight	75.00	10.00	750.00	14
	Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat	100.00	%
Fuel Type	Electricity	
SAP Code	691	
Controls SAP Code	2605	

25.0 Main Heating 2

Percentage of Heat	0.00	%
Database Ref. No.	104014	
Fuel Type	Electricity	
Model Name	aroSTOR 200ltr	
Manufacturer	Vaillant Group UK Ltd	
Controls	2100	

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating	Main Heating 2
SAP Code	914
Flue Gas Heat Recovery System	No
Waste Water Heat Recovery Instantaneous System 1	No
Waste Water Heat Recovery Instantaneous System 2	No
Waste Water Heat Recovery Storage System	No
Solar Panel	No
Water use <= 125 litres/person/day	Yes
Cold Water Source	From mains
Bath Count	1
Immersion Only Heating Hot Water	No

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

Summary for Input Data



29.0 Hot Water Cylinder

Insulation Type	Internal Store	
Cylinder Volume	Measured Loss	
Loss	200.00	L
	1.61	kWh/day

34.0 Small-scale Hydro

None

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	1 BED M4(3) FLAT (PLOT 60)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	1 BED M4(3) FLAT (PLOT 60)	
Plot Address	1 BED M4(3) FLAT (PLOT 60)		SAP Version	10.2

SAP Rating	80 C	DER	5.38	TER	12.95
Environmental	96 A	% DER < TER			58.46
CO ₂ Emissions (t/year)	0.32	DFEE	31.71	TFEE	34.58
Compliance Check	See BREL	% DFEE < TFEE			8.31
% DPER < TPER	19.24	DPER	55.37	TPER	68.56

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenure	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Ground-floor flat
Which Floor	0
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	0.00 kJ/m ² K
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 18.77 m	Internal Floor Area 71.56 m ²	Average Storey Height 2.58 m
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8.0 Living Area	28.72 m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	47.66	30.52	0.00	None	17.14	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	4.89	2.77	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	42.77	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	117.58

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	71.56

Description	Type	Storey Index	Construction	U-Value (W/m ² K)	Shelter Code	Shelter Factor	Kappa (kJ/m ² K)	Area (m ²)
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Summary for Input Data

Suspended Ground Floor Ground Floor - Solid Lowest occupied Suspended concrete floor, carpeted 0.12 None 0.00 75.00 71.56

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	Manufacturer BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	5.71	
W02	Window	Brickwork	West	7.62	
D02	Patio Door	Brickwork	North	3.80	

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

No

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	9.17	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	29.40	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	18.77	0.06	0.06 Bison Jetfloor	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	18.77	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	2.58	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	7.74	0.04	0.04 RCD	No
P1 Party wall - Ground floor	Independently assessed	15.27	0.05	0.05 Bison Tech	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	15.27	0.00	0.00 Table K1	No
E25 Staggered party wall between dwellings	Non Gov Approved Schemes	2.58	0.03	0.03 RCD	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	2

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

Summary for Input Data

21.0 Fixed Cooling System		<input type="text" value="No"/>									
22.0 Pressure Testing		<input type="text" value="Yes"/>									
Designed AP ₅₀		<input type="text" value="4.50"/>								m ³ /(h.m ²) @ 50 Pa	
Test Method		<input type="text" value="Blower Door"/>									
22.0 Lighting		<input type="text" value="No"/>									
No Fixed Lighting		<input type="text" value="No"/>									
		Name	Efficacy	Power	Capacity	Count					
		Pendant	75.00	10.00	750.00	4					
		Downlight	75.00	10.00	750.00	14					
		Batten Holder	75.00	10.00	750.00	1					
24.0 Main Heating 1		<input type="text" value="SAP table"/>									
Percentage of Heat		<input type="text" value="100.00"/>								%	
Fuel Type		<input type="text" value="Electricity"/>									
SAP Code		<input type="text" value="691"/>									
Controls SAP Code		<input type="text" value="2605"/>									
25.0 Main Heating 2		<input type="text" value="Database"/>									
Percentage of Heat		<input type="text" value="0.00"/>								%	
Database Ref. No.		<input type="text" value="104014"/>									
Fuel Type		<input type="text" value="Electricity"/>									
Model Name		<input type="text" value="aroSTOR 200ltr"/>									
Manufacturer		<input type="text" value="Vaillant Group UK Ltd"/>									
Controls		<input type="text" value="2100"/>									
26.0 Heat Networks		<input type="text" value="None"/>									
27.0 Secondary Heating		<input type="text" value="None"/>									
28.0 Water Heating		<input type="text" value="Main Heating 2"/>									
Water Heating		<input type="text" value="914"/>									
SAP Code		<input type="text" value="No"/>									
Flue Gas Heat Recovery System		<input type="text" value="No"/>									
Waste Water Heat Recovery Instantaneous System 1		<input type="text" value="No"/>									
Waste Water Heat Recovery Instantaneous System 2		<input type="text" value="No"/>									
Waste Water Heat Recovery Storage System		<input type="text" value="No"/>									
Solar Panel		<input type="text" value="No"/>									
Water use <= 125 litres/person/day		<input type="text" value="Yes"/>									
Cold Water Source		<input type="text" value="From mains"/>									
Bath Count		<input type="text" value="1"/>									
Immersion Only Heating Hot Water		<input type="text" value="No"/>									
28.1 Showers											
Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To						
Bathroom	Combi boiler or unvented hot water system	8.00		No							
28.3 Waste Water Heat Recovery System											
29.0 Hot Water Cylinder		<input type="text" value="Internal Store"/>									
Insulation Type		<input type="text" value="Measured Loss"/>									
Cylinder Volume		<input type="text" value="200.00"/>								L	
Loss		<input type="text" value="1.61"/>								kWh/day	
34.0 Small-scale Hydro		<input type="text" value="None"/>									
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Recommendations

Summary for Input Data



Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	1 BED MF FLAT (PLOT 67)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	1 BED MF FLAT (PLOT 67)	
Plot Address	1 BED MF FLAT (PLOT 67)		SAP Version	10.2

SAP Rating	84 B	DER	5.14	TER	13.43
Environmental	97 A	% DER < TER			61.73
CO ₂ Emissions (t/year)	0.23	DFEE	27.84	TFEE	29.17
Compliance Check	See BREL	% DFEE < TFEE			4.55
% DPER < TPER	25.50	DPER	53.25	TPER	71.47

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenure	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Mid-floor flat
Which Floor	1
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	0.00 kJ/m ² K
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 16.81 m	Internal Floor Area 52.48 m ²	Average Storey Height 2.58 m
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8.0 Living Area	24.60 m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	41.18	31.65	0.00	None	9.53	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	5.88	3.76	0.90	Stairwell Access Corridor 4	2.12	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	35.28	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	96.48

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	52.48

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
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Summary for Input Data

Party Floor 1 Lowest occupied Precast concrete planks floor, screed, carpeted 40.00 52.48

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	North	5.71	
W02	Window	Brickwork	East	3.82	

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

No

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	6.46	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	21.00	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	33.62	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	2.58	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	7.74	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	45.20	0.00	0.00 Table K1	No
E3 Sill	Independently assessed	2.10	0.02	0.02 Knauf	No
E25 Staggered party wall between dwellings	Independently assessed	2.58	0.03	0.03 RCD	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	2

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

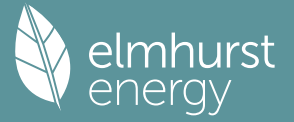
20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

Summary for Input Data

21.0 Fixed Cooling System		<input type="text" value="No"/>									
22.0 Pressure Testing		<input type="text" value="Yes"/>									
Designed AP ₅₀		<input type="text" value="4.50"/>								m ² /(h.m ²) @ 50 Pa	
Test Method		<input type="text" value="Blower Door"/>									
22.0 Lighting		<input type="text" value="No"/>									
No Fixed Lighting		<input type="text" value="No"/>									
	Name	Efficacy	Power	Capacity	Count						
	Pendant	75.00	10.00	750.00	4						
	Downlight	75.00	10.00	750.00	14						
	Batten Holder	75.00	10.00	750.00	1						
24.0 Main Heating 1		<input type="text" value="SAP table"/>									
Percentage of Heat		<input type="text" value="100.00"/>								%	
Fuel Type		<input type="text" value="Electricity"/>									
SAP Code		<input type="text" value="691"/>									
Controls SAP Code		<input type="text" value="2605"/>									
25.0 Main Heating 2		<input type="text" value="Database"/>									
Percentage of Heat		<input type="text" value="0.00"/>								%	
Database Ref. No.		<input type="text" value="104014"/>									
Fuel Type		<input type="text" value="Electricity"/>									
Model Name		<input type="text" value="aroSTOR 200ltr"/>									
Manufacturer		<input type="text" value="Vaillant Group UK Ltd"/>									
Controls		<input type="text" value="2100"/>									
26.0 Heat Networks		<input type="text" value="None"/>									
27.0 Secondary Heating		<input type="text" value="None"/>									
28.0 Water Heating		<input type="text" value="Main Heating 2"/>									
Water Heating		<input type="text" value="Main Heating 2"/>									
SAP Code		<input type="text" value="914"/>									
Flue Gas Heat Recovery System		<input type="text" value="No"/>									
Waste Water Heat Recovery Instantaneous System 1		<input type="text" value="No"/>									
Waste Water Heat Recovery Instantaneous System 2		<input type="text" value="No"/>									
Waste Water Heat Recovery Storage System		<input type="text" value="No"/>									
Solar Panel		<input type="text" value="No"/>									
Water use <= 125 litres/person/day		<input type="text" value="Yes"/>									
Cold Water Source		<input type="text" value="From mains"/>									
Bath Count		<input type="text" value="1"/>									
Immersion Only Heating Hot Water		<input type="text" value="No"/>									
28.1 Showers											
Description	Shower Type	Flow Rate	Rated Power	Connected	Connected To						
Bathroom	Combi boiler or unvented hot water system	[l/min] 8.00	[kW]	No							
28.3 Waste Water Heat Recovery System											
29.0 Hot Water Cylinder		<input type="text" value="Internal Store"/>									
Insulation Type		<input type="text" value="Measured Loss"/>									
Cylinder Volume		<input type="text" value="200.00"/>								L	
Loss		<input type="text" value="1.61"/>								kWh/day	
34.0 Small-scale Hydro		<input type="text" value="None"/>									
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Recommendations											
Lower cost measures											

Summary for Input Data



None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	1 BED TF FLAT (PLOT 89)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	1 BED TF FLAT (PLOT 89)	
Plot Address	1 BED TF FLAT (PLOT 89)		SAP Version	10.2

SAP Rating	76 C	DER	7.28	TER	17.25
Environmental	95 A	% DER < TER			57.80
CO ₂ Emissions (t/year)	0.32	DFEE	41.53	TFEE	45.62
Compliance Check	See BREL	% DFEE < TFEE			8.96
% DPER < TPER	18.31	DPER	75.22	TPER	92.08

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenure	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Top-floor flat
Which Floor	3
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	0.00 kJ/m ² K
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 22.27 m	Internal Floor Area 51.26 m ²	Average Storey Height 2.58 m
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8.0 Living Area	21.88 m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Cladding Wall	Steel Frame	Steel frame wall (warm frame or hybrid construction)	0.19	14.00	40.28	31.70	0.00	None	8.58	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	4.63	2.51	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area
Wall to Stair Core	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	17.44	17.44	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	18.22	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	94.11

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Flat Roof	External Flat Roof	Plasterboard, insulated flat roof	0.13	9.00	51.26	51.26	None	0.00	Enter Gross Area	0.00

Summary for Input Data

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete planks floor, screed, carpeted	40.00	51.26

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Cladding Wall	South	4.76	
W02	Window	Cladding Wall	East	3.82	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	5.55	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	18.90	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	22.27	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	5.16	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	5.16	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	6.51	0.00	0.00 Table K1	No
E3 Sill	Independently assessed	1.05	0.02	0.02 Knauf	No
P4 Party wall - Roof (insulation at ceiling level)	Table K1 - Default	6.51	0.48	0.48	No
E15 Flat roof with parapet	Table K1 - Default	22.27	0.30	0.30	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>

Summary for Input Data

Number of passive vents

Number of flueless gas fires

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting
No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendant	75.00	10.00	750.00	4
Downlight	75.00	10.00	750.00	14
Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

Controls SAP Code

25.0 Main Heating 2

Percentage of Heat %

Database Ref. No.

Fuel Type

Model Name

Manufacturer

Controls

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Bath Count

Immersion Only Heating Hot Water

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

Insulation Type

Cylinder Volume L

Loss kWh/day

Summary for Input Data



34.0 Small-scale Hydro

None

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Sep

Oct

Nov

Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	2 BED EF FLAT (PLOT 73)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED EF FLAT (PLOT 73)	
Plot Address	2 BED EF FLAT (PLOT 73)		SAP Version	10.2

SAP Rating	74 C	DER	7.13	TER	14.57
Environmental	94 A	% DER < TER			51.06
CO ₂ Emissions (t/year)	0.44	DFEE	42.07	TFEE	41.63
Compliance Check	See BREL	% DFEE < TFEE			-1.08
% DPER < TPER	5.13	DPER	73.42	TPER	77.39

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenure	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Mid-floor flat
Which Floor	1
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	0.00 kJ/m ² K
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 28.82 m	Internal Floor Area 72.30 m ²	Average Storey Height 2.58 m
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8.0 Living Area	29.34 m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	49.40	38.93	0.00	None	10.47	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	9.67	7.55	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area
Wall to Stair Core	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	21.62	21.62	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	18.12	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	136.37

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	72.30

11.0 Heat Loss Floors

Summary for Input Data



Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Over Plant Room/Cycle Store	Exposed Floor - Solid	Lowest occupied	Other	0.12	None	0.00	75.00	72.30

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	1.91	
D02	Patio Door	Brickwork	East	3.80	
W02	Window	Brickwork	East	4.76	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	6.45	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	18.90	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	28.81	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	5.16	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	2.58	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	6.47	0.00	0.00 Table K1	No
E25 Staggered party wall between dwellings	Non Gov Approved Schemes	2.58	0.03	0.03 RCD	No
E3 Sill	Independently assessed	1.05	0.02	0.02 Knauf	No
E20 Exposed floor (normal)	Table K1 - Default	25.74	0.32	0.32	No
P8 Party Wall - Exposed floor (inverted)	Table K1 - Default	6.47	0.48	0.48	No
E23 Balcony within or between dwellings, balcony support penetrates wall insulation	Independently assessed	3.08	0.35	0.35 Estimated	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>

Summary for Input Data

Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendant	75.00	10.00	750.00	4
Downlight	75.00	10.00	750.00	14
Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

Controls SAP Code

25.0 Main Heating 2

Percentage of Heat %

Database Ref. No.

Fuel Type

Model Name

Manufacturer

Controls

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Bath Count

Immersion Only Heating Hot Water

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

Insulation Type

Cylinder Volume L

Loss kWh/day

Summary for Input Data



34.0 Small-scale Hydro

None

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Sep

Oct

Nov

Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	2 BED GF FLAT (PLOT 64)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED GF FLAT (PLOT 64)	
Plot Address	2 BED GF FLAT (PLOT 64)		SAP Version	10.2

SAP Rating	81 B	DER	5.26	TER	12.79
Environmental	96 A	% DER < TER			58.87
CO ₂ Emissions (t/year)	0.32	DFEE	30.20	TFEE	33.83
Compliance Check	See BREL	% DFEE < TFEE			10.73
% DPER < TPER	19.98	DPER	54.18	TPER	67.71

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenure	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Ground-floor flat
Which Floor	0
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	0.00 kJ/m ² K
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 26.18 m	Internal Floor Area 72.95 m ²	Average Storey Height 2.58 m
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8.0 Living Area	25.39 m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	51.30	37.97	0.00	None	13.33	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	4.30	2.18	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area
Wall to Stairwell/Lift	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	17.71	17.71	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	22.52	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	140.22

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	72.95

11.0 Heat Loss Floors

Summary for Input Data

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Suspended Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	72.95

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	5.71	
W02	Window	Brickwork	East	3.82	
D02	Patio Door	Brickwork	South	3.80	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	7.36	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	25.20	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	26.18	0.06	0.06 Bison Jetfloor	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	26.18	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	5.16	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	5.16	0.04	0.04 RCD	No
P1 Party wall - Ground floor	Independently assessed	8.04	0.05	0.05 Bison Tech	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	8.04	0.00	0.00 Table K1	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>

Summary for Input Data

Number of flueless gas fires	<input type="text" value="0"/>										
21.0 Fixed Cooling System	<input type="text" value="No"/>										
22.0 Pressure Testing	<input type="text" value="Yes"/>										
Designed AP ₅₀	<input type="text" value="4.50"/>										m ³ /(h.m ²) @ 50 Pa
Test Method	<input type="text" value="Blower Door"/>										
22.0 Lighting	<input type="text" value="No"/>										
No Fixed Lighting	<input type="text" value="No"/>										
	Name	Efficacy	Power	Capacity	Count						
	Pendant	75.00	10.00	750.00	4						
	Downlight	75.00	10.00	750.00	14						
	Batten Holder	75.00	10.00	750.00	1						
24.0 Main Heating 1	<input type="text" value="SAP table"/>										
Percentage of Heat	<input type="text" value="100.00"/>										%
Fuel Type	<input type="text" value="Electricity"/>										
SAP Code	<input type="text" value="691"/>										
Controls SAP Code	<input type="text" value="2605"/>										
25.0 Main Heating 2	<input type="text" value="Database"/>										
Percentage of Heat	<input type="text" value="0.00"/>										%
Database Ref. No.	<input type="text" value="104014"/>										
Fuel Type	<input type="text" value="Electricity"/>										
Model Name	<input type="text" value="aroSTOR 200ltr"/>										
Manufacturer	<input type="text" value="Vaillant Group UK Ltd"/>										
Controls	<input type="text" value="2100"/>										
26.0 Heat Networks	<input type="text" value="None"/>										
27.0 Secondary Heating	<input type="text" value="None"/>										
28.0 Water Heating	<input type="text" value="Main Heating 2"/>										
Water Heating	<input type="text" value="Main Heating 2"/>										
SAP Code	<input type="text" value="914"/>										
Flue Gas Heat Recovery System	<input type="text" value="No"/>										
Waste Water Heat Recovery Instantaneous System 1	<input type="text" value="No"/>										
Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>										
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>										
Solar Panel	<input type="text" value="No"/>										
Water use <= 125 litres/person/day	<input type="text" value="Yes"/>										
Cold Water Source	<input type="text" value="From mains"/>										
Bath Count	<input type="text" value="1"/>										
Immersion Only Heating Hot Water	<input type="text" value="No"/>										
28.1 Showers											
Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To						
Bathroom	Combi boiler or unvented hot water system	8.00		No							
28.3 Waste Water Heat Recovery System											
29.0 Hot Water Cylinder	<input type="text" value="Internal Store"/>										
Insulation Type	<input type="text" value="Measured Loss"/>										
Cylinder Volume	<input type="text" value="200.00"/>										L
Loss	<input type="text" value="1.61"/>										kWh/day
34.0 Small-scale Hydro	<input type="text" value="None"/>										
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	2 BED M4(3) FLAT (PLOT 59)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED M4(3) FLAT (PLOT 59)	
Plot Address	2 BED M4(3) FLAT (PLOT 59)		SAP Version	10.2

SAP Rating	75 C	DER	5.82	TER	11.85
Environmental	95 A	% DER < TER			50.89
CO ₂ Emissions (t/year)	0.53	DFEE	34.54	TFEE	36.91
Compliance Check	See BREL	% DFEE < TFEE			6.41
% DPER < TPER	4.52	DPER	59.83	TPER	62.67

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenture	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Ground-floor flat
Which Floor	0
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	0.00 kJ/m ² K
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 39.65 m	Internal Floor Area 106.49 m ²	Average Storey Height 2.58 m
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8.0 Living Area	38.18 m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	61.79	49.89	0.00	None	11.90	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	30.56	28.44	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area
Wall to Plant Room	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	18.67	18.67	0.00	None	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	21.52	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	165.53
Block Partition	Dense block, plasterboard on dabs	75.00	19.50

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	106.49

Summary for Input Data

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Suspended Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	106.49

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	7.62	
D02	Patio Door	Brickwork	North	4.27	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	6.68	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	21.00	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	39.65	0.06	0.06 Bison Jetfloor	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	39.65	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	7.74	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	2.58	0.04	0.04 RCD	No
P1 Party wall - Ground floor	Independently assessed	7.69	0.05	0.05 Bison Tech	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	7.69	0.00	0.00 Table K1	No
E25 Staggered party wall between dwellings	Non Gov Approved Schemes	2.58	0.03	0.03 RCD	No
E17 Corner (inverted – internal area greater than external area)	Independently assessed	2.58	-0.09	-0.09 Knauf	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="3"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	2
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>

Summary for Input Data

Number of intermittent extract fans

Number of passive vents

Number of flueless gas fires

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendant	75.00	10.00	750.00	4
Downlight	75.00	10.00	750.00	14
Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

Controls SAP Code

25.0 Main Heating 2

Percentage of Heat %

Database Ref. No.

Fuel Type

Model Name

Manufacturer

Controls

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Bath Count

Immersion Only Heating Hot Water

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

Insulation Type

Cylinder Volume L

Loss kWh/day

Summary for Input Data



34.0 Small-scale Hydro

None

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Sep

Oct

Nov

Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	2 BED MF FLAT (PLOT 71)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED MF FLAT (PLOT 71)	
Plot Address	2 BED MF FLAT (PLOT 71)		SAP Version	10.2

SAP Rating	84 B	DER	4.42	TER	10.94
Environmental	97 A	% DER < TER			59.60
CO ₂ Emissions (t/year)	0.27	DFEE	24.60	TFEE	25.10
Compliance Check	See BREL	% DFEE < TFEE			2.03
% DPER < TPER	20.98	DPER	45.68	TPER	57.81

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenture	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	Flat, End-Terrace
Position of Flat	Mid-floor flat
Which Floor	1
2.0 Number of Storeys	1
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	0.00 kJ/m ² K
7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 26.18 m	Internal Floor Area 72.95 m ²	Average Storey Height 2.58 m
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8.0 Living Area	25.39 m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brickwork	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	51.30	38.92	0.00	None	12.38	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	4.30	2.18	0.90	Stairwell Access Corridor 4	2.12	Enter Gross Area
Wall to Stair Core	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	17.71	17.71	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	22.52	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	140.22

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	72.95

11.1 Party Floors

Summary for Input Data

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete planks floor, screed, carpeted	40.00	72.95

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer BFR, BSI or CERTASS data	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFR, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	Manufacturer	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Brickwork	South	4.76	
D02	Patio Door	Brickwork	South	3.80	
W02	Window	Brickwork	East	3.82	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	7.36	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	23.10	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	49.32	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	5.16	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	5.16	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	16.08	0.00	0.00 Table K1	No
E3 Sill	Independently assessed	1.05	0.02	0.02 Knauf	No
E23 Balcony within or between dwellings, balcony support penetrates wall insulation	Independently assessed	3.05	0.35	0.35 Estimated	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>

Summary for Input Data

Number of passive vents

Number of flueless gas fires

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting
No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendant	75.00	10.00	750.00	4
Downlight	75.00	10.00	750.00	14
Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

Controls SAP Code

25.0 Main Heating 2

Percentage of Heat %

Database Ref. No.

Fuel Type

Model Name

Manufacturer

Controls

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Bath Count

Immersion Only Heating Hot Water

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

Insulation Type

Cylinder Volume L

Loss kWh/day

Summary for Input Data



34.0 Small-scale Hydro

None

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Sep

Oct

Nov

Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	2 BED TF FLAT (PLOT 85)		Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	2 BED TF FLAT (PLOT 85)	
Plot Address	2 BED TF FLAT (PLOT 85)		SAP Version	10.2

SAP Rating	72 C	DER	7.43	TER	16.26
Environmental	94 A	% DER < TER			54.31
CO ₂ Emissions (t/year)	0.46	DFEE	44.87	TFEE	49.47
Compliance Check	See BREL	% DFEE < TFEE			9.31
% DPER < TPER	11.39	DPER	76.59	TPER	86.44

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	Flat, End-Terrace	
Position of Flat	Top-floor flat	
Which Floor	3	
2.0 Number of Storeys	1	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements		Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	Ground floor:	32.80 m	71.28 m ²	2.58 m

8.0 Living Area	26.06	m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Cladding Wall	Steel Frame	Steel frame wall (warm frame or hybrid construction)	0.19	14.00	67.37	54.04	0.00	None	13.33	Enter Gross Area
Wall to Unheated Corridor	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	10.15	8.03	0.70	Stairwell Access Corridor 3	2.12	Enter Gross Area
Wall to Stair Core	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.28	110.00	14.33	14.33	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	13.34	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Internal Timber Partition	Plasterboard on timber frame	9.00	118.91

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Flat Roof	External Flat Roof	Plasterboard, insulated flat roof	0.13	9.00	71.28	71.28	None	0.00	Calculate Wall Area	0.00

Summary for Input Data

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete planks floor, screed, carpeted	40.00	71.28

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Semi Glazed Door Window	Manufacturer	Half Glazed Door Window	Double Low-E Soft 0.1 Double Low-E Soft 0.05			0.63 0.44		0.70	1.20 1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.35			1.30
Front Solid Door	BFRC, BSI or CERTASS data	Solid Door				0.00			1.00

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Solid Door	Wall to Unheated Corridor	North	2.12	
W01	Window	Cladding Wall	South	1.91	
W02	Window	Cladding Wall	East	9.51	
W03	Window	Cladding Wall	North	1.91	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	7.36	0.06	0.06 HiTherm	No
E4 Jamb	Independently assessed	25.20	0.01	0.01 Knauf	No
E7 Party floor between dwellings (in blocks of flats)	Independently assessed	32.80	0.05	0.05 Knauf	No
E16 Corner (normal)	Independently assessed	7.74	0.05	0.05 Knauf	No
E18 Party wall between dwellings	Non Gov Approved Schemes	2.58	0.04	0.04 RCD	No
P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	4.76	0.00	0.00 Table K1	No
P4 Party wall - Roof (insulation at ceiling level)	Table K1 - Default	4.76	0.48	0.48	No
E15 Flat roof with parapet	Table K1 - Default	32.80	0.30	0.30	No
E25 Staggered party wall between dwellings	Non Gov Approved Schemes	2.58	0.03	0.03 RCD	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="2"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	1
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>

Summary for Input Data

Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendant	75.00	10.00	750.00	4
Downlight	75.00	10.00	750.00	14
Batten Holder	75.00	10.00	750.00	1

24.0 Main Heating 1

Percentage of Heat %

Fuel Type

SAP Code

Controls SAP Code

25.0 Main Heating 2

Percentage of Heat %

Database Ref. No.

Fuel Type

Model Name

Manufacturer

Controls

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Bath Count

Immersion Only Heating Hot Water

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

Insulation Type

Cylinder Volume L

Loss kWh/day

Summary for Input Data



34.0 Small-scale Hydro

None

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Sep

Oct

Nov

Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	M2.3 ET	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M2.3 ET
Plot Address	M2.3 ET, M2.3 ET	SAP Version	10.2

SAP Rating	86 B	DER	3.39	TER	11.26
Environmental	97 A	% DER < TER			69.89
CO ₂ Emissions (t/year)	0.25	DFEE	32.72	TFEE	35.53
Compliance Check	See BREL	% DFEE < TFEE			7.92
% DPER < TPER	39.47	DPER	35.58	TPER	58.79

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	188.77	kJ/m²

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	Yes

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	18.15 m	40.81 m ²	2.46 m
		18.15 m	40.81 m ²	2.69 m

8.0 Living Area	30.72	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	93.45	78.84	0.00	None	14.61	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	42.42	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Stud Partitions	Plasterboard on timber frame	9.00	164.52

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	40.81	40.81	None	0.00	Calculate Wall Area	0.00

10.2 Internal Ceilings	Description	Storey	Construction	Kappa	Area (m ²)
	Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	40.81

11.0 Heat Loss Floors	Description	Type	Storey Index	Construction	U-Value (W/m ² K)	Shelter Code	Shelter Factor	Kappa (kJ/m ² K)	Area (m ²)
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Summary for Input Data

Suspended Ground Floor Ground Floor - Solid Lowest occupied Suspended concrete floor, carpeted 0.12 None 0.00 75.00 40.81

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	40.81

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.29			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
W01	Window	Brick	North	3.33	
D02	Patio Door	Brick	South	4.61	
W02	Window	Brick	South	3.70	
W03	Window	Brick	East	0.82	

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

No

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E10 Eaves (insulation at ceiling level)	Independently assessed	9.91	0.07	0.07	Knauf	No
E12 Gable (insulation at ceiling level)	Independently assessed	8.24	0.05	0.05	Knauf	No
E1 Steel lintel with perforated steel base plate	Independently assessed	9.99	0.07	0.07	HiTherm	No
E3 Sill	Independently assessed	7.16	0.02	0.02	Knauf	No
E4 Jamb	Independently assessed	30.02	0.01	0.01	Knauf	No
E5 Ground floor (normal)	Independently assessed	18.15	0.06	0.06	Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	18.15	0.00	0.00	Knauf	No
P1 Party wall - Ground floor	Independently assessed	8.24	0.04	0.04	Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Independently assessed	8.24	0.00	0.00		No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	8.24	0.04	0.04	Knauf	No
E16 Corner (normal)	Independently assessed	10.30	0.04	0.04	Knauf	No
E18 Party wall between dwellings	Independently assessed	10.30	0.04	0.04	RCD	No

Y-value 0.03 W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	No
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	4

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan	1
	Kitchen	
0.15	In Room Fan Other	3
	Wet Room	
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other	0
	Wet Room	
0.11	Through Wall Fan	0
	Kitchen	
0.14	Through Wall Fan	0
	Other Wet Room	

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0

Summary for Input Data

Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m²/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	6
	Downlight	75.00	10.00	750.00	11

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

In Winter

In Summer

Model Name

Manufacturer

System Type

Controls SAP Code

Controls description

Is MHS Pumped

Heating Pump Age

Heat Emitter

Underfloor Heating

Flow Temperature

Flow Temperature Value

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Bath Count

Immersion Only Heating Hot Water

28.1 Showers

Summary for Input Data



Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	9.00		No	
En-suite	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

Hot Water Cylinder		
Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	200.00	L
Loss	1.00	kWh/day
Pipes insulation	Fully insulated primary pipework	

31.0 Thermal Store

None

34.0 Small-scale Hydro

None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	M2.3 MT	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M2.3 MT
Plot Address	M2.3 MT, M2.3 MT	SAP Version	10.2

SAP Rating	87 B	DER	3.16	TER	10.43
Environmental	97 A	% DER < TER			69.70
CO ₂ Emissions (t/year)	0.23	DFEE	28.91	TFEE	31.79
Compliance Check	See BREL	% DFEE < TFEE			9.06
% DPER < TPER	38.86	DPER	33.24	TPER	54.37

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Mid-Terrace	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	259.75	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	9.96 m	40.81 m²	2.46 m
		9.96 m	40.81 m²	2.69 m

8.0 Living Area	30.72	m²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	65.91	52.13	0.00	None	13.78	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	109.66	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m²K)	Area (m²)
	Stud Partitions	Plasterboard on timber frame	9.00	164.52

10.0 External Roofs	Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	40.81	40.81	None	0.00	Calculate Wall Area	0.00

10.2 Internal Ceilings	Description	Storey	Construction	Kappa	Area (m²)
	Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	40.81

11.0 Heat Loss Floors	Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
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Summary for Input Data

Suspended Ground Floor Ground Floor - Solid Lowest occupied Suspended concrete floor, carpeted 0.12 None 0.00 75.00 40.81

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	40.81

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.29			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
W01	Window	Brick	North	3.33	
D02	Patio Door	Brick	South	4.61	
W02	Window	Brick	South	3.70	

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

No

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E10 Eaves (insulation at ceiling level)	Independently assessed	9.91	0.07	0.07 Knauf	No
E12 Gable (insulation at ceiling level)	Independently assessed	8.24	0.05	0.05 Knauf	No
E1 Steel lintel with perforated steel base plate	Independently assessed	9.31	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	6.48	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	30.02	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	9.96	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	9.96	0.00	0.00 Knauf	No
P1 Party wall - Ground floor	Independently assessed	16.48	0.04	0.04 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Independently assessed	16.48	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	16.48	0.04	0.04 Knauf	No
E18 Party wall between dwellings	Independently assessed	20.60	0.04	0.04 RCD	No

Y-value 0.03 W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	No
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	4

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	3
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0

Summary for Input Data

Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System	<input type="text" value="No"/>
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22.0 Pressure Testing	<input type="text" value="Yes"/>	
Designed AP ₅₀	<input type="text" value="4.50"/>	m ³ /(h.m ²) @ 50 Pa
Test Method	<input type="text" value="Blower Door"/>	

22.0 Lighting	<input type="text" value="No"/>				
No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	6
	Downlight	75.00	10.00	750.00	11

24.0 Main Heating 1	<input type="text" value="Database"/>	
Percentage of Heat	<input type="text" value="100.00"/>	%
Database Ref. No.	<input type="text" value="104432"/>	
Fuel Type	<input type="text" value="Electricity"/>	
In Winter	<input type="text" value="280.10"/>	
In Summer	<input type="text" value="285.80"/>	
Model Name	<input type="text" value="aroTHERM plus 7kW + AI"/>	
Manufacturer	<input type="text" value="Vaillant Group UK Ltd"/>	
System Type	<input type="text" value="Heat Pump"/>	
Controls SAP Code	<input type="text" value="2207"/>	
Controls description	<input type="text" value="Time and temperature zone control by arrangement"/>	
Is MHS Pumped	<input type="text" value="Pump in heated space"/>	
Heating Pump Age	<input type="text" value="2013 or later"/>	
Heat Emitter	<input type="text" value="Radiators and Underfloor"/>	
Underfloor Heating	<input type="text" value="Yes - Pipes in thin screed"/>	
Flow Temperature	<input type="text" value="Enter value"/>	
Flow Temperature Value	<input type="text" value="45.00"/>	

25.0 Main Heating 2	<input type="text" value="None"/>
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26.0 Heat Networks	<input type="text" value="None"/>
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27.0 Secondary Heating	<input type="text" value="None"/>
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28.0 Water Heating	<input type="text" value="Main Heating 1"/>
Water Heating	<input type="text" value="Main Heating 1"/>
SAP Code	<input type="text" value="901"/>
Flue Gas Heat Recovery System	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 1	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>
Solar Panel	<input type="text" value="No"/>
Water use <= 125 litres/person/day	<input type="text" value="Yes"/>
Cold Water Source	<input type="text" value="From mains"/>
Bath Count	<input type="text" value="1"/>
Immersion Only Heating Hot Water	<input type="text" value="No"/>

28.1 Showers					
Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To

Summary for Input Data



Bathroom	Combi boiler or unvented hot water system	9.00	No
En-suite	Combi boiler or unvented hot water system	8.00	No

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

Hot Water Cylinder	<input type="text" value="Hot Water Cylinder"/>	
Cylinder Stat	<input type="text" value="Yes"/>	
Cylinder In Heated Space	<input type="text" value="Yes"/>	
Independent Time Control	<input type="text" value="Yes"/>	
Insulation Type	<input type="text" value="Measured Loss"/>	
Cylinder Volume	<input type="text" value="200.00"/>	L
Loss	<input type="text" value="1.00"/>	kWh/day
Pipes insulation	<input type="text" value="Fully insulated primary pipework"/>	

31.0 Thermal Store

34.0 Small-scale Hydro

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	M3.11 ET	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M3.11 ET
Plot Address	M3.11 ET, M3.11 ET	SAP Version	10.2

SAP Rating	86 B	DER	3.18	TER	10.03
Environmental	97 A	% DER < TER			68.30
CO ₂ Emissions (t/year)	0.28	DFEE	30.92	TFEE	33.44
Compliance Check	See BREL	% DFEE < TFEE			7.55
% DPER < TPER	36.35	DPER	33.33	TPER	52.36

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	184.76	kJ/m²

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	Yes

7.0 Measurements				
	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	19.57 m	48.50 m ²	2.46 m
		19.57 m	48.50 m ²	2.69 m

8.0 Living Area	24.24	m ²
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Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	84.14	73.85	0.00	None	10.29	Enter Gross Area
Weatherboard	Cavity Wall	Cavity wall : dense plaster, AAC block, filled cavity, any outside structure	0.19	70.00	17.06	14.81	0.00	None	2.25	Enter Gross Area

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	48.08	0.00	None

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Stud Partitions	Plasterboard on timber frame	9.00	197.93

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	48.50	48.50	None	0.00	Calculate Wall Area	0.00

Description	Storey	Construction	Kappa	Area (m ²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	48.50

11.0 Heat Loss Floors

Summary for Input Data

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Suspended Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	48.50

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	48.50

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.29			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
W01	Window	Brick	North	1.07	
D02	Patio Door	Brick	South	4.61	
W02	Window	Brick	South	2.46	
W03	Window	Weatherboard	North	2.25	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E10 Eaves (insulation at ceiling level)	Independently assessed	10.36	0.07	0.07 Knauf	No
E12 Gable (insulation at ceiling level)	Independently assessed	9.36	0.05	0.05 Knauf	No
E1 Steel lintel with perforated steel base plate	Independently assessed	8.29	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	5.45	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	25.20	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	19.57	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	19.57	0.00	0.00 Knauf	No
P1 Party wall - Ground floor	Independently assessed	9.36	0.04	0.04 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Independently assessed	9.36	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	9.36	0.04	0.04 Knauf	No
E16 Corner (normal)	Independently assessed	10.30	0.04	0.04 Knauf	No
E18 Party wall between dwellings	Independently assessed	10.30	0.04	0.04 RCD	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

Approved Installation

Mechanical Ventilation data Type

Type

MV Reference Number

Duct Type

Wet Rooms

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan	1
	Kitchen	
0.15	In Room Fan Other	2
	Wet Room	
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other	0
	Wet Room	
0.11	Through Wall Fan	0
	Kitchen	
0.14	Through Wall Fan	0
	Other Wet Room	

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys

Number of open flues

Number of chimneys/flues attached to closed fire

Summary for Input Data

Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP ₅₀	<input type="text" value="4.50"/>	m ³ /(h.m ²) @ 50 Pa
Test Method	<input type="text" value="Blower Door"/>	

22.0 Lighting

No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	6
	Downlight	75.00	10.00	750.00	11

24.0 Main Heating 1

Percentage of Heat	<input type="text" value="100.00"/>	%
Database Ref. No.	<input type="text" value="104432"/>	
Fuel Type	<input type="text" value="Electricity"/>	
In Winter	<input type="text" value="280.71"/>	
In Summer	<input type="text" value="284.66"/>	
Model Name	<input type="text" value="aroTHERM plus 7kW + AI"/>	
Manufacturer	<input type="text" value="Vaillant Group UK Ltd"/>	
System Type	<input type="text" value="Heat Pump"/>	
Controls SAP Code	<input type="text" value="2207"/>	
Controls description	<input type="text" value="Time and temperature zone control by arrangement"/>	
Is MHS Pumped	<input type="text" value="Pump in heated space"/>	
Heating Pump Age	<input type="text" value="2013 or later"/>	
Heat Emitter	<input type="text" value="Radiators and Underfloor"/>	
Underfloor Heating	<input type="text" value="Yes - Pipes in thin screed"/>	
Flow Temperature	<input type="text" value="Enter value"/>	
Flow Temperature Value	<input type="text" value="45.00"/>	

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating	<input type="text" value="Main Heating 1"/>
SAP Code	<input type="text" value="901"/>
Flue Gas Heat Recovery System	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 1	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>
Solar Panel	<input type="text" value="No"/>
Water use <= 125 litres/person/day	<input type="text" value="Yes"/>
Cold Water Source	<input type="text" value="From mains"/>
Bath Count	<input type="text" value="1"/>
Immersion Only Heating Hot Water	<input type="text" value="No"/>

Summary for Input Data

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	9.00		No	
En-suite	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

	Hot Water Cylinder	
Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	200.00	L
Loss	1.00	kWh/day
Pipes insulation	Fully insulated primary pipework	

31.0 Thermal Store

	None
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34.0 Small-scale Hydro

	None										
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	M3.12 ET	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M3.12 ET
Plot Address	M3.12 ET	SAP Version	10.2

SAP Rating	85 B	DER	3.37	TER	11.22
Environmental	97 A	% DER < TER			69.96
CO ₂ Emissions (t/year)	0.31	DFEE	35.99	TFEE	36.71
Compliance Check	See BREL	% DFEE < TFEE			1.97
% DPER < TPER	40.06	DPER	35.19	TPER	58.70

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	3	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	182.00	kJ/m²

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	17.36 m	37.67 m ²	2.46 m
	2nd Storey:	17.36 m	37.67 m ²	2.69 m
		16.76 m	25.96 m ²	2.55 m

8.0 Living Area	16.50	m ²
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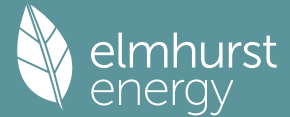
9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	103.64	88.68	0.00	None	14.96	Enter Gross Area
	Timber Stud Wall	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	22.17	22.17	0.50	Room In Roof	0.00	Enter Gross Area
	Dormer Cheek	Timber Frame	Timber framed wall (one layer of plasterboard)	0.26	9.00	4.74	3.11	0.00	None	1.63	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	58.15	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Internal Steel Partition	Plasterboard on timber frame	9.00	176.93

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	17.31	17.31	None	0.00	Enter Gross Area	0.00
	Dormer Roof	External Flat	Plasterboard, insulated flat roof	0.19	9.00	2.11	2.11	None	0.00	Enter Gross Area	0.00
	Exposed Ceiling	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	11.66	11.66	Room In Roof	0.50	Enter Gross Area	0.00

Summary for Input Data



Sloping Roof	External Slope Roof	Plasterboard, insulated slope	0.16	9.00	9.25	8.49	None	0.00	Enter Gross Area	0.76
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10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	37.67
Internal Ceiling 2	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	25.96

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	37.67

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	37.67
Internal Floor 2	+2	Plasterboard ceiling, carpeted chipboard floor	18.00	25.96

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.29			1.40
Roof Window	Manufacturer	Roof Window	Double Low-E Soft 0.05			0.53		0.70	1.30
Storage Door	Manufacturer	Solid Door				0.00			1.20
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Dormer Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.41			1.30

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
D02	Patio Door	Brick	South	3.80	
W01	Window	Brick	North	4.14	
W02	Window	Dormer Cheek	North	1.63	
R01	Roof Window	Sloping Roof	South	0.76	45
W03	Window	Brick	East	2.16	
W04	Window	Brick	South	2.71	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E12 Gable (insulation at ceiling level)	Independently assessed	6.94	0.05	0.05 Knauf	No
E2 Other lintels (including other steel lintels)	Independently assessed	11.58	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	8.75	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	32.40	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	17.36	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	34.12	0.00	0.00 Knauf	No
E16 Corner (normal)	Independently assessed	10.29	0.04	0.04 Knauf	No
E17 Corner (inverted – internal area greater than external area)	Table K1 - Default	6.38	0.00	0.00 Table K1-Timber/timber	No
R9 Roof to wall (flat ceiling)	Independently assessed	4.50	0.06	0.06 AES	No
R7 Flat ceiling (inverted)	Independently assessed	1.33	0.03	0.03 AES	No
R6 Flat ceiling	Independently assessed	8.79	0.02	0.02 AES	No
R8 Roof to wall (rafter)	Independently assessed	7.55	0.05	0.05 Superglass Insulation	No
R1 Head of roof window	Independently assessed	0.78	0.12	0.12 AES	No
R2 Sill of roof window	Independently assessed	0.78	0.11	0.11 AES	No
R3 Jamb of roof window	Independently assessed	1.96	0.04	0.04 AES	No
E13 Gable (insulation at rafter level)	Independently assessed	1.64	0.09	0.09 AES	No
P1 Party wall - Ground floor	Independently assessed	8.57	0.07	0.07 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	14.06	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	7.04	0.07	0.07 Knauf	No
P5 Party wall - Roof (insulation at rafter level)	Non Gov Approved Schemes	1.54	0.04	0.04 AES	No
E18 Party wall between dwellings	Independently assessed	10.30	0.04	0.04 RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	8.79	0.07	0.07 Knauf	No
E16 Corner (normal)	Table K1 - Default	3.89	0.18	0.18 Table K1-Brick/Timber	No
E16 Corner (normal)	Table K1 - Default	3.91	0.18	0.18 Table K1-Dormer	No
E18 Party wall between dwellings	Table K1 - Default	3.89	0.24	0.24 Table K1-Block/Timber	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

Approved Installation

Summary for Input Data

Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	4

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan	1
	Kitchen	
0.15	In Room Fan Other	2
	Wet Room	
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other	0
	Wet Room	
0.11	Through Wall Fan	0
	Kitchen	
0.14	Through Wall Fan	1
	Other Wet Room	

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System

No

22.0 Pressure Testing

Yes

Designed AP ₅₀	4.50	m ³ /(h.m ²) @ 50 Pa
Test Method	Blower Door	

22.0 Lighting

No Fixed Lighting	No
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Name	Efficacy	Power	Capacity	Count
Pendants	75.00	10.00	750.00	9
Downlighters	75.00	10.00	750.00	4
Batten Holder	75.00	10.00	750.00	1
Track light Fitting	75.00	10.00	750.00	3
Splash Proof Downlighter	75.00	10.00	750.00	1

24.0 Main Heating 1

.0 Main Heating 1		Database	
Description		ASHP	
Percentage of Heat		100.00	%
Database Ref. No.		104432	
Fuel Type		Electricity	
In Winter		277.27	
In Summer		281.96	
Model Name		aroTHERM plus 7kW + AI	
Manufacturer		Vaillant Group UK Ltd	
System Type		Heat Pump	
Controls SAP Code		2207	
Controls description		Time and temperature zone control by arrangement	
Is MHS Pumped		Pump in heated space	
Heating Pump Age		2013 or later	

Summary for Input Data

Heat Emitter	Radiators and Underfloor											
Underfloor Heating	Yes - Pipes in thin screed											
Flow Temperature	Enter value											
Flow Temperature Value	45.00											

25.0 Main Heating 2	None											
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26.0 Heat Networks	None											
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27.0 Secondary Heating	None											
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28.0 Water Heating												
Water Heating	Main Heating 1											
SAP Code	901											
Flue Gas Heat Recovery System	No											
Waste Water Heat Recovery Instantaneous System 1	No											
Waste Water Heat Recovery Instantaneous System 2	No											
Waste Water Heat Recovery Storage System	No											
Solar Panel	No											
Water use <= 125 litres/person/day	Yes											
Cold Water Source	From mains											
Bath Count	1											
Immersion Only Heating Hot Water	No											

28.1 Showers												
Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To							
Bathroom	Combi boiler or unvented hot water system	8.00		No								

28.3 Waste Water Heat Recovery System												
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29.0 Hot Water Cylinder	Hot Water Cylinder											
Cylinder Stat	Yes											
Cylinder In Heated Space	Yes											
Independent Time Control	Yes											
Insulation Type	Measured Loss											
Cylinder Volume	200.00										L	
Loss	1.20										kWh/day	
Pipes insulation	Fully insulated primary pipework											

31.0 Thermal Store	None											
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34.0 Small-scale Hydro	None											
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	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations												
Lower cost measures	None											
Further measures to achieve even higher standards	None											

Summary for Input Data

Plot Reference	M3.12 MT	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M3.12 MT
Plot Address	M3.12 MT	SAP Version	10.2

SAP Rating	86 B	DER	3.13	TER	10.32
Environmental	97 A	% DER < TER			69.67
CO ₂ Emissions (t/year)	0.29	DFEE	32.21	TFEE	32.31
Compliance Check	See BREL	% DFEE < TFEE			0.30
% DPER < TPER	39.12	DPER	32.84	TPER	53.94

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North
Property Tenure	1
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	House, Mid-Terrace
2.0 Number of Storeys	3
3.0 Date Built	2026
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation
Thermal Mass	200.00 kJ/m ² K

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	8.79 m	37.67 m ²	2.46 m
	2nd Storey:	11.18 m	25.96 m ²	2.69 m
				2.55 m

8.0 Living Area	16.50 m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	67.12	54.31	0.00	None	12.81	Enter Gross Area
	Timber Stud Wall	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	22.17	22.17	0.50	Room In Roof	0.00	Enter Gross Area
	Dormer Cheek	Timber Frame	Timber framed wall (one layer of plasterboard)	0.26	9.00	4.74	3.11	0.00	None	1.63	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	93.47	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Internal Steel Partition	Plasterboard on timber frame	9.00	176.93

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	17.31	17.31	None	0.00	Enter Gross Area	0.00
	Dormer Roof	External Flat	Plasterboard, insulated flat roof	0.19	9.00	2.11	2.11	None	0.00	Enter Gross Area	0.00
	Exposed Ceiling	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	11.66	11.66	Room In Roof	0.50	Enter Gross Area	0.00

Summary for Input Data



Sloping Roof	External Slope Roof	Plasterboard, insulated slope	0.16	9.00	9.25	8.49	None	0.00	Enter Gross Area	0.76
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10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	37.67
Internal Ceiling 2	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	25.96

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	37.67

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	37.67
Internal Floor 2	+2	Plasterboard ceiling, carpeted chipboard floor	18.00	25.96

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.29			1.40
Roof Window	Manufacturer	Roof Window	Double Low-E Soft 0.05			0.53		0.70	1.30
Storage Door	Manufacturer	Solid Door				0.00			1.20
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Dormer Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.41			1.30

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
D02	Patio Door	Brick	South	3.80	
W01	Window	Brick	North	4.14	
W02	Window	Dormer Cheek	North	1.63	
R01	Roof Window	Sloping Roof	South	0.76	45
W04	Window	Brick	South	2.71	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	9.52	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	6.69	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	26.10	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	8.79	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	19.97	0.00	0.00 Knauf	No
E17 Corner (inverted – internal area greater than external area)	Table K1 - Default	6.38	0.00	0.00 Table K1-Timber/timber	No
R9 Roof to wall (flat ceiling)	Independently assessed	4.50	0.06	0.06 AES	No
R7 Flat ceiling (inverted)	Independently assessed	1.33	0.03	0.03 AES	No
R6 Flat ceiling	Independently assessed	8.79	0.02	0.02 AES	No
R8 Roof to wall (rafter)	Independently assessed	7.55	0.05	0.05 Superglass Insulation	No
R1 Head of roof window	Independently assessed	0.78	0.12	0.12 AES	No
R2 Sill of roof window	Independently assessed	0.78	0.11	0.11 AES	No
R3 Jamb of roof window	Independently assessed	1.96	0.04	0.04 AES	No
P1 Party wall - Ground floor	Independently assessed	17.15	0.07	0.07 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	28.22	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	13.96	0.07	0.07 Knauf	No
P5 Party wall - Roof (insulation at rafter level)	Non Gov Approved Schemes	3.17	0.04	0.04 AES	No
E18 Party wall between dwellings	Independently assessed	23.27	0.04	0.04 RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	8.79	0.07	0.07 Knauf	No
E16 Corner (normal)	Table K1 - Default	3.91	0.18	0.18 Table K1-Dormer	No
E18 Party wall between dwellings	Table K1 - Default	7.78	0.24	0.24 Table K1-Block/Timber	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>

Summary for Input Data

MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	4

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	2
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	1

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System

No

22.0 Pressure Testing

Yes

Designed AP ₅₀	4.50	m ³ /(h.m ²) @ 50 Pa
Test Method	Blower Door	

22.0 Lighting

No Fixed Lighting	No				
Name	Efficacy	Power	Capacity	Count	
Pendants	75.00	10.00	750.00	9	
Downlighters	75.00	10.00	750.00	4	
Batten Holder	75.00	10.00	750.00	1	
Track light Fitting	75.00	10.00	750.00	3	
Splash Proof Downlighter	75.00	10.00	750.00	1	

24.0 Main Heating 1

0 Main Heating 1	Database	
Description	ASHP	
Percentage of Heat	100.00	%
Database Ref. No.	104432	
Fuel Type	Electricity	
In Winter	279.92	
In Summer	283.59	
Model Name	aroTHERM plus 7kW + AI	
Manufacturer	Vaillant Group UK Ltd	
System Type	Heat Pump	
Controls SAP Code	2207	
Controls description	Time and temperature zone control by arrangement	
Is MHS Pumped	Pump in heated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators and Underfloor	
Underfloor Heating	Yes - Pipes in thin screed	

Summary for Input Data

Flow Temperature

Flow Temperature Value

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Bath Count

Immersion Only Heating Hot Water

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

Cylinder Stat

Cylinder In Heated Space

Independent Time Control

Insulation Type

Cylinder Volume L

Loss kWh/day

Pipes insulation

31.0 Thermal Store

34.0 Small-scale Hydro

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Plot Reference	M3.13 ET	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M3.11 ET
Plot Address	M3.11 ET, M3.11 ET	SAP Version	10.2

SAP Rating	85 B	DER	3.39	TER	10.92
Environmental	97 A	% DER < TER			68.96
CO ₂ Emissions (t/year)	0.3	DFEE	35.77	TFEE	38.57
Compliance Check	See BREL	% DFEE < TFEE			7.26
% DPER < TPER	37.69	DPER	35.49	TPER	56.95

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	186.47	kJ/m²

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	Yes

7.0 Measurements	Ground floor: 1st Storey:	Heat Loss Perimeter 19.76 m 19.76 m	Internal Floor Area 48.66 m ² 48.66 m ²	Average Storey Height 2.46 m 2.69 m
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8.0 Living Area	17.07	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	48.60	37.42	0.00	None	11.18	Enter Gross Area
	Weatherboard	Cavity Wall	Cavity wall : dense plaster, AAC block, filled cavity, any outside structure	0.19	70.00	53.15	44.70	0.00	None	8.45	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	50.36	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Stud Partitions	Plasterboard on timber frame	9.00	203.63

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	48.66	48.66	None	0.00	Calculate Wall Area	0.00

10.2 Internal Ceilings	Description	Storey	Construction	Kappa	Area (m ²)
	Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	48.66

11.0 Heat Loss Floors

Summary for Input Data



Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Suspended Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	48.66

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	48.66

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.1			0.29			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
W01	Window	Brick	North	3.33	
D02	Patio Door	Brick	West	3.80	
W02	Window	Weatherboard	West	1.23	
W03	Window	Weatherboard	North	5.32	
W04	Window	Weatherboard	East	1.90	
W05	Window	Brick	East	1.90	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E10 Eaves (insulation at ceiling level)	Independently assessed	9.36	0.07	0.07 Knauf	No
E12 Gable (insulation at ceiling level)	Independently assessed	10.40	0.05	0.05 Knauf	No
E1 Steel lintel with perforated steel base plate	Independently assessed	13.51	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	10.68	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	33.90	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	19.76	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	19.76	0.00	0.00 Knauf	No
P1 Party wall - Ground floor	Independently assessed	9.36	0.04	0.04 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Independently assessed	9.36	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	9.36	0.04	0.04 Knauf	No
E16 Corner (normal)	Independently assessed	10.30	0.04	0.04 Knauf	No
E18 Party wall between dwellings	Independently assessed	10.30	0.04	0.04 RCD	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="No"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="3"/>

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan	1
	Kitchen	
0.15	In Room Fan Other	2
	Wet Room	
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other	0
	Wet Room	
0.11	Through Wall Fan	0
	Kitchen	
0.14	Through Wall Fan	0
	Other Wet Room	

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>

Summary for Input Data

Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m²/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting	<input type="text" value="No"/>				
	Name	Efficacy	Power	Capacity	Count
	Pendant	75.00	10.00	750.00	6
	Downlight	75.00	10.00	750.00	11

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

In Winter

In Summer

Model Name

Manufacturer

System Type

Controls SAP Code

Controls description

Is MHS Pumped

Heating Pump Age

Heat Emitter

Underfloor Heating

Flow Temperature

Flow Temperature Value

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Bath Count

Summary for Input Data

Immersion Only Heating Hot Water

No

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	9.00		No	
En-suite	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

Hot Water Cylinder	
Cylinder Stat	Yes
Cylinder In Heated Space	Yes
Independent Time Control	Yes
Insulation Type	Measured Loss
Cylinder Volume	200.00
Loss	1.00
Pipes insulation	Fully insulated primary pipework

L

kWh/day

31.0 Thermal Store

None

34.0 Small-scale Hydro

None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	M4.12 ET	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M4.12 ET
Plot Address	M4.12 ET	SAP Version	10.2

SAP Rating	85 B	DER	3.22	TER	10.22
Environmental	97 A	% DER < TER			68.49
CO ₂ Emissions (t/year)	0.36	DFEE	35.35	TFEE	36.42
Compliance Check	See BREL	% DFEE < TFEE			2.93
% DPER < TPER	37.03	DPER	33.66	TPER	53.45

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	3	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	165.13	kJ/m²K
<hr/>		
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	19.83 m	48.54 m ²	2.46 m
	2nd Storey:	19.83 m	48.54 m ²	2.69 m
		18.21 m	26.41 m ²	2.57 m

8.0 Living Area	36.15	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	113.82	99.17	0.00	None	14.65	Enter Gross Area
	Timber Stud Wall	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	31.90	31.90	0.50	Room In Roof	0.00	Enter Gross Area
	Dormer Cheek	Timber Frame	Timber framed wall (one layer of plasterboard)	0.26	9.00	4.69	3.06	0.00	None	1.63	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	56.38	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Internal Steel Partition	Plasterboard on timber frame	9.00	201.60

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	21.58	21.58	None	0.00	Enter Gross Area	0.00
	Dormer Roof	External Flat	Plasterboard, insulated flat roof	0.19	9.00	2.13	2.13	None	0.00	Enter Gross Area	0.00
	Exposed Ceiling	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	22.12	22.12	Room In Roof	0.50	Enter Gross Area	0.00

Summary for Input Data

Sloping Roof	External Slope Roof	Plasterboard, insulated slope	0.16	9.00	3.83	3.83	None	0.00	Enter Gross Area	0.00
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10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	48.54
Internal Ceiling 2	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	26.41

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	48.54

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	48.54
Internal Floor 2	+2	Plasterboard ceiling, carpeted chipboard floor	18.00	26.41

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.29			1.40
Roof Window	Manufacturer	Roof Window	Double Low-E Soft 0.05			0.53		0.70	1.30
Storage Door	Manufacturer	Solid Door				0.00			1.20
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Dormer Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.41			1.30

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
D02	Patio Door	Brick	South	3.80	
W01	Window	Brick	North	4.14	
W02	Window	Dormer Cheek	North	1.63	
W03	Window	Brick	East	0.72	
W04	Window	Brick	South	3.84	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E12 Gable (insulation at ceiling level)	Independently assessed	8.15	0.05	0.05 Knauf	No
E2 Other lintels (including other steel lintels)	Independently assessed	11.02	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	8.18	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	28.50	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	19.83	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	38.04	0.00	0.00 Knauf	No
E16 Corner (normal)	Independently assessed	10.29	0.04	0.04 Knauf	No
E17 Corner (inverted – internal area greater than external area)	Table K1 - Default	6.23	0.00	0.00 Table K1-Timber/timber	No
R9 Roof to wall (flat ceiling)	Independently assessed	4.53	0.06	0.06 AES	No
R7 Flat ceiling (inverted)	Independently assessed	1.33	0.03	0.03 AES	No
R6 Flat ceiling	Independently assessed	5.52	0.02	0.02 AES	No
R8 Roof to wall (rafter)	Independently assessed	9.94	0.05	0.05 Superglass Insulation	No
E13 Gable (insulation at rafter level)	Independently assessed	0.63	0.09	0.09 AES	No
P1 Party wall - Ground floor	Independently assessed	8.80	0.07	0.07 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	13.11	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	8.41	0.07	0.07 Knauf	No
P5 Party wall - Roof (insulation at rafter level)	Non Gov Approved Schemes	0.39	0.04	0.04 AES	No
E18 Party wall between dwellings	Independently assessed	11.18	0.04	0.04 RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	11.03	0.07	0.07 Knauf	No
E16 Corner (normal)	Table K1 - Default	4.80	0.18	0.18 Table K1-Brick/Timber	No
E16 Corner (normal)	Table K1 - Default	3.86	0.18	0.18 Table K1-Dormer	No
E18 Party wall between dwellings	Table K1 - Default	4.80	0.24	0.24 Table K1-Block/Timber	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>

Summary for Input Data

MV Reference Number	500755
Duct Type	Rigid
Wet Rooms	4

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	2
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	1

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	0
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System

No

22.0 Pressure Testing

Yes

Designed AP ₅₀	4.50	m ³ /(h.m ²) @ 50 Pa
Test Method	Blower Door	

22.0 Lighting

No Fixed Lighting

No

Name	Efficacy	Power	Capacity	Count
Pendants	75.00	10.00	750.00	9
Downlighters	75.00	10.00	750.00	4
Batten Holder	75.00	10.00	750.00	1
Track light Fitting	75.00	10.00	750.00	3
Splash Proof Downlighter	75.00	10.00	750.00	1

24.0 Main Heating 1

0 Main Heating 1	Database	
Description	ASHP	
Percentage of Heat	100.00	%
Database Ref. No.	104432	
Fuel Type	Electricity	
In Winter	272.00	
In Summer	279.43	
Model Name	aroTHERM plus 7kW + AI	
Manufacturer	Vaillant Group UK Ltd	
System Type	Heat Pump	
Controls SAP Code	2207	
Controls description	Time and temperature zone control by arrangement	
Is MHS Pumped	Pump in heated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators and Underfloor	
Underfloor Heating	Yes - Pipes in thin screed	

Summary for Input Data

Flow Temperature

Flow Temperature Value

25.0 Main Heating 2

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Bath Count

Immersion Only Heating Hot Water

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

Cylinder Stat

Cylinder In Heated Space

Independent Time Control

Insulation Type

Cylinder Volume L

Loss kWh/day

Pipes insulation

31.0 Thermal Store

34.0 Small-scale Hydro

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	M4.12 MT	Issued on Date	29/07/2026
Assessment Reference	001	Plot Type Ref	M4.12 MT
Plot Address	M4.12 MT	SAP Version	10.2

SAP Rating	86 B	DER	2.93	TER	9.16
Environmental	97 A	% DER < TER			68.01
CO ₂ Emissions (t/year)	0.33	DFEE	30.91	TFEE	31.47
Compliance Check	See BREL	% DFEE < TFEE			1.78
% DPER < TPER	35.92	DPER	30.60	TPER	47.76

Assessor Details	Mr. Matthew Fitzpatrick	Assessor ID	7601-0001
Client	SB-03, Stonebond Properties (Guildford)		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	North	
Property Tenture	1	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Mid-Terrace	
2.0 Number of Storeys	3	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	188.49	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	11.04 m	48.54 m ²	2.46 m
	2nd Storey:	11.04 m	48.54 m ²	2.69 m
		13.66 m	26.41 m ²	2.57 m

8.0 Living Area	36.15	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Brick	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.18	60.00	56.82	42.89	0.00	None	13.93	Enter Gross Area
	Timber Stud Wall	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	31.90	31.90	0.50	Room In Roof	0.00	Enter Gross Area
	Dormer Cheek	Timber Frame	Timber framed wall (one layer of plasterboard)	0.26	9.00	4.69	3.06	0.00	None	1.63	Enter Gross Area

9.1 Party Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
	Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	113.30	0.00	None

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Internal Steel Partition	Plasterboard on timber frame	9.00	201.60

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Cold Roof	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	21.58	21.58	None	0.00	Enter Gross Area	0.00
	Dormer Roof	External Flat	Plasterboard, insulated flat roof	0.19	9.00	2.13	2.13	None	0.00	Enter Gross Area	0.00
	Exposed Ceiling	External Plane	Plasterboard, insulated at ceiling level	0.08	9.00	22.12	22.12	Room In Roof	0.50	Enter Gross Area	0.00

Summary for Input Data



Sloping Roof	External Slope Roof	Plasterboard, insulated slope	0.16	9.00	3.83	3.83	None	0.00	Enter Gross Area	0.00
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10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	9.00	48.54
Internal Ceiling 2	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	26.41

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	48.54

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	48.54
Internal Floor 2	+2	Plasterboard ceiling, carpeted chipboard floor	18.00	26.41

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.29			1.40
Roof Window	Manufacturer	Roof Window	Double Low-E Soft 0.05			0.53		0.70	1.30
Storage Door	Manufacturer	Solid Door				0.00			1.20
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.1			0.63		0.70	1.20
Dormer Window	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.41			1.30

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
D01	Front Door	Brick	North	2.15	
D02	Patio Door	Brick	South	3.80	
W01	Window	Brick	North	4.14	
W02	Window	Dormer Cheek	North	1.63	
W03	Window	Brick	South	3.84	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	10.33	0.07	0.07 HiTherm	No
E3 Sill	Independently assessed	7.50	0.02	0.02 Knauf	No
E4 Jamb	Independently assessed	26.40	0.01	0.01 Knauf	No
E5 Ground floor (normal)	Independently assessed	11.03	0.06	0.06 Bison Jetfloor	No
E6 Intermediate floor within a dwelling	Independently assessed	13.66	0.00	0.00 Knauf	No
E17 Corner (inverted – internal area greater than external area)	Table K1 - Default	6.23	0.00	0.00 Table K1-Timber/timber	No
R9 Roof to wall (flat ceiling)	Independently assessed	4.53	0.06	0.06 AES	No
R7 Flat ceiling (inverted)	Independently assessed	1.33	0.03	0.03 AES	No
R6 Flat ceiling	Independently assessed	5.52	0.02	0.02 AES	No
R8 Roof to wall (rafter)	Independently assessed	9.94	0.05	0.05 Superglass Insulation	No
P1 Party wall - Ground floor	Independently assessed	17.60	0.07	0.07 Bison Tech	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	21.91	0.00	0.00	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	16.56	0.07	0.07 Knauf	No
P5 Party wall - Roof (insulation at rafter level)	Non Gov Approved Schemes	1.03	0.04	0.04 AES	No
E18 Party wall between dwellings	Independently assessed	21.48	0.04	0.04 RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	11.03	0.07	0.07 Knauf	No
E16 Corner (normal)	Table K1 - Default	3.86	0.18	0.18 Table K1-Dormer	No
E18 Party wall between dwellings	Table K1 - Default	9.60	0.24	0.24 Table K1-Block/Timber	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="Yes"/>
Approved Installation	<input type="text" value="Yes"/>
Mechanical Ventilation data Type	<input type="text" value="Database"/>
Type	<input type="text" value="Mechanical extract ventilation - decentralised"/>
MV Reference Number	<input type="text" value="500755"/>
Duct Type	<input type="text" value="Rigid"/>
Wet Rooms	<input type="text" value="4"/>

Summary for Input Data

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.15	In Room Fan Other Wet Room	2
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.14	Through Wall Fan Other Wet Room	1

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	<input type="text" value="0"/>
Number of open flues	<input type="text" value="0"/>
Number of chimneys/flues attached to closed fire	<input type="text" value="0"/>
Number of flues attached to solid fuel boiler	<input type="text" value="0"/>
Number of flues attached to other heater	<input type="text" value="0"/>
Number of blocked chimneys	<input type="text" value="0"/>
Number of intermittent extract fans	<input type="text" value="0"/>
Number of passive vents	<input type="text" value="0"/>
Number of flueless gas fires	<input type="text" value="0"/>

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀

m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Pendants	75.00	10.00	750.00	9
Downlighters	75.00	10.00	750.00	4
Batten Holder	75.00	10.00	750.00	1
Track light Fitting	75.00	10.00	750.00	3
Splash Proof Downlighter	75.00	10.00	750.00	1

24.0 Main Heating 1

Database	<input type="text" value="Database"/>
Description	<input type="text" value="ASHP"/>
Percentage of Heat	<input type="text" value="100.00"/> %
Database Ref. No.	<input type="text" value="104432"/>
Fuel Type	<input type="text" value="Electricity"/>
In Winter	<input type="text" value="275.91"/>
In Summer	<input type="text" value="281.31"/>
Model Name	<input type="text" value="aroTHERM plus 7kW + AI"/>
Manufacturer	<input type="text" value="Vaillant Group UK Ltd"/>
System Type	<input type="text" value="Heat Pump"/>
Controls SAP Code	<input type="text" value="2207"/>
Controls description	<input type="text" value="Time and temperature zone control by arrangement"/>
Is MHS Pumped	<input type="text" value="Pump in heated space"/>
Heating Pump Age	<input type="text" value="2013 or later"/>
Heat Emitter	<input type="text" value="Radiators and Underfloor"/>
Underfloor Heating	<input type="text" value="Yes - Pipes in thin screed"/>
Flow Temperature	<input type="text" value="Enter value"/>
Flow Temperature Value	<input type="text" value="45.00"/>

25.0 Main Heating 2

Summary for Input Data

26.0 Heat Networks

27.0 Secondary Heating

28.0 Water Heating

Water Heating

SAP Code

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

Cold Water Source

Bath Count

Immersion Only Heating Hot Water

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bathroom	Combi boiler or unvented hot water system	8.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

Cylinder Stat

Cylinder In Heated Space

Independent Time Control

Insulation Type

Cylinder Volume L

Loss kWh/day

Pipes insulation

31.0 Thermal Store

34.0 Small-scale Hydro

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None