



ENERGY STATEMENT

Site

1A, Brighton Road,
South Croydon,
CR2 6EA

Proposal

Construction of a Four Storey building with 25 Flats with commercial space
on ground floor level


13th April 2023

Ref. AJ-727



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Report Completed By	Asaps.co.uk 
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1) Executive Summary

- a) This Energy Strategy has been produced by Asaps.co.uk on behalf of the Applicant.
- b) It will set out the design measures that have been implemented by the Applicant to achieve the required CO₂ reductions at the development site: 1A, Brighton Road, South Croydon, CR2 6EA ('the Development').
- c) The Strategy is written in support of the full planning application being submitted to The London borough of Croydon.
- d) The Strategy will demonstrate measures taken by the Applicant to comply with:
 - i) National Planning Policy Framework.
 - ii) The London Plan (Greater London Authority, 2022) planning policies on climate change mitigation measures to:
 - iii) Development proposals should make the fullest contribution to minimizing carbon dioxide emissions in accordance with the following energy hierarchy:
 - (1) Be lean: use less energy
 - (2) Be clean: supply energy efficiently
 - (3) Be green: use renewable energy
- e) Energy Planning, Greater London Authority guidance on preparing energy assessments (March 2022).
- f) Local Planning Condition if any.
- g) The Energy Strategy describes demand-reduction measures, energy-efficiency measures renewable energy in relation to how the Applicant meets the objectives of the energy hierarchy: Be Lean, Be Clean, Be Green. Refer to Figure 1.

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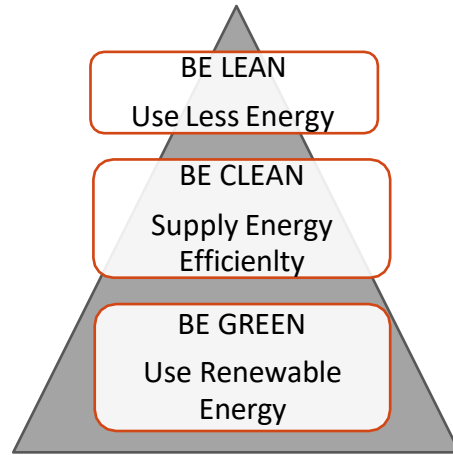


Figure 1 The Energy Hierarchy

h) The Strategy concludes that the following combination of measures, summarized here in Table 1, are included in the design of the Development:

Table 1 Measures incorporated to deliver the energy standard.

<p>BE LEAN</p>	<ul style="list-style-type: none"> • Energy-efficient building fabric and insulation to all heat loss floors, walls and roofs. • High-efficiency double-glazed windows throughout. • Quality of build will be confirmed by achieving good air-tightness results throughout. • Efficient-building services including high-efficiency heating systems. • Low-energy lighting throughout the building
<p>BE CLEAN</p>	<ul style="list-style-type: none"> • No reduction through Be Clean.
<p>BE GREEN</p>	<ul style="list-style-type: none"> • PV of 0.5 KW for each for each Flat, South facing Panels are proposed, with little or no shading.

The impact of these design measures and low-carbon and renewable energy solutions, in terms of how the Applicant delivers their commitment to the energy hierarchy, is illustrated in Figure 2. The CO2 emissions at each stage of the energy hierarchy and percentage savings are set out in Table 2.

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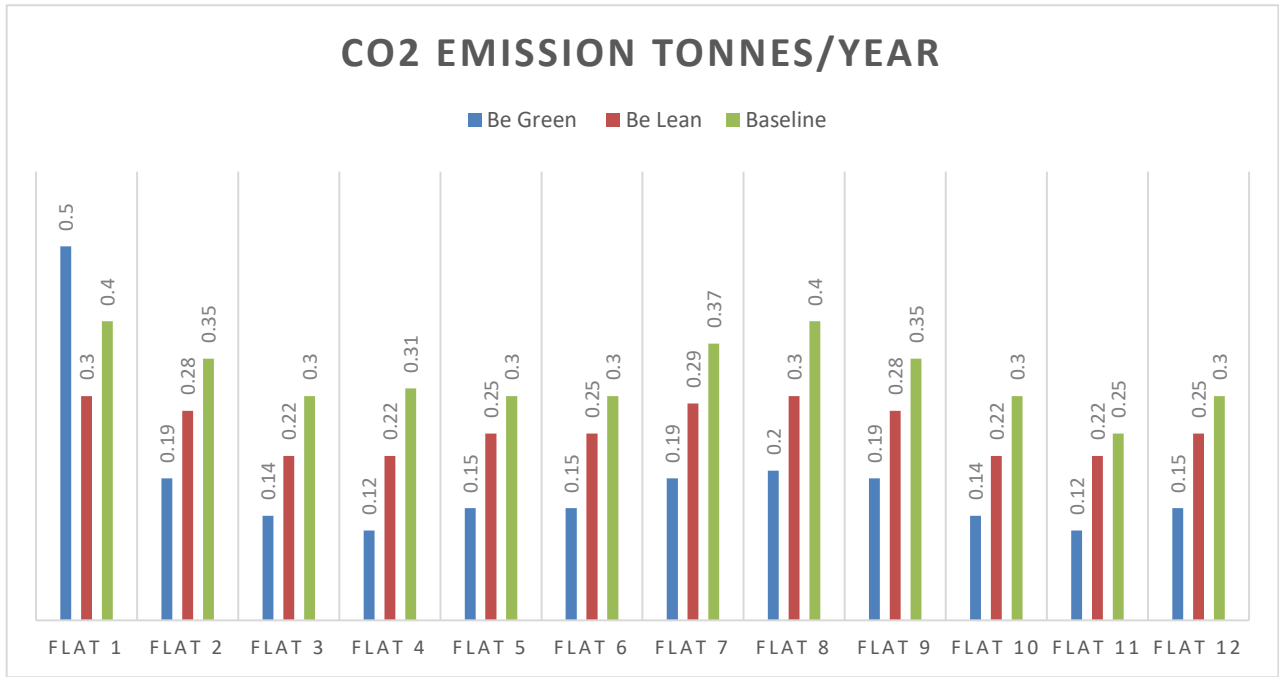


Figure 2 How the Development delivers the energy hierarchy

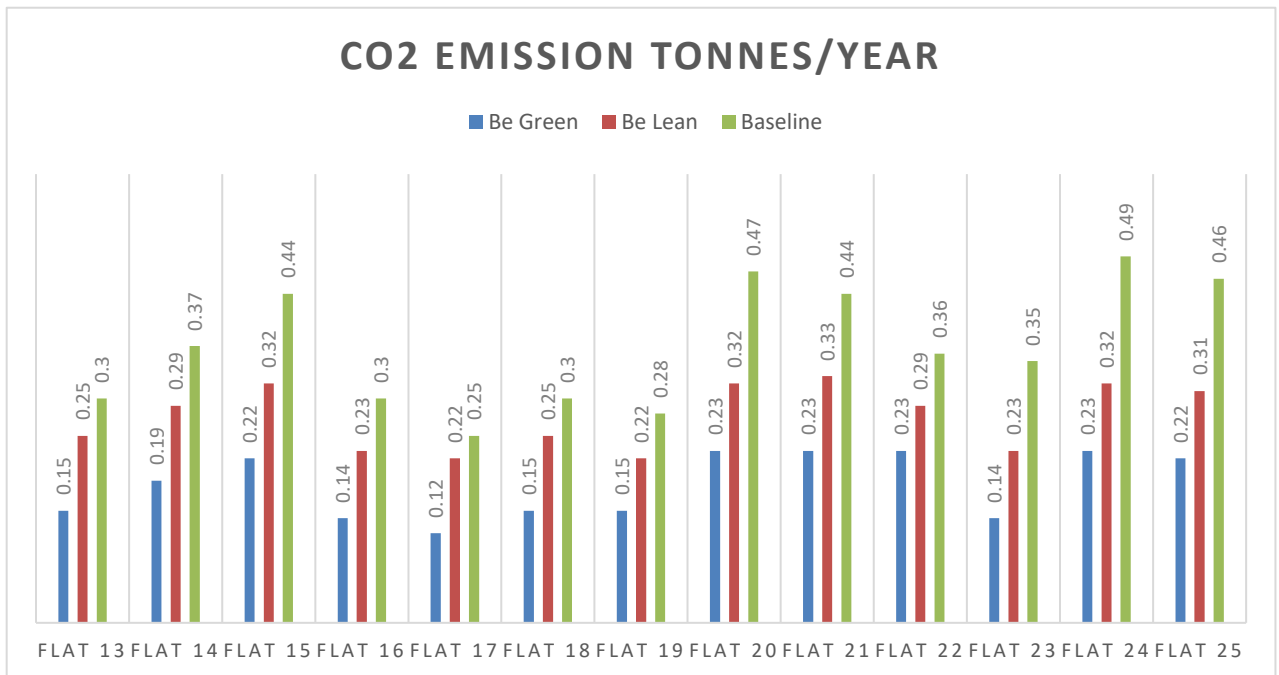


Figure 3 How the Development delivers the energy hierarchy

Table 2 CO2 emissions and savings after each stage of the energy hierarchy

Dwelling Emissions	Existing Baseline CO2 Emissions (tonnes of CO2/ Yr.)	Be Lean CO2 Emissions (tonnes of CO2/ Yr.)	Be Green CO2 Emissions (Tonnes of CO2/ Yr.)	% Reduction
Flat 1	0.4	0.3	0.2	50.00%
Flat 2	0.35	0.28	0.19	45.71%
Flat 3	0.3	0.22	0.14	53.00%
Flat 4	0.31	0.22	0.12	61.29%
Flat 5	0.3	0.25	0.15	50.00%
Flat 6	0.3	0.25	0.15	50.00%
Flat 7	0.37	0.29	0.19	48.64%
Flat 8	0.4	0.3	0.2	50.00%
Flat 9	0.35	0.28	0.19	45.71%
Flat 10	0.3	0.22	0.14	53.33%
Flat 11	0.25	0.22	0.12	52.00%
Flat 12	0.3	0.25	0.15	50.00%
Flat 13	0.3	0.25	0.15	50.00%
Flat 14	0.37	0.29	0.19	48.64%
Flat 15	0.44	0.32	0.22	50%
Flat 16	0.3	0.23	0.14	53.33%
Flat 17	0.25	0.22	0.12	52.00%
Flat 18	0.3	0.25	0.15	50.00%
Flat 19	0.28	0.22	0.15	46.43%

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Flat 20	0.47	0.32	0.23	51.06%
Flat 21	0.44	0.33	0.23	47.72%
Flat 22	0.36	0.29	0.23	36.11%
Flat 23	0.35	0.23	0.14	60.00%
Flat 24	0.49	0.32	0.23	53.06%
Flat 25	0.46	0.31	0.22	52.17%
Total	8.74	6.66	4.34	50.34%

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2) Introduction

- a) Asaps, UK has been instructed by the client to prepare an Energy renewable statement or a Carbon Reduction Statement to support the planning application for the development at 1A, Brighton Road, South Croydon, CR2 6EA.
- b) This report must be read in conjunction with the application forms, certificates, detailed plans, and other supporting documents submitted to the Local Authority as part of the application.
- c) The application is for Construction of a four storey building with 22 Flats with commercial space on ground floor level.
- d) The objectives of this Carbon Reduction Statement are to outline the possible measures that can be incorporated into the development during detailed design, to make an appraisal of the carbon dioxide emissions of the proposed development, assess the potential fabric and building services efficiencies to reduce the carbon dioxide emission and to suggest the most appropriate means by which the development can contribute towards the aspiration of policy relating to reducing carbon dioxide emissions and energy consumption.
- e) The Assessment shall be carried out following the principles set out in the "Energy Hierarchy." These principles can be summarised as follows:
 - Be Lean - use less energy
 - Be Clean - supply energy efficiently
 - Be Green - use renewable energy
- f) To demonstrate the carbon dioxide emissions, it is proposed to use the Standard Assessment Procedure (SAP) for the calculations to obtain initial baseline carbon dioxide emissions figures for the dwellings.
- g) Further calculations will be used to demonstrate the potential carbon dioxide emission savings from the initial calculations by enhancements to the building fabric, plant and controls - BE LEAN. The carbon dioxide emission saving by the use of renewable energy shall be assessed through the outputs from the SAP calculations - BE GREEN. The suitability of supplying energy, both heat, and power, through the use of a combined heat and power system shall be assessed - BE CLEAN.

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3) Policy Context

The Strategy will demonstrate measures taken by the Applicant to comply with:

- a) London borough of Croydon, which require all developments to ensure compliance with the applicable energy and sustainability standards stipulated in the National Planning Policy Framework, London Plan, Local Planning Authority and associated documents issued by the Mayor of London.
- b) The Great London Authority, through the London Plan, March 2021, will require developments to contribute towards London's ambitious target to become zero-carbon by 2050 by increasing energy efficiency, including through the use of smart technologies, and utilizing low carbon energy sources.
- c) The London Plan, March 2021, Policy SI 2 - Minimising greenhouse gas emissions, expects major development proposals to be net zero-carbon. This means reducing greenhouse gas emissions in operation and minimizing both annual and peak energy demand in accordance with the energy hierarchy:
 - Be Lean - use less energy and manage demand during operation
 - Be Clean - exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly
 - Be Green - maximise opportunities for renewable energy by producing, storing and using renewable energy on-site.
- d) The Policy SI 2 sets a minimum on-site reduction of at least 35 per cent beyond Building Regulations for all developments and major developments should aim for zero carbon. Residential development should achieve 10 per cent, and non-residential development should achieve 15 per cent through energy efficiency measures.
- e) Local Planning Condition if any as per Planning application.
- f) The way in which the Applicant meets the energy standard and CO₂ reduction target at 1A, Brighton Road, South Croydon, CR2 6EA will be explained in this Strategy as follows:
 - i) The Baseline: The Development's baseline energy demand, the Target Emission Rate (TER): This will be calculated to establish the minimum on-site standard for compliance with AD L 2022.
 - ii) Be Lean: The Development's Dwelling Emission Rate (DER) will be calculated to explain how the Applicant's design specification has led to a reduced energy demand and an improved fabric-energy efficiency. The better the design of the building fabric in terms of, for example, insulation, air tightness and orientation to maximise solar gain, the

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- less energy required to heat the dwelling and so the better the fabric energy efficiency.
- iii) Be Clean: The potential to provide energy to the development in an efficient way, by either connecting to a District Heat Network (DHN) or installing on-site Combined Heat and Power (CHP), will be assessed and viability concluded.
 - iv) Be Green: Low-carbon and renewable energy technologies will be assessed for their suitability and viability in relation to the Development. Solutions will be put forward for the development and the resulting CO2 emission savings presented.
- g) The Energy and Carbon Reduction Statement follows the principles set out in the Energy Hierarchy and is broken down to provide the following details:
- i) Estimated site-wide regulated carbon dioxide emissions and reductions (broken down for the domestic and non-domestic elements), expressed in tonnes per annum, after each stage of the energy hierarchy
 - ii) A clear commitment to regulated carbon dioxide emissions savings compared to a Part L 2022 of the Building Regulations compliant development through energy demand reduction measures alone
 - iii) Clear evidence that the risk of overheating has been mitigated through passive design
 - iv) Evidence of investigation into existing or planned district heating networks that the development could be connected to, including relevant correspondence with local heat network operators
 - v) Commitment to a site heat network served by a single energy center linking all apartments and non-domestic building uses, if appropriate for the development
 - vi)
 - vii) Where applicable, investigations of the feasibility of installing CHP in the proposed development (if connection can't be made to an area wide network) before considering renewables
 - viii) An initial feasibility test for renewable energy technologies and, where appropriate, commitment to further reduce carbon dioxide emissions through the use of onsite renewable energy generation.
- h) Developments are expected to achieve carbon reductions beyond Approved Document L from energy efficiency measures alone to reduce energy demand as far as possible.
- i) This is a refurbishment and extension project and therefore the carbon reductions beyond Approved Document L will be limited due to the reuse of the existing structure.

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- j) Under The London Plan Policy SI 3 - Energy Infrastructure, the Mayor expects developments to investigate the use of heat networks, particularly for large scale developments. Major development proposals within Heat Network Priority Areas should have a communal low-temperature heating system. Where no heat network is not in existence yet, the development should be designed to allow for the cost-effective connection at a later date. The heat network should achieve good practice design and specification standards.
- k) Policy SI 4 - Managing Heat Risk, requires developments to minimise adverse impacts of the urban heat island through design, layout, orientation, materials and the incorporation of green infrastructure. Developments should demonstrate the potential for internal overheating and reliance on air conditioning systems can be minimised in accordance with the following cooling hierarchy:
 - i) reduce the amount of heat entering a building through orientation, shading, high albedo materials, fenestration, insulation and the provision of green infrastructure.
 - ii) minimise internal heat generation through energy efficient design.
 - iii) manage the heat within the building through exposed internal thermal mass and high ceilings.
 - iv) provide passive ventilation.
 - v) provide mechanical ventilation.
 - vi) provide active cooling systems.

4) Energy Assessment

Falcon Energy has used SAP 10 methodology to calculate energy demand for proposed dwelling.

a) Baseline Energy Demand

- i) In order to measure the effectiveness of demand-reduction measures, it is first necessary to calculate the baseline energy demand and this has been done using SAP 10 methodology. This can also be referred to as the Target Emission Rate (TER.)
- ii) The resulting AD L 2013 ,TER for 1A, Brighton Road, South Croydon, CR2 6EA has been calculated using Part L1 A and L1 B, model designs which have been applied to the Applicant's Development details. The TER, or baseline energy demand, represents the maximum CO2 emissions that are permitted for the Development in order to comply with AD L 2022. For New Build cottages it is calculated by multiplying floor area with the TER of Be Green stage of the assessment to get the total CO2 Emissions.

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b) The Development Baseline

- i) The resulting TER, representing the total maximum CO₂ emissions permitted for the Development has been calculated as Shown in the Table Below. To ensure compliance with AD L 2013, CO₂ emissions should not exceed this figure.

Table 3 Baseline Emission Rate

Dwelling	Baseline Emissions (Tonnes CO₂/yr.)
Flat 1	0.4
Flat 2	0.35
Flat 3	0.3
Flat 4	0.31
Flat 5	0.3
Flat 6	0.3
Flat 7	0.37
Flat 8	0.4
Flat 9	0.35
Flat 10	0.3
Flat 11	0.25
Flat 12	0.3
Flat 13	0.3
Flat 14	0.37
Flat 15	0.44
Flat 16	0.3

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Flat 17	0.25
Flat 18	0.3
Flat 19	0.28
Flat 20	0.47
Flat 21	0.44
Flat 22	0.36
Flat 23	0.35
Flat 24	0.49
Flat 25	0.46
Total Baseline Emissions (Tco2/yr.)	8.74

c) Be Lean – Reduced Energy Demand

- i) The residential development at the proposed site, achieves a high quality, sustainable design by integrating the following design measures to reduce energy demand:
 - Energy-efficient building fabric and insulation to all heat loss floors, walls and roofs.
 - High-efficiency double-glazed windows throughout.
 - Quality of build will be confirmed by achieving good air-tightness results throughout.
 - Efficient-building services including high-efficiency heating systems.
 - Low-energy lighting throughout the building.

d) Reduced Energy Demand

- i) The Applicant’s design specification and intended demand-reduction measures for the Development have been modelled using the same SAP 2022 methodology as before. This allows us to assess the effectiveness of Be Lean measures as a percentage reduction in CO2 emissions over the Baseline.
- ii) The total calculated CO2 emissions for proposed dwelling is **4340Kg/CO2 per annum**, which is a reduction of **50.34 % or 4400 Kg/CO2 per annum** over the Baseline, refer

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to Appendix for SAP Results and Table 5 for the Be Lean design specification.

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Table 4 Be lean Emission Rate

Dwelling	Be Lean Emissions (Tonnes CO₂/yr.)
Flat 1	0.3
Flat 2	0.28
Flat 3	0.22
Flat 4	0.22
Flat 5	0.25
Flat 6	0.25
Flat 7	0.29
Flat 8	0.3
Flat 9	0.28
Flat 10	0.22
Flat 11	0.22
Flat 12	0.25
Flat 13	0.25
Flat 14	0.29
Flat 15	0.32
Flat 16	0.23
Flat 17	0.22
Flat 18	0.25
Flat 19	0.22
Flat 20	0.32

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Flat 21	0.33
Flat 22	0.29
Flat 23	0.23
Flat 24	0.32
Flat 25	0.31
Total Emissions (Tco2/yr.)	6.66

Table 5 Be Lean design specification for 1A, Brighton Road, South Croydon, CR2 6EA

Elements U Value (W/m2.K)	Baseline Specification (Part L1 A 2022)	Be Lean Specifications
External Walls	0.26	0.12
Roofs	0.16	0.12
Ground Floor	0.18	0.12
Glazing	1.6	0.9
Doors	1.6	1
Space Heating	Brand Name: Grant Model Name: AERONA3 Model Qualifier: HPID13R32	Brand Name: Grant Model Name: AERONA3 Model Qualifier: HPID13R32
Renewables	----	----
Thermal Mass	Default	Default

e) Be Clean – Supply Energy Efficiently

- i) Steps have been taken by the Applicant to reduce the energy demand of the Development as far as is feasible.
- ii) The next step in the energy hierarchy is to consider how the remaining energy demand can be met and whether there is the potential for this to be done through the

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mechanism of establishing and/or linking up with existing or planned decentralized energy systems.
- iii) To ensure compliance with the Greater London Authority's energy hierarchy, the potential to supply energy efficiently to the Development at 1A, Brighton Road, South

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Croydon, CR2 6EA and further reduce regulated CO2 emissions through Be Clean measures, is evaluated.

i) District Heating System

- (1)** District Heat Networks (DHN), also referred to as either district energy systems or district heating schemes, produce steam, hot water or chilled water at a central energy centre. The steam or water is distributed in pre-insulated pipework, to individual buildings for space heating, domestic hot water and air conditioning. As a result, individual buildings served by a DHN do not require their own boilers or chillers.
- (2)** The London Heat Map is an online tool that can help identify opportunities for the use of decentralised energy networks and systems for use in projects. Using the Heat Map, there appears to be no district heating systems available or even proposed in the area, so it would not be feasible to install plant for future connection to such a network at this time.

ii) Combine Heat And Power

(1) Combined Heat and Power (CHP)

It is a relatively simple technology comprising of an engine (usually gas fired, but can be oil or biomass fired) which fires a generator producing on-site electricity. This process also generates heat as a by-product which can then be used to provide space heating and hot water. CHP systems can be small scale, used in single buildings, or large scale and used in a community or district heating network. As electricity is produced on site, distribution losses in comparison to the national grid are minimal and the heat by-product is captured instead of being wasted. As a result, CHP provides an efficient, low carbon electricity and heat generation solution.

The following extracts from the GLA guidance on preparing energy assessments (March 2016) detail situations where CHP is unlikely to be a viable solution:

- Small-medium residential development - At this scale it is generally not economic to install CHP in residential led, mixed use developments (and where CHP is installed it tends to have lower electrical efficiencies).
- Non-domestic developments with a simultaneous demand for heat and power for less than 5,000 homes per annum. examples of such developments may include offices and schools.

(2) Installation Consideration

- The sizing of a CHP system is critical to its efficiency and operation. An oversized system will require a large buffer tank to absorb excess heat and will often have to turn off. This is not good for long term operation.
- Systems should therefore be undersized and meet base heating demand (usually hot water demand) to ensure continuous operation.

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- Large scale CHP systems will require sufficient plant room to accommodate the engine and buffer vessel.
- Large systems suitable for developments of 500 or more units, although can be viable on smaller schemes.
- Systems perform well where there is a consistent demand for heat.
- Export of electricity can sometimes require an upgrade to a local substation.
- Flue design important.
- Design needs to be bespoke to the needs of the development.

(3) Approximate upfront costs (TBC by supplier)

- Costs vary dependant on the size of the system. Small 24 kWt/1 kWe systems may start at £15,000 with larger systems costing substantially more.

(4) Advantages

- There are significant CO2 reductions for large-scale development (multiple apartment blocks) where there is a consistent requirement for heat.

(5) Disadvantages

- Not financially viable on smaller developments.
- Plant room space required.
- Will not perform well where there is inconsistent demand for heat.
- Up-front and ongoing costs are higher than commercial gas boilers

(6) Conclusion

- As the provision of onsite CHP is not considered viable for the Development, and as district heating networks are not currently available in this area, the Applicant should consider alternative options for providing heating in the building.
- This will be covered in the following Be Green section.
- There is no reduction to be shown via the Be Clean method.

f) Be Green – Low-Carbon and Renewable Energy

- i) The next step in the Energy Hierarchy is to reduce the carbon dioxide emissions by the use of renewable technologies - BE GREEN.
- ii) A review of the potential renewable technologies has been undertaken to identify any potential low or zero carbon technologies which could be incorporated at a later date. The following renewable energy resources have been assessed for availability and appropriateness in relation to the site location, building occupancy and design.
 - Biomass Heating
 - Biomass CHP

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- Heat Pumps
 - Solar Photovoltaics
 - Domestic Solar Hot Water Systems
 - Wind Power
- iii) A preliminary assessment has been carried out for each renewable energy technology and for those appearing viable a further detailed appraisal has been undertaken.
- iv) The preliminary study considered the site location and the type of building in the development and surroundings and produced a shortlist of renewable energy technologies that will be the subject of a further feasibility study.
- v) Table 6 below provides a summary of the assessment.

Table 6 Renewables Toolkit Assessment

S.NO	Energy System	Description	Comment
1	Bio Mass Heating	Solid, liquid or gaseous fuels derived from plant material can provide boiler heat for space and water heating. Biomass can be burnt directly to provide heat in buildings. Wood from forests, urban tree pruning, farmed coppices or farm and factory waste, is the most common fuel and is used commercially in the form of wood chips or pellets, although traditional logs are also used. Other forms of Biomass can be used, e.g. bio-diesel.	Wood pellet or wood chip fired or dual bio-diesel/gas-fired boilers could be considered. As this development consists of a new building, it offers the opportunity to accommodate such a system. The flues would have to be discharged to atmosphere above roof level and concerns raised by Environmental Health regarding the pollutants and particles, which would have to be addressed. Care needs to be taken with the design of the flue to ensure particle discharge is not a concern to residents. The fuel storage silo/tank would have to be located external to the building, which is not available on this site. A suitable local fuel supplier is required to supply the site.
		Feasible	No
2	Bio Mass CHP	CHP as above, but with biomass as the fuel.	Whilst the Biomass CHP system may overcome the issue of the reduction in carbon dioxide emissions via true renewable sources, however, the lack of a year-round base load is still a problem and therefore Biomass CHP is not feasible for this development.
		Feasible	No

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3	Ground/Air Source Heat Pumps heating	The ground collector can be installed, either as a loop of pipe, in the piles or using a borehole and compressor offer efficient heating of space in winter, as the temperature of the ground below 2m remain constant throughout the year. For Air source External condensing unit can be located adjacent to the dwelling in the discreet location.	Ground and air source heat pumps are most efficient when supplying heat continuously and in areas where a mains gas supply is not available. In dwellings, GSHP and ASHP are capable of supplying the majority of the total space heating and pre heat for the hot water. This site does appear to have external areas of sufficient size for the installation of ground loops for the collection of heat. It is considered that the use of ASHP to offset the heat losses of the dwelling would be economical at this stage due to the size of the dwellings. A suitable location for the outdoor units to ensure noise and draughts do not cause a nuisance to the building occupants or their neighbors is present
		Feasible	Yes
4	Solar Photovoltaics (PV)	Building Integrated Photovoltaics (BIPV) or Roof mounted collectors provide noiseless, low maintenance, carbon free electricity.	There appears to be areas of roof that could be utilised to install PV panels onto the scheme. These could be integrated into the roof finishes or mounted on frames on the roof and orientated towards the south for optimal performance. Careful consideration must be given to the chosen roof finish to ensure compatibility.
		Feasible	Yes
5	Solar Thermal Hot Water	Solar collectors for low temperature hot water systems require direct isolation so the chosen location, tilt, orientation are critical	This solution could be utilised to generate hot water using the energy from the sun. There are the installation of solar thermal collectors and careful consideration must be given to the chosen roof finish to ensure compatibility.
		Feasible	*Yes (If no P.V panels are Installed)
6	Wind Power	Most Small Wind Turbines can be mounted on the buildings but larger machines require foundation at ground level and suitable site location	It could be viable to install some form of wind turbines on this site, however due to surrounding buildings and the visual impact it is not considered to be the most sensitive system of providing energy via renewable resources in this location.
		Feasible	No

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- vi) From the above it has been established that there are three potential ways of providing energy via renewable sources appropriate for inclusion in this scheme, these being the use of Air source heat pumps, solar photovoltaics and domestic solar hot water or a combination of these.

(1) Solar Photovoltaics

- (a) Roof mounted PV panels should ideally face south-east to south-west at an elevation of about 10°. However, in the UK even if installed flat on a roof, they receive 90% of the energy of an optimum system.
- (b) As can be seen from Table 7 below, the incorporation of photovoltaic system, with total output of 0.5 KW, the development could reduce the carbon dioxide emissions by a further 23.76 % and when combined with the fabric energy efficiency measures from in Table 4 above, a potential total reduction of 41.70% could be achieved.

(2) Domestic Solar Hot Water System

- (a) Approximately 2-4m² of solar thermal collectors could provide the hot water requirements of a typical dwelling. These could be used to feed twin coil hot water cylinders positioned within the dwelling, allowing the water to be heated by the sun when possible whilst retaining the backup of the main heating system when required.
- (b) Although often not unattractive, and possible to integrate into the building or roof cladding system domestic solar thermal collectors are still considered likely to have visual implications, therefore careful sighting of the panels is required. Therefore, only PV panels are considered.

Table 7 Be Lean Emission Rate

Dwelling	Be Green Emissions (Tonnes CO₂/yr.)
Flat 1	0.2
Flat 2	0.19
Flat 3	0.14
Flat 4	0.12
Flat 5	0.15
Flat 6	0.15
Flat 7	0.19
Flat 8	0.2
Flat 9	0.19
Flat 10	0.14
Flat 11	0.12
Flat 12	0.15
Flat 13	0.15
Flat 14	0.19
Flat 15	0.22
Flat 16	0.14
Flat 17	0.12
Flat 18	0.15
Flat 19	0.15
Flat 20	0.23

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Flat 21	0.23
Flat 22	0.23
Flat 23	0.14
Flat 24	0.23
Flat 25	0.22
Total Emissions (Tco2/yr.)	4.34

Table 8 Dwelling Emission Reductions

For Flats		
Strategy	Total Dwelling CO2 Emissions combined for Units in kgCo2/year	Percentage Reduction from Baseline
Baseline	8740	---
Be Lean	6660	23.79%
Be Green (Photovoltaic PV)	4340	50.34%

5) Annual Carbon Dioxide Emission Reduction

- a) Based on the initial SAP calculations for the dwellings, it has been calculated that the baseline carbon dioxide emissions figure is **8740kgCO2/year**.
- a) In accordance with the Planning Policies set out by London borough of Croydon and the London Plan, this report has demonstrated a carbon dioxide emissions improvement **23.79%** by fabric and energy efficiencies.
- b) In addition, a further reduction in carbon dioxide emissions is possible by the use of renewable technologies in the form of solar photovoltaic panels. This would result in a total reduction of **50.34 %**.
- c) A number of options have been considered and the potential carbon dioxide reductions calculated using the SAP calculations and a summary of the results is provided in Table 8 above.
- d) For the purpose of planning and based on the figures provided by initial SAP calculations, this report has demonstrated that it is feasible, with the improvement of the building fabric, energy efficient heating and controls systems, carbon dioxide emissions reduction in excess of **50.34%**, could be achieved. This complies with the requirements of the

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planning policies set out by the London Plan and Local Planning Authority.

6) Overheating

- a) It is important to consider the internal comfort conditions for the occupants of the dwellings. At design stage, this can be met through the use of the "cooling hierarchy", as set out in the London Plan. The cooling hierarchy, in Policy SI 4, seeks to reduce any potential overheating and also the need to cool a building through active cooling measures. Air conditioning systems are a very resource intensive form of active cooling, increasing carbon dioxide emissions, and also emitting large amounts of heat into the surrounding area. By incorporating the cooling hierarchy into the design process buildings will be better equipped to manage their cooling needs and to adapt to the changing climate they will experience over their lifetime.
- b) The development shall reduce the potential for overheating and reliance on air conditioning systems and demonstrate this in accordance with the following cooling hierarchy:
 - i) Minimise internal heat generation through energy efficient design reduce the amount of heat entering a building in summer through orientation, shading, albedo, fenestration, insulation and green roofs and walls
 - ii) manage the heat within the building through exposed internal thermal mass and high ceilings
 - iii) passive ventilation
 - iv) mechanical ventilation
 - v) active cooling systems (ensuring they are the lowest carbon options).
- c) During the initial design, the initial SAP Assessment was carried out for the dwelling to help assess the energy demand and carbon emissions of the development. The SAP Assessment includes an overheating assessment in line with the requirements of the Building Regulations.
- d) Based on this SAP Assessment, the dwelling has no significant risk of solar overheating. This is acceptable under the requirements of the Building Regulations. The internal heat generation has been minimised through energy efficient design. All of the luminaires shall be low energy which will also remove an internal heat generating load.
- e) The heat entering the building in summer is reduced through the optimisation of glazing area, the use of shading via building form and other protruding edges, together with the inclusion of very high-performance facade materials and improved air tightness. The use of a solar control glazing, which has a coating applied to lower the G Value of the glass,

Energy Statement : 1A, Brighton Road, South Croydon, CR2 6EA

can be applied. This acts in the same way that the low e coating lowers the U Value which helps reduce heat losses through the windows.

- f) The dwelling could have a mechanical ventilation system installed, which provides filtered fresh air to the dwelling. This is tempered by the crossover heat exchanger, which recovers waste heat from the extract air from the dwelling. The ventilation systems shall be controlled locally by the occupants.
- g) Low energy lamps shall be used in the luminaires to reduce heat gain. These lamps do not emit heat like traditional GLS lamps.
- h) It is also possible to include passive ventilation within the cores and staircase by utilizing the smoke vents. The smoke vents are linked to thermostats and can be opened if the temperature exceeds an upper limit, thus providing passive and natural ventilation to these areas to remove any potential heat build-up.

8) Carbon Offsets

- a) Carbon offset funds provide a source of funds for carbon reduction projects across the cities and have a role in funding emission reductions from existing buildings where achieving carbon savings can be more challenging. Currently, the GLA's recommended price for offsetting carbon vary from £60 per tonne to £90 per tonne depending upon the region. The recommended GLA carbon offset price will be reviewed regularly.
- b) Carbon emissions left to offset after Be Green stage for all 25 flats combined are around 4.34 tonnes of CO₂. Therefore, total Cost to offset the Carbon Emission for the period of 30 years for all 25 Flats (the assumed lifetime of the development's services). Is calculated as follows:

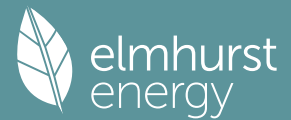
$$4.46 \times £60 \times 30 = \text{£ } 7,812.$$

Energy Statement : 1A, Brighton Road, South Croydon, CR2 6EA

9) Conclusion

- a) The London borough of Croydon and the London Plan 2021 Policy S I 2 requires new residential developments to minimise and exhibit the highest standards of sustainable design and construction. The reduction in carbon dioxide emissions target has been set as 35%. The development should achieve a minimum of 10% Target Emission Rate, in building and services efficiencies only, as defined by the Building Regulations 2022. In this Project, the Target Emissions Rate has been set by calculating the emissions for the proposed dwellings if they were constructed using the existing fabric and services.
- b) The Application is for the redevelopment of at 1A, Brighton Road, South Croydon, CR2 6EA, Construction of a Four Storey building with 25 Flats & commercial space on ground floor level. It is proposed that in order to meet the requirements of policy this development will adopt a high standard of design with regard to energy efficiency principles. It has been estimated that the proposed development will achieve a reduction of at least 23.79% in the carbon dioxide emissions through fabric and services efficiencies. A further reduction of 34.83% by use on-site renewable energy generation could be achieved. This results in a total reduction of 50.34%. It is envisaged during detailed construction design; these figures can be improved. It is envisaged that during detailed design, the reduction in carbon dioxide emissions can be improved.
- c) This report has assessed the risk of overheating and the development has been identified as having no significant risk.
- d) This Energy and Carbon Reduction statement demonstrates that the proposed development incorporates low and zero carbon technologies. It is for these reasons it is considered that this application should be viewed favorably by the London borough of Croydon, or Local planning authority, to whom it may concern.

Summary for Input Data



Property Reference	Flat 01		Issued on Date	13/04/2024	
Assessment Reference	Flat 1 Be Green	Prop Type Ref			
Property					
SAP Rating	88 B	DER	3.17	TER	13.17
Environmental	97 A	% DER < TER			75.93
CO ₂ Emissions (t/year)	0.2	DFEE	34.27	TFEE	34.57
Compliance Check	See BREL	% DFEE < TFEE			0.89
% DPER < TPER	53.36	DPER	32.71	TPER	70.14
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	West	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	1	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	27.30 m	75.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

27.00 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	65.00	32.60	0.00	None	32.40	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	17.00	17.00	0.70	Stairwell Access Corridor 3	0.00	Enter Gross Area

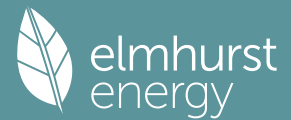
9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	48.00	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	75.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	75.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
North Windows/Door	Glazinf Windows/Door	External Wall	North	10.80	0
East Windows/Door	Glazinf Windows/Door	External Wall	East	21.60	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	11.00	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	11.00	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	21.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	28.07	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	12

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

System Type

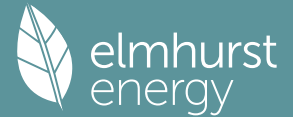
Controls SAP Code

Delayed Start Stat

HETAS approved System

Oil Pump Inside

Summary for Input Data



FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes

Summary for Input Data



Diverter	<input type="text" value="Yes"/>										
Battery Capacity [kWh]	<input type="text" value="10.00"/>										
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer			
0.75	South	30°	None Or Little	No	No	1.00					

34.0 Small-scale Hydro

Electricity Generated	<input type="text" value="None"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 02		Issued on Date	13/04/2024	
Assessment Reference	Flat 2 Be Green	Prop Type Ref			
Property					
SAP Rating	89 B	DER	2.79	TER	12.17
Environmental	98 A	% DER < TER			77.07
CO ₂ Emissions (t/year)	0.19	DFEE	26.41	TFEE	31.13
Compliance Check	See BREL	% DFEE < TFEE			15.17
% DPER < TPER	55.41	DPER	28.85	TPER	64.70
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	South	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	1	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	24.00 m	78.50 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

27.00 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	37.00	17.56	0.00	None	19.44	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	8.00	8.00	0.70	Stairwell Access Corridor 3	0.00	Enter Gross Area
Staircase wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.00	27.00	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

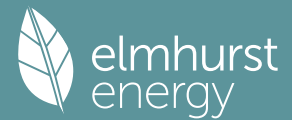
9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	45.00	0.00	None

10.1 Party Ceilings

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



Party Ceiling 1 Precast concrete plank floor (screed laid on rubber), carpeted 30.00 78.50

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	78.50

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
East Windows/Door	Glazinf Windows/Door	External Wall	East	15.12	0
North Windows/Door	Glazinf Windows/Door	External Wall	North	4.32	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	8.60	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	8.60	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	15.52	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	21.53	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	8

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

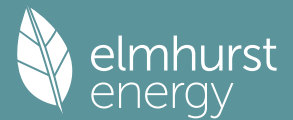
System Type

Controls SAP Code

Delayed Start Stat

HETAS approved System

Summary for Input Data



Oil Pump Inside	No
FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	Yes

Summary for Input Data



Battery Capacity [kWh]	<input type="text" value="10.00"/>									
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer		
0.75	South	30°	None Or Little	No	No	1.00				

34.0 Small-scale Hydro

	<input type="text" value="None"/>										
Electricity Generated	<input type="text" value="0.00"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 03	Issued on Date	13/04/2024
Assessment Reference	Flat 3 Be Green	Prop Type Ref	
Property			
SAP Rating	88 B	DER	3.56
Environmental	98 A	TER	16.12
CO ₂ Emissions (t/year)	0.14	% DER < TER	77.92
Compliance Check	See BREL	DFEE	32.50
% DPER < TPER	56.26	TFEE	36.48
		% DFEE < TFEE	10.93
		DPER	37.82
		TPER	86.45
Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	West	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	1	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	22.30 m	47.56 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

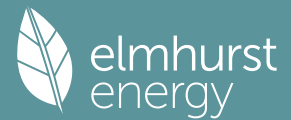
8.0 Living Area	32.00	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	55.00	37.48	0.00	None	17.52	Enter Gross Area
	Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	12.00	12.00	0.70	Stainwell Access Corridor 3	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	25.00	0.00	None

10.1 Party Ceilings	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	47.56

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	47.56

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
East Windows/Door	Glazinf Windows/Door	External Wall	East	6.48	0
North Windows/Door	Glazinf Windows/Door	External Wall	North	6.72	0
Opening	Glazinf Windows/Door	External Wall	West	4.32	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	4.30	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	4.30	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	7.76	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	10.57	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP ₅₀	<input type="text" value="5.00"/>	m ³ /(h.m ²) @ 50 Pa
Property Tested?	<input type="text" value="Yes"/>	
Test Method	<input type="text" value="Blower Door"/>	
As Built AP ₅₀	<input type="text" value="4.00"/>	m ³ /(h.m ²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation	Mechanical Ventilation System Present
	<input type="text" value="No"/>

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

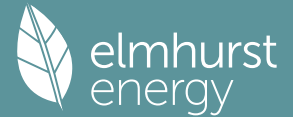
22.0 Lighting

No Fixed Lighting	<input type="text" value="No"/>			
Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	7

24.0 Main Heating 1

Database	<input type="text" value="Database"/>	
Percentage of Heat	<input type="text" value="100.00"/>	%
Database Ref. No.	<input type="text" value="102735"/>	
Fuel Type	<input type="text" value="Electricity"/>	
SAP Code	<input type="text" value="0"/>	
In Winter	<input type="text" value="261.35"/>	
In Summer	<input type="text" value="170.29"/>	
Model Name	<input type="text" value="AERONA3"/>	
Manufacturer	<input type="text" value="Grant Engineering (UK) Ltd"/>	
System Type	<input type="text" value="Heat Pump"/>	
Controls SAP Code	<input type="text" value="2207"/>	
Delayed Start Stat	<input type="text" value="No"/>	
HETAS approved System	<input type="text" value="No"/>	
Oil Pump Inside	<input type="text" value="No"/>	

Summary for Input Data



FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	1
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	
Export Capable Meter?	Yes
Connected To Dwelling	Yes

Summary for Input Data



Diverter	<input type="text" value="Yes"/>										
Battery Capacity [kWh]	<input type="text" value="0.00"/>										
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer			
0.75	South	30°	None Or Little	No	No	1.00					

34.0 Small-scale Hydro

<input type="text" value="None"/>											
<input type="text" value="0.00"/>											
<input type="text" value="0.00"/>											
kWh/Year											
<input type="text" value="Yes"/>											
<input type="text" value="Annual"/>											
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



Property Reference	Flat 04	Issued on Date	13/04/2024
Assessment Reference	Flat 4 Be Green	Prop Type Ref	
Property			

SAP Rating	91 B	DER	2.80	TER	13.30
Environmental	98 A	% DER < TER			78.95
CO ₂ Emissions (t/year)	0.12	DFEE	23.34	TFEE	26.50
Compliance Check	See BREL	% DFEE < TFEE			11.92
% DPER < TPER	59.32	DPER	28.95	TPER	71.16

Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	North	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	1	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	11.00 m	52.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area	25.00	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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	21.21	7.96	0.00	None	13.25	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	10.11	10.11	0.70	Stairwell Access Corridor 3	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	61.05	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	48.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	48.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	13.25	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	5.30	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	5.30	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	10.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	10.44	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value	<input type="text" value="0.16"/>	W/m ² K
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18.0 Pressure Testing

Designed AP ₅₀	<input type="text" value="5.00"/>	m ² /(h.m ²) @ 50 Pa
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Property Tested?	<input type="text" value="Yes"/>
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Test Method	<input type="text" value="Blower Door"/>
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As Built AP ₅₀	<input type="text" value="4.00"/>	m ² /(h.m ²) @ 50 Pa
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19.0 Mechanical Ventilation

Mechanical Ventilation	<input type="text" value="No"/>
Mechanical Ventilation System Present	

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System	<input type="text" value="No"/>
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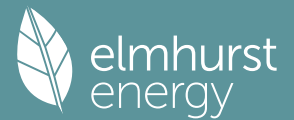
22.0 Lighting

No Fixed Lighting	<input type="text" value="No"/>				
Name	Efficacy	Power	Capacity	Count	
Lighting 1	75.00	40	3000	7	

24.0 Main Heating 1

Percentage of Heat	<input type="text" value="100.00"/>	%
Database Ref. No.	<input type="text" value="102735"/>	
Fuel Type	<input type="text" value="Electricity"/>	
SAP Code	<input type="text" value="0"/>	
In Winter	<input type="text" value="258.76"/>	
In Summer	<input type="text" value="170.27"/>	
Model Name	<input type="text" value="AERONA3"/>	
Manufacturer	<input type="text" value="Grant Engineering (UK) Ltd"/>	
System Type	<input type="text" value="Heat Pump"/>	
Controls SAP Code	<input type="text" value="2207"/>	
Delayed Start Stat	<input type="text" value="No"/>	
HETAS approved System	<input type="text" value="No"/>	
Oil Pump Inside	<input type="text" value="No"/>	
FI Case	<input type="text" value="0.00"/>	

Summary for Input Data



Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	1
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	Yes

Summary for Input Data



Battery Capacity [kWh]	<input type="text" value="10.00"/>									
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer		
0.75	South	30°	None Or Little	No	No	1.00				

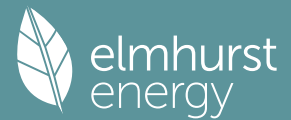
34.0 Small-scale Hydro

	<input type="text" value="None"/>										
Electricity Generated	<input type="text" value="0.00"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 05		Issued on Date	13/04/2024	
Assessment Reference	Flat 5 Be Green	Prop Type Ref			
Property					
SAP Rating	90 B	DER	2.93	TER	12.83
Environmental	98 A	% DER < TER			77.16
CO ₂ Emissions (t/year)	0.15	DFEE	26.85	TFEE	28.96
Compliance Check	See BREL	% DFEE < TFEE			7.30
% DPER < TPER	55.81	DPER	30.25	TPER	68.44
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	East	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	1	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	18.06 m	62.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

17.30 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	7.34	0.00	None	19.75	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	27.09	0.70	Stairwell Access Corridor 3	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	61.05	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	19.75	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	7.90	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	7.90	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	15.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	18.06	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	10

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

System Type

Controls SAP Code

Delayed Start Stat

HETAS approved System

Oil Pump Inside

FI Case

Summary for Input Data



Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	Yes

Summary for Input Data



Battery Capacity [kWh]	<input type="text" value="10.00"/>									
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer		
0.75	South	30°	None Or Little	No	No	1.00				

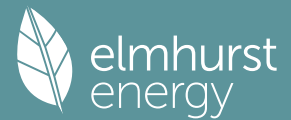
34.0 Small-scale Hydro

	<input type="text" value="None"/>										
Electricity Generated	<input type="text" value="0.00"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 06	Issued on Date	13/04/2024
Assessment Reference	Flat 6 Be Green	Prop Type Ref	
Property			

SAP Rating	90 B	DER	2.93	TER	12.83
Environmental	98 A	% DER < TER			77.16
CO ₂ Emissions (t/year)	0.15	DFEE	26.85	TFEE	28.96
Compliance Check	See BREL	% DFEE < TFEE			7.30
% DPER < TPER	55.81	DPER	30.25	TPER	68.44

Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	East	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	1	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	18.06 m	62.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area	17.30	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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	7.34	0.00	None	19.75	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	27.09	0.70	Stairwell Access Corridor 3	0.00	Enter Gross Area

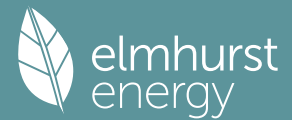
9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	61.05	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	19.75	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	7.90	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	7.90	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	15.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	18.06	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value	<input type="text" value="0.13"/>	W/m²K
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18.0 Pressure Testing

Designed AP ₅₀	<input type="text" value="5.00"/>	m³/(h.m²) @ 50 Pa
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Property Tested?	<input type="text" value="Yes"/>
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Test Method	<input type="text" value="Blower Door"/>
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As Built AP ₅₀	<input type="text" value="4.00"/>	m³/(h.m²) @ 50 Pa
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19.0 Mechanical Ventilation

Mechanical Ventilation	<input type="text" value="Mechanical Ventilation System Present"/>
Mechanical Ventilation System Present	<input type="text" value="No"/>

20.0 Fans, Open Fireplaces, Flues

20.0 Fans, Open Fireplaces, Flues	<input type="text" value="No"/>
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21.0 Fixed Cooling System	<input type="text" value="No"/>
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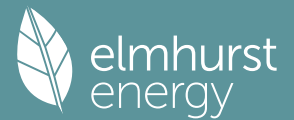
22.0 Lighting	<input type="text" value="No"/>
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No Fixed Lighting	<input type="text" value="No"/>
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Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	10

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="102735"/>
Fuel Type	<input type="text" value="Electricity"/>
SAP Code	<input type="text" value="0"/>
In Winter	<input type="text" value="263.79"/>
In Summer	<input type="text" value="170.33"/>
Model Name	<input type="text" value="AERONA3"/>
Manufacturer	<input type="text" value="Grant Engineering (UK) Ltd"/>
System Type	<input type="text" value="Heat Pump"/>
Controls SAP Code	<input type="text" value="2207"/>
Delayed Start Stat	<input type="text" value="No"/>
HETAS approved System	<input type="text" value="No"/>
Oil Pump Inside	<input type="text" value="No"/>
FI Case	<input type="text" value="0.00"/>

Summary for Input Data



Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	Yes

Summary for Input Data



Battery Capacity [kWh]	<input type="text" value="10.00"/>									
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer		
0.75	South	30°	None Or Little	No	No	1.00				

34.0 Small-scale Hydro

	<input type="text" value="None"/>										
Electricity Generated	<input type="text" value="0.00"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 07	Issued on Date	13/04/2024
Assessment Reference	Flat 7 Be Green	Prop Type Ref	
Property			

SAP Rating	89 B	DER	2.93	TER	12.32
Environmental	98 A	% DER < TER			76.22
CO ₂ Emissions (t/year)	0.19	DFEE	30.31	TFEE	31.65
Compliance Check	See BREL	% DFEE < TFEE			4.23
% DPER < TPER	53.86	DPER	30.24	TPER	65.54

Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	South	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	1	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	24.22 m	77.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area	26.00	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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	68.76	39.14	0.00	None	29.62	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	3.90	3.90	0.70	Stairwell Access Corridor 3	0.00	Enter Gross Area

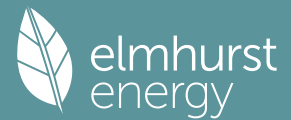
9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	53.34	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	79.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	79.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	22.12	0
East Windows/Door	Glazinf Windows/Door	External Wall	East	7.50	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	8.85	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	8.85	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	20.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	24.22	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	12

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

System Type

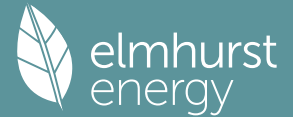
Controls SAP Code

Delayed Start Stat

HETAS approved System

Oil Pump Inside

Summary for Input Data



FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	
Export Capable Meter?	Yes
Connected To Dwelling	Yes

Summary for Input Data



Diverter	<input type="text" value="Yes"/>										
Battery Capacity [kWh]	<input type="text" value="10.00"/>										
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer			
0.75	South	30°	None Or Little	No	No	1.00					

34.0 Small-scale Hydro

Electricity Generated	<input type="text" value="None"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 08	Issued on Date	13/04/2024
Assessment Reference	Flat 8 Be Green	Prop Type Ref	
Property			

SAP Rating	88 B	DER	3.17	TER	13.17
Environmental	97 A	% DER < TER			75.93
CO ₂ Emissions (t/year)	0.2	DFEE	34.27	TFEE	34.57
Compliance Check	See BREL	% DFEE < TFEE			0.89
% DPER < TPER	53.36	DPER	32.71	TPER	70.14

Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	West	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	2	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	27.30 m	75.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area	27.00	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
	External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	65.00	32.60	0.00	None	32.40	Enter Gross Area
	Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	17.00	17.00	0.70	Stairwell Access Corridor 3	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	48.00	0.00	None

10.1 Party Ceilings	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	75.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	75.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
North Windows/Door	Glazinf Windows/Door	External Wall	North	10.80	0
East Windows/Door	Glazinf Windows/Door	External Wall	East	21.60	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	11.00	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	11.00	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	21.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	28.07	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	12

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

System Type

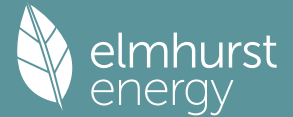
Controls SAP Code

Delayed Start Stat

HETAS approved System

Oil Pump Inside

Summary for Input Data



FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes

Summary for Input Data



Diverter	<input type="text" value="Yes"/>										
Battery Capacity [kWh]	<input type="text" value="10.00"/>										
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer			
0.75	South	30°	None Or Little	No	No	1.00					

34.0 Small-scale Hydro

Electricity Generated	<input type="text" value="None"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 09	Issued on Date	13/04/2024
Assessment Reference	Flat 9 Be Green	Prop Type Ref	
Property			

SAP Rating	89 B	DER	2.79	TER	12.17
Environmental	98 A	% DER < TER			77.07
CO ₂ Emissions (t/year)	0.19	DFEE	26.41	TFEE	31.13
Compliance Check	See BREL	% DFEE < TFEE			15.17
% DPER < TPER	55.41	DPER	28.85	TPER	64.70

Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	South	
Property Tenture	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	2	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	24.00 m	78.50 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area	27.00	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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	37.00	17.56	0.00	None	19.44	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	8.00	8.00	0.70	Stairwell Access Corridor 3	0.00	Enter Gross Area
Staircase wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.00	27.00	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

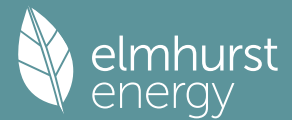
9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	45.00	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
-------------	--------------	-----------------------------	------------------------

Summary for Input Data



Party Ceiling 1 Precast concrete plank floor (screed laid on rubber), carpeted 30.00 78.50

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	78.50

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
East Windows/Door	Glazinf Windows/Door	External Wall	East	15.12	0
North Windows/Door	Glazinf Windows/Door	External Wall	North	4.32	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	8.60	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	8.60	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	15.52	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	21.53	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	8

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

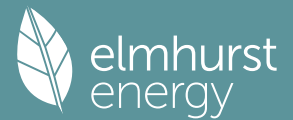
System Type

Controls SAP Code

Delayed Start Stat

HETAS approved System

Summary for Input Data



Oil Pump Inside	No
FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	Yes

Summary for Input Data



Battery Capacity [kWh]	<input type="text" value="10.00"/>									
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer		
0.75	South	30°	None Or Little	No	No	1.00				

34.0 Small-scale Hydro

	<input type="text" value="None"/>										
Electricity Generated	<input type="text" value="0.00"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 10		Issued on Date	13/04/2024	
Assessment Reference	Flat 10 Be Green	Prop Type Ref			
Property					
SAP Rating	88 B	DER	3.56	TER	16.12
Environmental	98 A	% DER < TER			77.92
CO ₂ Emissions (t/year)	0.14	DFEE	32.50	TFEE	36.48
Compliance Check	See BREL	% DFEE < TFEE			10.93
% DPER < TPER	56.26	DPER	37.82	TPER	86.45
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	West	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	2	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	22.30 m	47.56 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

32.00 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	55.00	37.48	0.00	None	17.52	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	12.00	12.00	0.70	Stainwell Access Corridor 3	0.00	Enter Gross Area

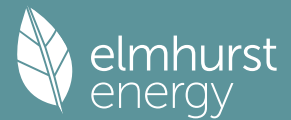
9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	25.00	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	47.56

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	47.56

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
East Windows/Door	Glazinf Windows/Door	External Wall	East	6.48	0
North Windows/Door	Glazinf Windows/Door	External Wall	North	6.72	0
Opening	Glazinf Windows/Door	External Wall	West	4.32	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	4.30	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	4.30	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	7.76	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	10.57	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP ₅₀	<input type="text" value="5.00"/>	m ³ /(h.m ²) @ 50 Pa
Property Tested?	<input type="text" value="Yes"/>	
Test Method	<input type="text" value="Blower Door"/>	
As Built AP ₅₀	<input type="text" value="4.00"/>	m ³ /(h.m ²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation	Mechanical Ventilation System Present
	<input type="text" value="No"/>

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

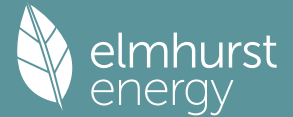
22.0 Lighting

No Fixed Lighting	<input type="text" value="No"/>			
Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	7

24.0 Main Heating 1

Database	<input type="text" value="Database"/>	
Percentage of Heat	<input type="text" value="100.00"/>	%
Database Ref. No.	<input type="text" value="102735"/>	
Fuel Type	<input type="text" value="Electricity"/>	
SAP Code	<input type="text" value="0"/>	
In Winter	<input type="text" value="261.35"/>	
In Summer	<input type="text" value="170.29"/>	
Model Name	<input type="text" value="AERONA3"/>	
Manufacturer	<input type="text" value="Grant Engineering (UK) Ltd"/>	
System Type	<input type="text" value="Heat Pump"/>	
Controls SAP Code	<input type="text" value="2207"/>	
Delayed Start Stat	<input type="text" value="No"/>	
HETAS approved System	<input type="text" value="No"/>	
Oil Pump Inside	<input type="text" value="No"/>	

Summary for Input Data



FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	1
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	
Export Capable Meter?	Yes
Connected To Dwelling	Yes

Summary for Input Data



Diverter	<input type="text" value="Yes"/>										
Battery Capacity [kWh]	<input type="text" value="0.00"/>										
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer			
0.75	South	30°	None Or Little	No	No	1.00					

34.0 Small-scale Hydro

Electricity Generated	<input type="text" value="None"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 11		Issued on Date	13/04/2024	
Assessment Reference	Flat 11 Be Green	Prop Type Ref			
Property					
SAP Rating	91 B	DER	2.80	TER	13.30
Environmental	98 A	% DER < TER			78.95
CO ₂ Emissions (t/year)	0.12	DFEE	23.34	TFEE	26.50
Compliance Check	See BREL	% DFEE < TFEE			11.92
% DPER < TPER	59.32	DPER	28.95	TPER	71.16
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	North	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	2	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	11.00 m	52.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

25.00 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	21.21	7.96	0.00	None	13.25	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	10.11	10.11	0.70	Stairwell Access Corridor 3	0.00	Enter Gross Area

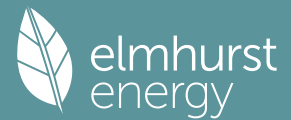
9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	61.05	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	48.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	48.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	13.25	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	5.30	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	5.30	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	10.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	10.44	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	7

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

System Type

Controls SAP Code

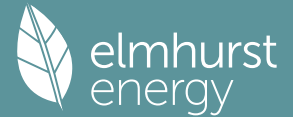
Delayed Start Stat

HETAS approved System

Oil Pump Inside

FI Case

Summary for Input Data



Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	1
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	Yes

Summary for Input Data



Battery Capacity [kWh]	<input type="text" value="10.00"/>									
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer		
0.75	South	30°	None Or Little	No	No	1.00				

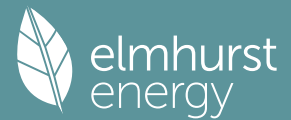
34.0 Small-scale Hydro

	<input type="text" value="None"/>										
Electricity Generated	<input type="text" value="0.00"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 12		Issued on Date	13/04/2024	
Assessment Reference	Flat 12 Be Green	Prop Type Ref			
Property					
SAP Rating	90 B	DER	2.93	TER	12.83
Environmental	98 A	% DER < TER			77.16
CO ₂ Emissions (t/year)	0.15	DFEE	26.85	TFEE	28.96
Compliance Check	See BREL	% DFEE < TFEE			7.30
% DPER < TPER	55.81	DPER	30.25	TPER	68.44
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	East	
Property Tenture	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	2	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	18.06 m	62.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

17.30 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	7.34	0.00	None	19.75	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	27.09	0.70	Stainwell Access Corridor 3	0.00	Enter Gross Area

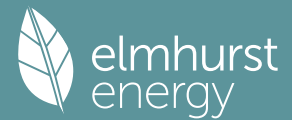
9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	61.05	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	19.75	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	7.90	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	7.90	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	15.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	18.06	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value	<input type="text" value="0.13"/>	W/m²K
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18.0 Pressure Testing

Designed AP ₅₀	<input type="text" value="5.00"/>	m³/(h.m²) @ 50 Pa
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Property Tested?	<input type="text" value="Yes"/>
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Test Method	<input type="text" value="Blower Door"/>
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As Built AP ₅₀	<input type="text" value="4.00"/>	m³/(h.m²) @ 50 Pa
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19.0 Mechanical Ventilation

Mechanical Ventilation	<input type="text" value="Mechanical Ventilation System Present"/>
Mechanical Ventilation System Present	<input type="text" value="No"/>

20.0 Fans, Open Fireplaces, Flues

20.0 Fans, Open Fireplaces, Flues	<input type="text" value="No"/>
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21.0 Fixed Cooling System	<input type="text" value="No"/>
---------------------------	---------------------------------

22.0 Lighting	<input type="text" value="No"/>
---------------	---------------------------------

No Fixed Lighting	<input type="text" value="No"/>
-------------------	---------------------------------

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	10

24.0 Main Heating 1	<input type="text" value="Database"/>
---------------------	---------------------------------------

Percentage of Heat	<input type="text" value="100.00"/>	%
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Database Ref. No.	<input type="text" value="102735"/>
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Fuel Type	<input type="text" value="Electricity"/>
-----------	--

SAP Code	<input type="text" value="0"/>
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In Winter	<input type="text" value="263.79"/>
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In Summer	<input type="text" value="170.33"/>
-----------	-------------------------------------

Model Name	<input type="text" value="AERONA3"/>
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Manufacturer	<input type="text" value="Grant Engineering (UK) Ltd"/>
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System Type	<input type="text" value="Heat Pump"/>
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Controls SAP Code	<input type="text" value="2207"/>
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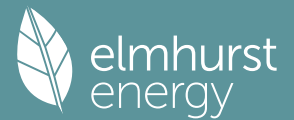
Delayed Start Stat	<input type="text" value="No"/>
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HETAS approved System	<input type="text" value="No"/>
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Oil Pump Inside	<input type="text" value="No"/>
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FI Case	<input type="text" value="0.00"/>
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Summary for Input Data



Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	Yes

Summary for Input Data



Battery Capacity [kWh]	<input type="text" value="10.00"/>									
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer		
0.75	South	30°	None Or Little	No	No	1.00				

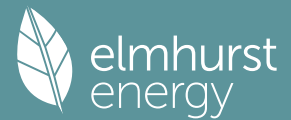
34.0 Small-scale Hydro

	<input type="text" value="None"/>										
Electricity Generated	<input type="text" value="0.00"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 13		Issued on Date	13/04/2024	
Assessment Reference	Flat 13 Be Green	Prop Type Ref			
Property					
SAP Rating	90 B	DER	2.93	TER	12.83
Environmental	98 A	% DER < TER			77.16
CO ₂ Emissions (t/year)	0.15	DFEE	26.85	TFEE	28.96
Compliance Check	See BREL	% DFEE < TFEE			7.30
% DPER < TPER	55.81	DPER	30.25	TPER	68.44
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	East	
Property Tenture	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	2	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	18.06 m	62.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

17.30 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	7.34	0.00	None	19.75	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	27.09	0.70	Stainwell Access Corridor 3	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	61.05	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	19.75	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	7.90	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	7.90	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	15.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	18.06	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	10

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

System Type

Controls SAP Code

Delayed Start Stat

HETAS approved System

Oil Pump Inside

FI Case

Summary for Input Data



Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	Yes

Summary for Input Data



Battery Capacity [kWh]	<input type="text" value="10.00"/>									
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer		
0.75	South	30°	None Or Little	No	No	1.00				

34.0 Small-scale Hydro

	<input type="text" value="None"/>										
Electricity Generated	<input type="text" value="0.00"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 14		Issued on Date	13/04/2024	
Assessment Reference	Flat 14 Be Green	Prop Type Ref			
Property					
SAP Rating	89 B	DER	2.93	TER	12.32
Environmental	98 A	% DER < TER			76.22
CO ₂ Emissions (t/year)	0.19	DFEE	30.31	TFEE	31.65
Compliance Check	See BREL	% DFEE < TFEE			4.23
% DPER < TPER	53.86	DPER	30.24	TPER	65.54
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	South	
Property Tenture	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	2	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	24.22 m	77.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

26.00 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	68.76	39.14	0.00	None	29.62	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	3.90	3.90	0.70	Stainwell Access Corridor 3	0.00	Enter Gross Area

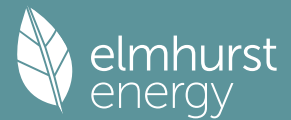
9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	53.34	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	79.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	79.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	22.12	0
East Windows/Door	Glazinf Windows/Door	External Wall	East	7.50	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	8.85	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	8.85	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	20.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	24.22	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	12

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

System Type

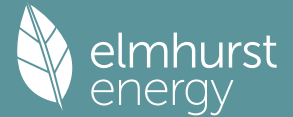
Controls SAP Code

Delayed Start Stat

HETAS approved System

Oil Pump Inside

Summary for Input Data



FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes

Summary for Input Data



Diverter	<input type="text" value="Yes"/>										
Battery Capacity [kWh]	<input type="text" value="10.00"/>										
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer			
0.75	South	30°	None Or Little	No	No	1.00					

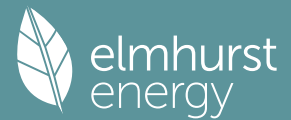
34.0 Small-scale Hydro

Electricity Generated	<input type="text" value="None"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 15	Issued on Date	13/04/2024
Assessment Reference	Flat 15 Be Green	Prop Type Ref	
Property			

SAP Rating	89 B	DER	2.64	TER	11.17
Environmental	98 A	% DER < TER			76.37
CO ₂ Emissions (t/year)	0.22	DFEE	26.90	TFEE	31.99
Compliance Check	See BREL	% DFEE < TFEE			15.93
% DPER < TPER	54.01	DPER	27.22	TPER	59.18

Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	West	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	3	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	40.00 m	99.60 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area	28.50	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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	48.00	22.08	0.00	None	25.92	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	18.00	18.00	0.70	Stairwell Access Corridor 3	0.00	Enter Gross Area
Staircase wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.00	27.00	2.50	Stairwell Stairwell 2	0.00	Enter Gross Area

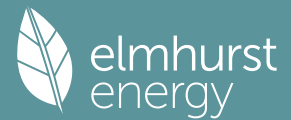
9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	47.00	0.00	None

10.0 External Roofs

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area	Shelter Code	Shelter Factor	Calculation Type	Openings
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Summary for Input Data



External Roof 1	External Plane Roof	Plasterboard, insulated at ceiling level	0.12	9.00	12.20	12.20 (m ²)	None	0.00	Enter Gross Area	0.00
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10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	87.40

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	99.60

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
EastWindows/Door Opening	Glazinf Windows/Door	External Wall	East	21.60	0
	Glazinf Windows/Door	External Wall	North	4.32	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	7.90	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	7.90	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	15.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	18.06	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	10

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

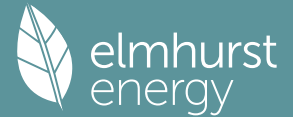
In Winter

In Summer

Model Name

Manufacturer

Summary for Input Data



System Type	Heat Pump
Controls SAP Code	2207
Delayed Start Stat	No
HETAS approved System	No
Oil Pump Inside	No
FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65
Pipes insulation	Fully insulated primary pipework
In Airing Cupboard	No

L
kWh/day

Summary for Input Data



31.0 Thermal Store

None

32.0 Photovoltaic Unit

One Dwelling

Export Capable Meter? Yes

Connected To Dwelling Yes

Diverter Yes

Battery Capacity [kWh] 10.00

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
0.75	South	30°	None Or Little	No	No	1.00		

34.0 Small-scale Hydro

None

Electricity Generated 0.00

Apportioned 0.00 kWh/Year

Connected to dwelling's electricity meter Yes

Electricity Generation Annual

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



Property Reference	Flat 16	Issued on Date	13/04/2024
Assessment Reference	Flat 16 Be Green	Prop Type Ref	
Property			

SAP Rating	89 B	DER	3.67	TER	17.08
Environmental	98 A	% DER < TER			78.51
CO ₂ Emissions (t/year)	0.14	DFEE	35.98	TFEE	39.00
Compliance Check	See BREL	% DFEE < TFEE			7.74
% DPER < TPER	58.72	DPER	37.85	TPER	91.68

Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	West	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	3	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	21.00 m	46.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area	33.00	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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	54.00	38.88	0.00	None	15.12	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	3.90	3.90	0.70	Stairwell Access Corridor 3	0.00	Enter Gross Area
External Wall 3	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	6.60	6.60	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	24.00	0.00	None

10.0 External Roofs

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area	Shelter Code	Shelter Factor	Calculation Type	Openings
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Summary for Input Data



External Roof 1	External Plane Roof	Plasterboard, insulated at ceiling level	0.12	9.00	2.00	(m ²) 2.00	None	0.00	Enter Gross Area	0.00
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10.1 Party Ceilings		Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1			Precast concrete plank floor (screed laid on rubber), carpeted	30.00	44.00

11.1 Party Floors		Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1			Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	46.00

12.0 Opening Types		Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazing Windows/Door		Manufacturer	Window		Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings		Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
West Windows/Door			Glazing Windows/Door	External Wall	North	4.32	0
East Windows/Door			Glazing Windows/Door	External Wall	East	6.48	0
Opening			Glazing Windows/Door	External Wall	West	4.32	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	8.85	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	8.85	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	20.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	24.22	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	12

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

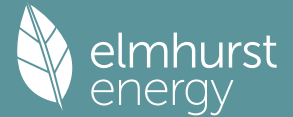
In Winter

In Summer

Model Name

Manufacturer

Summary for Input Data



System Type	Heat Pump
Controls SAP Code	2207
Delayed Start Stat	No
HETAS approved System	No
Oil Pump Inside	No
FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65
Pipes insulation	Fully insulated primary pipework
In Airing Cupboard	No

L
kWh/day

Summary for Input Data



31.0 Thermal Store

None

32.0 Photovoltaic Unit

One Dwelling

Export Capable Meter? Yes

Connected To Dwelling Yes

Diverter Yes

Battery Capacity [kWh] 10.00

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
0.75	South	30°	None Or Little	No	No	1.00		

34.0 Small-scale Hydro

None

Electricity Generated 0.00

Apportioned 0.00 kWh/Year

Connected to dwelling's electricity meter Yes

Electricity Generation Annual

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

Recommendations

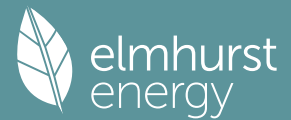
Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Property Reference	Flat 17	Issued on Date	13/04/2024
Assessment Reference	Flat 17 Be Green	Prop Type Ref	
Property			

SAP Rating	91 B	DER	2.80	TER	13.30
Environmental	98 A	% DER < TER			78.95
CO ₂ Emissions (t/year)	0.12	DFEE	23.34	TFEE	26.50
Compliance Check	See BREL	% DFEE < TFEE			11.92
% DPER < TPER	59.32	DPER	28.95	TPER	71.16

Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	North	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	3	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	11.00 m	52.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area	25.00	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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	21.21	7.96	0.00	None	13.25	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	10.11	10.11	0.70	Stairwell Access Corridor 3	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	61.05	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	48.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	48.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	13.25	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	5.30	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	5.30	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	10.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	10.44	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	7

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

System Type

Controls SAP Code

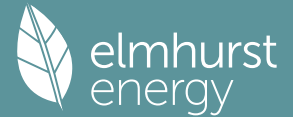
Delayed Start Stat

HETAS approved System

Oil Pump Inside

FI Case

Summary for Input Data



Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	1
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	Yes

Summary for Input Data



Battery Capacity [kWh]	<input type="text" value="10.00"/>									
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer		
0.75	South	30°	None Or Little	No	No	1.00				

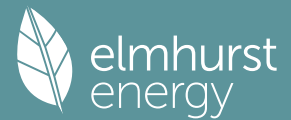
34.0 Small-scale Hydro

	<input type="text" value="None"/>										
Electricity Generated	<input type="text" value="0.00"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 18		Issued on Date	13/04/2024	
Assessment Reference	Flat 18 Be Green	Prop Type Ref			
Property					
SAP Rating	90 B	DER	2.93	TER	12.83
Environmental	98 A	% DER < TER			77.16
CO ₂ Emissions (t/year)	0.15	DFEE	26.85	TFEE	28.96
Compliance Check	See BREL	% DFEE < TFEE			7.30
% DPER < TPER	55.81	DPER	30.25	TPER	68.44
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	East	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	3	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	18.06 m	62.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

17.30 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	7.34	0.00	None	19.75	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	27.09	0.70	Stairwell Access Corridor 3	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	61.05	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	19.75	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	7.90	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	7.90	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	15.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	18.06	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	10

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

System Type

Controls SAP Code

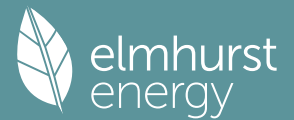
Delayed Start Stat

HETAS approved System

Oil Pump Inside

FI Case

Summary for Input Data



Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	Yes

Summary for Input Data



Battery Capacity [kWh]	<input type="text" value="10.00"/>									
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer		
0.75	South	30°	None Or Little	No	No	1.00				

34.0 Small-scale Hydro

	<input type="text" value="None"/>										
Electricity Generated	<input type="text" value="0.00"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Recommendations

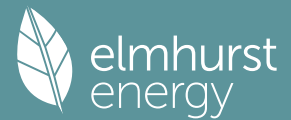
Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data



Property Reference	Flat 19	Issued on Date	13/04/2024
Assessment Reference	Flat 19 Be Green	Prop Type Ref	
Property			

SAP Rating	90 B	DER	2.93	TER	12.83
Environmental	98 A	% DER < TER			77.16
CO ₂ Emissions (t/year)	0.15	DFEE	26.85	TFEE	28.96
Compliance Check	See BREL	% DFEE < TFEE			7.30
% DPER < TPER	55.81	DPER	30.25	TPER	68.44

Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	East	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	3	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	18.06 m	62.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area	17.30	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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	7.34	0.00	None	19.75	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.09	27.09	0.70	Stairwell Access Corridor 3	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	61.05	0.00	None

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

Summary for Input Data



11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	62.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	19.75	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	7.90	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	7.90	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	15.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	18.06	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	10

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

Manufacturer

System Type

Controls SAP Code

Delayed Start Stat

HETAS approved System

Oil Pump Inside

FI Case

Summary for Input Data



Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

One Dwelling	One Dwelling
Export Capable Meter?	Yes
Connected To Dwelling	Yes
Diverter	Yes

Summary for Input Data



Battery Capacity [kWh]	<input type="text" value="10.00"/>									
PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer		
0.75	South	30°	None Or Little	No	No	1.00				

34.0 Small-scale Hydro

	<input type="text" value="None"/>										
Electricity Generated	<input type="text" value="0.00"/>										
Apportioned	<input type="text" value="0.00"/>										
Connected to dwelling's electricity meter	<input type="text" value="Yes"/>										
Electricity Generation	<input type="text" value="Annual"/>										
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



Property Reference	Flat 20		Issued on Date	13/04/2024	
Assessment Reference	Flat 20 Be Green	Prop Type Ref			
Property					
SAP Rating	88 B	DER	2.99	TER	12.40
Environmental	97 A	% DER < TER			75.89
CO ₂ Emissions (t/year)	0.23	DFEE	34.46	TFEE	35.00
Compliance Check	See BREL	% DFEE < TFEE			1.55
% DPER < TPER	53.28	DPER	30.77	TPER	65.87
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	South	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Mid-floor flat	
Which Floor	3	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	1	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	35.60 m	90.50 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

29.60 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	85.50	42.30	0.00	None	43.20	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	3.75	3.75	0.70	Stairwell Access Corridor 3	0.00	Enter Gross Area

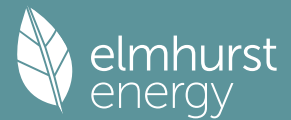
9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)	Shelter Res	Shelter
Party Wall 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	56.70	0.00	None

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
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Summary for Input Data



External Roof 1 External Plane Roof Plasterboard, insulated at ceiling level 0.12 9.00 19.00 19.00 None 0.00 Enter Gross Area 0.00

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	71.50

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	90.50

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	East	10.80	0
Opening	Glazinf Windows/Door	External Wall	North	25.92	0
Opening	Glazinf Windows/Door	External Wall	West	6.48	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	5.30	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	5.30	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	10.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	10.44	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	7

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

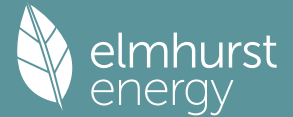
In Winter

In Summer

Model Name

Manufacturer

Summary for Input Data



System Type	Heat Pump
Controls SAP Code	2207
Delayed Start Stat	No
HETAS approved System	No
Oil Pump Inside	No
FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	1
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65
Pipes insulation	Fully insulated primary pipework
In Airing Cupboard	No

L
kWh/day

Summary for Input Data



31.0 Thermal Store

None

32.0 Photovoltaic Unit

One Dwelling

Export Capable Meter? Yes

Connected To Dwelling Yes

Diverter Yes

Battery Capacity [kWh] 10.00

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
0.75	South	30°	None Or Little	No	No	1.00		

34.0 Small-scale Hydro

None

Electricity Generated 0.00

Apportioned 0.00 kWh/Year

Connected to dwelling's electricity meter Yes

Electricity Generation Annual

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



Property Reference	Flat 21	Issued on Date	13/04/2024
Assessment Reference	Flat 21 Be Green	Prop Type Ref	
Property			

SAP Rating	86 B	DER	3.66	TER	15.14
Environmental	97 A	% DER < TER			75.83
CO ₂ Emissions (t/year)	0.23	DFEE	42.94	TFEE	43.20
Compliance Check	See BREL	% DFEE < TFEE			0.61
% DPER < TPER	53.38	DPER	37.64	TPER	80.73

Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	South	
Property Tenture	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Top-floor flat	
Which Floor	4	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	1	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	24.25 m	75.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area	27.60	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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	69.00	32.28	0.00	None	36.72	Enter Gross Area
External Wall 2	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	3.75	3.75	0.70	Stainwell Access Corridor 3	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	44.25	0.00	None

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
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Summary for Input Data



External Roof External Flat Roof Plasterboard, insulated flat roof 0.12 9.00 75.00 75.00 None 0.00 Enter Gross Area 0.00

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	75.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	North	21.60	0
North Windows/Door	Glazinf Windows/Door	External Wall	East	10.80	0
Opening	Glazinf Windows/Door	External Wall	West	4.32	0

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

Yes

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	9.53	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	9.53	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	24.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	34.12	0.07	0.07	Yes
E14 Flat roof	Gov Approved Scheme	34.12	0.08	0.08	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value 0.08 W/m²K

18.0 Pressure Testing

Yes

Designed AP₅₀ 4.00 m³/(h.m²) @ 50 Pa

Property Tested? Yes

Test Method Blower Door

As Built AP₅₀ 3.00 m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present No

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

No

22.0 Lighting

No Fixed Lighting No

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	12

24.0 Main Heating 1

Database

Percentage of Heat 100.00 %

Database Ref. No. 102735

Fuel Type Electricity

SAP Code 0

In Winter 270.50

In Summer 171.31

Model Name AERONA3

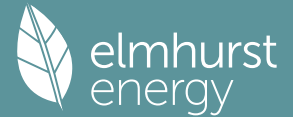
Manufacturer Grant Engineering (UK) Ltd

System Type Heat Pump

Controls SAP Code 2207

Delayed Start Stat No

Summary for Input Data



HETAS approved System	No
Oil Pump Inside	No
FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

Summary for Input Data



Export Capable Meter?

Connected To Dwelling

Diverter

Battery Capacity [kWh]

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
0.75	South	30°	None Or Little	No	No	1.00		

34.0 Small-scale Hydro

Electricity Generated

Apportioned kWh/Year

Connected to dwelling's electricity meter

Electricity Generation

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



Property Reference	Flat 22		Issued on Date	13/04/2024	
Assessment Reference	Flat 22 Be Green	Prop Type Ref			
Property					
SAP Rating	85 B	DER	4.10	TER	14.72
Environmental	97 A	% DER < TER			72.15
CO ₂ Emissions (t/year)	0.23	DFEE	37.82	TFEE	38.36
Compliance Check	See BREL	% DFEE < TFEE			1.40
% DPER < TPER	45.83	DPER	42.58	TPER	78.60
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	West	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Top-floor flat	
Which Floor	4	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	22.30 m	64.60 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

24.60 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	32.13	14.85	0.00	None	17.28	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	14.40	14.40	0.90	Stairwell Access Corridor 4	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	39.90	0.00	None

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
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Summary for Input Data



External Roof External Flat Roof Plasterboard, insulated flat roof 0.12 9.00 64.60 64.60 None 0.00 Enter Gross Area 0.00

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	64.60

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
East Windows/Door	Glazinf Windows/Door	External Wall	East	15.12	0
North Windows/Door	Glazinf Windows/Door	External Wall	North	2.16	0

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

Yes

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	14.40	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	14.40	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	35.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	35.25	0.07	0.07	Yes
E14 Flat roof	Gov Approved Scheme	35.25	0.08	0.08	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value 0.14 W/m²K

18.0 Pressure Testing

Yes

Designed AP₅₀ 4.00 m³/(h.m²) @ 50 Pa

Property Tested? Yes

Test Method Blower Door

As Built AP₅₀ 4.00 m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present No

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

No

22.0 Lighting

No Fixed Lighting No

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	12

24.0 Main Heating 1

Database

Percentage of Heat 100.00 %

Database Ref. No. 102735

Fuel Type Electricity

SAP Code 0

In Winter 263.18

In Summer 170.56

Model Name AERONA3

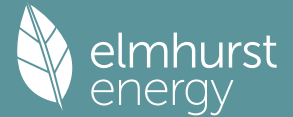
Manufacturer Grant Engineering (UK) Ltd

System Type Heat Pump

Controls SAP Code 2207

Delayed Start Stat No

Summary for Input Data



HETAS approved System	No
Oil Pump Inside	No
FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

Summary for Input Data



Export Capable Meter?

Connected To Dwelling

Diverter

Battery Capacity [kWh]

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
0.50	South	30°	None Or Little	No	No	1.00		

34.0 Small-scale Hydro

Electricity Generated

Apportioned kWh/Year

Connected to dwelling's electricity meter

Electricity Generation

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



Property Reference	Flat 23	Issued on Date	13/04/2024
Assessment Reference	Flat 23 Be Green	Prop Type Ref	
Property			

SAP Rating	90 B	DER	3.31	TER	16.80
Environmental	98 A	% DER < TER			80.30
CO ₂ Emissions (t/year)	0.14	DFEE	36.28	TFEE	41.24
Compliance Check	See BREL	% DFEE < TFEE			12.02
% DPER < TPER	62.57	DPER	33.71	TPER	90.05

Assessor Details	Mr. Giovanni Maurizi	Assessor ID	M052-0001
Client			

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

Orientation	West	
Property Tenure	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Top-floor flat	
Which Floor	4	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	25.35 m	49.73 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area	23.00	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
	External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	50.85	33.57	0.00	None	17.28	Enter Gross Area
	Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	3.75	3.75	0.90	Stairwell Access Corridor 4	0.00	Enter Gross Area
	External Wall 3	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	21.60	21.60	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	18.90	0.00	None

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area	Shelter Code	Shelter Factor	Calculation Type	Openings
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Summary for Input Data



External Roof 1	External Plane Roof	Other	0.12	0.00	49.73	49.73 (m ²)	None	0.00	Enter Gross Area	0.00
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11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	49.73

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
Windows/Door	Glazinf Windows/Door	External Wall	East	12.96	0
Opening	Glazinf Windows/Door	External Wall	West	4.32	0

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
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	5.30	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	5.30	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	10.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	10.44	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value W/m²K

18.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Property Tested?

Test Method

As Built AP₅₀ m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	7

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

SAP Code

In Winter

In Summer

Model Name

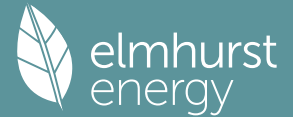
Manufacturer

System Type

Controls SAP Code

Delayed Start Stat

Summary for Input Data



HETAS approved System	No
Oil Pump Inside	No
FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	1
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

Summary for Input Data



Export Capable Meter?

Connected To Dwelling

Diverter

Battery Capacity [kWh]

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
0.75	South	30°	None Or Little	No	No	1.00		

34.0 Small-scale Hydro

Electricity Generated

Apportioned kWh/Year

Connected to dwelling's electricity meter

Electricity Generation

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



Property Reference	Flat 24		Issued on Date	13/04/2024	
Assessment Reference	Flat 24 Be Green	Prop Type Ref			
Property					
SAP Rating	87 B	DER	3.29	TER	14.00
Environmental	97 A	% DER < TER			76.50
CO ₂ Emissions (t/year)	0.23	DFEE	35.00	TFEE	40.16
Compliance Check	See BREL	% DFEE < TFEE			12.83
% DPER < TPER	54.55	DPER	33.87	TPER	74.52
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	East	
Property Tenture	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Top-floor flat	
Which Floor	4	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	33.00 m	81.00 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

32.00 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	76.60	56.62	0.00	None	19.98	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	23.40	23.40	0.70	Stairwell Access Corridor 3	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	24.00	0.00	None

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
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Summary for Input Data



External Roof 1 External Plane Roof Other 0.12 0.00 81.00 81.00 None 0.00 Enter Gross Area 0.00

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	81.00

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
Windows/Door	Glazinf Windows/Door	External Wall	West	19.98	0

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

Yes

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	8.85	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	8.85	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	20.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	24.22	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value 0.05 W/m²K

18.0 Pressure Testing

Yes

Designed AP₅₀ 5.00 m³/(h.m²) @ 50 Pa

Property Tested? Yes

Test Method Blower Door

As Built AP₅₀ 4.00 m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present No

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

No

22.0 Lighting

No Fixed Lighting No

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	12

24.0 Main Heating 1

Database

Percentage of Heat 100.00 %

Database Ref. No. 102735

Fuel Type Electricity

SAP Code 0

In Winter 267.59

In Summer 171.01

Model Name AERONA3

Manufacturer Grant Engineering (UK) Ltd

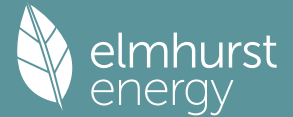
System Type Heat Pump

Controls SAP Code 2207

Delayed Start Stat No

HETAS approved System No

Summary for Input Data



Oil Pump Inside	No
FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

	Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None									
Heat source 2	None									
Heat source 3	None									
Heat source 4	None									
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

32.0 Photovoltaic Unit

Export Capable Meter?

Summary for Input Data



Connected To Dwelling

Diverter

Battery Capacity [kWh]

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
0.75	South	30°	None Or Little	No	No	1.00		

34.0 Small-scale Hydro

Electricity Generated

Apportioned kWh/Year

Connected to dwelling's electricity meter

Electricity Generation

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



Property Reference	Flat 25		Issued on Date	13/04/2024	
Assessment Reference	Flat 25 Be Green	Prop Type Ref			
Property					
SAP Rating	87 B	DER	3.25	TER	13.60
Environmental	97 A	% DER < TER			76.10
CO ₂ Emissions (t/year)	0.22	DFEE	34.56	TFEE	37.99
Compliance Check	See BREL	% DFEE < TFEE			9.03
% DPER < TPER	53.80	DPER	33.45	TPER	72.41
Assessor Details	Mr. Giovanni Maurizi		Assessor ID	M052-0001	
Client					

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

Orientation	East	
Property Tenture	ND	
Transaction Type	5	
Terrain Type	Urban	
1.0 Property Type	Flat, Semi-Detached	
Position of Flat	Top-floor flat	
Which Floor	4	
2.0 Number of Storeys	1	
3.0 Date Built	2023	
3.0 Property Age Band	L	
4.0 Sheltered Sides	3	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Enter TMP value	
Thermal Mass	250.00	kJ/m ² K
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
Basement:	0.00 m	0.00 m ²	0.00 m
Ground floor:	28.00 m	79.60 m ²	3.00 m
1st Storey:	0.00 m	0.00 m ²	0.00 m
2nd Storey:	0.00 m	0.00 m ²	0.00 m
3rd Storey:	0.00 m	0.00 m ²	0.00 m
4th Storey:	0.00 m	0.00 m ²	0.00 m
5th Storey:	0.00 m	0.00 m ²	0.00 m
6th Storey:	0.00 m	0.00 m ²	0.00 m
7th Storey:	0.00 m	0.00 m ²	0.00 m

8.0 Living Area

27.00 m²

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
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	56.50	32.02	0.00	None	24.48	Enter Gross Area
Corridor Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.12	60.00	27.00	27.00	0.70	Stainwell Access Corridor 3	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 1	Filled Cavity with Edge Sealing	Plasterboard on dabs mounted on cement render on both sides, AAC blocks, cavity	0.00	45.00	40.00	0.00	None

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
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Summary for Input Data



External Roof 1 External Plane Other 0.12 9.00 79.60 79.60 None 0.00 Enter Gross 0.00
 Roof Roof Area

10.1 Party Ceilings

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Ceiling 1	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	79.00

11.1 Party Floors

Description	Storey Index	Construction	Kappa (kJ/m ² K)	Area (m ²)
Party Floor 1	Lowest occupied	Precast concrete plank floor (screed laid on rubber), carpeted	30.00	79.60

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Glazinf Windows/Door	Manufacturer	Window	Triple glazed		Air Filled	0.68	Wood	0.70	0.90

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m ²)	Pitch
West Windows/Door	Glazinf Windows/Door	External Wall	West	21.60	0
Opening	Glazinf Windows/Door	External Wall	North	2.88	0

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

Yes

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E1 Steel lintel with perforated steel base plate	Gov Approved Scheme	8.85	0.50	0.50	Yes
E3 Sill	Gov Approved Scheme	8.85	0.04	0.04	Yes
E4 Jamb	Gov Approved Scheme	20.00	0.05	0.05	Yes
E7 Party floor between dwellings (in blocks of flats)	Gov Approved Scheme	24.22	0.07	0.07	Yes
E16 Corner (normal)	Gov Approved Scheme	6.00	0.09	0.09	Yes
E18 Party wall between dwellings	Gov Approved Scheme	6.00	0.06	0.06	Yes

Y-value 0.05 W/m²K

18.0 Pressure Testing

Yes

Designed AP₅₀ 5.00 m³/(h.m²) @ 50 Pa

Property Tested? Yes

Test Method Blower Door

As Built AP₅₀ 4.00 m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present No

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

No

22.0 Lighting

No Fixed Lighting No

Name	Efficacy	Power	Capacity	Count
Lighting 1	75.00	40	3000	12

24.0 Main Heating 1

Database

Percentage of Heat 100.00 %

Database Ref. No. 102735

Fuel Type Electricity

SAP Code 0

In Winter 267.68

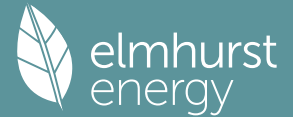
In Summer 171.02

Model Name AERONA3

Manufacturer Grant Engineering (UK) Ltd

System Type Heat Pump

Summary for Input Data



Controls SAP Code	2207
Delayed Start Stat	No
HETAS approved System	No
Oil Pump Inside	No
FI Case	0.00
Flue Type	None or Unknown
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	45.00
Boiler Interlock	No
Combi boiler type	No Combi
Combi keep hot type	None

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	2
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder

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	1.65	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

Summary for Input Data



32.0 Photovoltaic Unit

One Dwelling

Export Capable Meter? Yes

Connected To Dwelling Yes

Diverter Yes

Battery Capacity [kWh] 10.00

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
0.75	South	30°	None Or Little	No	No	1.00		

34.0 Small-scale Hydro

None

Electricity Generated 0.00

Apportioned 0.00 kWh/Year

Connected to dwelling's electricity meter Yes

Electricity Generation Annual

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

U-Value Calculation Report



Assessor Details

Mr. Giovanni Maurizi, M052-0001

Wall External New Wall - Cavity Wall

Wall Type: Standard Wall

Layer	Description	Thickness (mm)	Conductivity (W/mK)	Resistance (m ² K/W)	Fraction (%)
Ext surface				0.0400	
Layer 1	Thermalite Turbo				
	Standard	100	0.1100	0.9091	93.43
	Bridging - Mortar	100	0.8803	0.1136	6.57
Layer 2	Kingspan Kooltherm Insulation				
	Insulation	100	0.0190	5.2632	100.00
Layer 3	Thermalite Turbo				
	Insulation	100	0.1100	0.9091	93.43
	Bridging - Mortar	100	0.8803	0.1136	6.57
Layer 4	Insulated Plasterboard				
	Insulation	37.5	0.0220	1.7045	100.00
Int surface				0.1300	

Total resistance: Upper limit = 8.842 m² K/W

Lower limit = 8.383 m² K/W

Average = 8.613 m² K/W

Total correction = 0.0000 m² K/W

U-value (unrounded) = 0.12 W/m² K

Unheated space: None

Total thickness: 338 mm

U-value: 0.12 W/m² K

Kappa: 0.00 kJ/m² K

U-Value Calculation Report



Assessor Details

Mr. Giovanni Maurizi, M052-0001

Roof External Roof - Flat Roof

Roof Type: Flat Roof standard (no precipitation)

Layer	Description	Thickness (mm)	Conductivity (W/mK)	Resistance (m ² K/W)	Fraction (%)	Density (kr/m ³)	Heat Cap. (J/kgK)
Ext surface				0.0000			
Layer 1	Felt/bitumen layers Standard	10	0.2300	0.0435	100.00		
Layer 2	Kingspan Kooltherm Insulation	150	0.0190	7.8947	100.00		
Layer 3	Vapour Control Layer Membrane	1	0.0000	0.0000	100.00		
Layer 4	Screed Standard	50	1.1500	0.0435	100.00		
Layer 5	Concrete, reinforced (1% steel) Standard	100	2.3000	0.0435	100.00		
Layer 6	Plasterboard, standard Standard	12.5	0.2100	0.0595	100.00		
Int surface				0.1000			

Total resistance: Upper limit = 8.185 m² K/W

Lower limit = 8.185 m² K/W

Average = 8.185 m² K/W

Total correction = 0.0000 m² K/W

U-value (unrounded) = 0.12 W/m² K

Unheated space: None

Total thickness: 324 mm

U-value: 0.12 W/m² K

Kappa: n/a

U-Value Calculation Report



Assessor Details

Mr. Giovanni Maurizi, M052-0001

Floor External Floor - Concrete Slab Floor

Floor Type: Slab On Ground Floor Area = 100.00 m², Perimeter = 40.00 m, Wall thickness = 275.00 mm, Soil: Unknown
Horizontal edge insulation: none Vertical edge insulation: none

Layer	Description	Thickness (mm)	Conductivity (W/mK)	Resistance (m ² K/W)	Fraction (%)	Density (kr/m ³)	Heat Cap. (J/kgK)
Ext surface				0.0400			
Layer 1	Consolidated Hardcore Standard	150	1.3000	0.1154	100.00		
Layer 2	Sand Blinding Standard	50	1.0000	0.0500	100.00		
Layer 3	Visqueen DPM Membrane	1	0.0000	0.0000	100.00		
Layer 4	Concrete, reinforced (2% steel) Standard	100	2.5000	0.0400	100.00		
Layer 5	Kingspan Thermafloor Insulation	150	0.0220	6.8182	100.00		
Layer 6	Vaapour Control Layer Membrane	1	0.0000	0.0000	100.00		
Layer 7	Screed Standard	50	1.1500	0.0435	100.00		
Int surface				0.1700			

Total resistance: Upper limit = 7.067 m² K/W

Lower limit = 7.067 m² K/W

Average = 7.067 m² K/W

Total correction = 0.0000 m² K/W

U-value (unrounded) = 0.12 W/m² K

Unheated space: None

Total thickness: 502 mm

U-value: 0.12 W/m² K

Kappa: n/a