FES GROUP

CONSTRUCTION COMPLIANCE, SUSTAINABILITY, OVERHEATING, RETROFIT

Energy Statement

Energy and Carbon Reduction

North Bradley

Reference Number: 0010034

Date: September 2026

Issue: 1

PLANNING

DESIGN

ON-CONSTRUCTION

EXISTING BUILDINGS

thefesgroup.com

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Summary of changes:

N/A

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Company Profile

Established in 2007 as a family firm, we set out to create a sustainable, resilient business, establishing a happy and positive working environment for both clients and colleagues. It was important for us to offer adaptable and growing solutions for the areas of the construction industry that would benefit from them the most.

Creating an environment that was a pleasure to work in for both colleagues and clients was, and remains, incredibly important to us. Building our future on the foundations of honest relationships, flexibility and efficiency means that we value every client's success as though it were our own.

We have grown to become a trusted construction compliance partner. We continue to grow, to offer packages of sustainability, environmental and retrofit services, with the long-term aim of making our clients' lives easier, so they can focus on the jobs that they enjoy.

Today, the business works with a wide spectrum of clients from household name plc firms, one-off builds and everything in between. Our client list includes many of the nation's major house builders and contractors, as well as universities and public sector organisations. The team also lends their know-how to many architectural practices, M&E consultants and planners.

Introduction

This report has been prepared by the FES Group on behalf of Allison Homes to accompany the planning application for the proposed development known as North Bradley.

The development proposals will see the construction of 70 new dwellings, consisting of detached, semi-detached, and terraced dwellings.

This report reviews the proposed energy and carbon reduction strategy advanced by Allison Homes within the context of local and national planning policy. The report in particular considers and evaluates the measures incorporated into the design of the development to reduce the predicted CO_2 consumption of the site over 2021 Building Regulations under SAP10.

The following documents were considered when formulating the report:

- National Planning Policy Framework 2026 – The NPPF strengthens the emphasis on sustainable development and encourages Local Authorities to adopt standards consistent with the Government's zero carbon building policy and other nationally described standards.
- Building Regulations Part L 2021– Approved Document L 2021 Conservation of Fuel and Power in new dwellings sets minimum energy efficiency and fabric efficiency standards for all new domestic buildings

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Sustainable Design

The building fabric, the building services and the management of a building broadly determine the energy use of a building. In understanding this, design teams can take measures to advance sustainable design from the earliest stages of a development. However sustainability is not limited to issues concerning energy consumption. Material selection, the protection of local environments, addressing flood risk and the health and wellbeing of future occupants are all issues requiring consideration. Addressing all these issues in an integrated and intelligent manner will result in truly sustainable developments.

Material Selection

Significant amounts of energy and natural resources are consumed in the production, transportation and disposal of building materials. Two issues are of significant importance in the procurement of materials: the environmental impact of materials and the sourcing of materials. Allison Homes is dedicated to taking pro-active measures to addressing these issues.

	BRE Green Guide Rating
External Wall	A+
Ground Floor	B
Intermediate Floor	C
Roof	A+
Internal Walls	A
Windows	A

Table 1- Green Guide Rating of Specification

The developer will choose materials which have a lesser environmental impact. This will be implemented during the procurement process. Suppliers will be obliged to produce Environmental Management System certificates covering the sourcing and production of materials. Timber or timber composite products will be sourced from responsible sources. Suppliers will be obliged to provide full Chain of Custody Certificates right through the supply chain; from the initial timber yard, manufacturing process, transformation and distribution. Secure certificates must be produced by valid accrediting bodies – FSC, PEFC, CSA, SFI & MTCC.

Flood Risk

The Flood and Water Management Act 2010, directs developers to avoid, reduce and delay the discharge of rainfall to public sewers and watercourses through the use of Sustainable Urban Drainage Systems (SUDS) with the aim of protecting watercourses and reducing the risk of localised flooding and pollution.

This obligation is taken seriously:

Where possible, impermeable surfaces are kept to a minimum, thus allowing for maximum infiltration (e.g. permeable paving)



Pollution during Construction

The contractor will be required, under the terms of their contract, to minimise dust, fumes, discharges and any other form of pollution on site, in line with best practice policies:

- The Control of Dust and Emissions from Construction & Demolition: Best Practice Guidance.

The sustainable management and monitoring of waste generated during the construction of a development is a major concern to local and national planners.

Furthermore the site will allow the successful segregation of waste on site in line with Best Practice policies. However the contractor will be obliged to adopt many of the principles of the waste hierarchy:

- Accurate specifications of materials and volumes.
- Recycling and re-use of waste on site.
- Arrange take back schemes with suppliers.
- Instruct a licensed waste contractor to segregate site waste for recycling.



Health and Wellbeing

In achieving ever stricter levels of energy efficiency, it is important that designers do not lose sight of the fact that they are building homes that people can live in and not just occupy. This is an integral part of sustainability, and a hugely important consideration if the population (and the market place) is to tolerate the sustainability agenda. While it is quite difficult to measure or even quantify health and wellbeing, the following measures are a sample of the efforts made by Allison Homes to address this issue: The proposed properties will have sufficient living /dining space. While this is obviously a marketing consideration, it does fall within this category.

The principal living rooms have sufficient glazing to allow natural light to penetrate into the rooms. Numerous studies have shown this to be beneficial to the general health and happiness of occupants. Daylighting calculations can be undertaken to demonstrate that living rooms, dining rooms, kitchen and home offices receive adequate daylighting.

- The property will benefit from a garden or private space for recreation however this may not apply to flats. This will take the form of secure rear gardens to each property.
- The property has dedicated internal recycling facilities and accessible external storage in line with the local council waste and recycling collection scheme.

Water Efficiency

The average person consumes some 150 litres per day; this represents an annual increase of 1% since the 1930s. Despite the United Kingdom's wet and temperate climate, climate change will most probably result in an increase in the occurrence of drought orders and hosepipe bans. With this in mind, it is not difficult to appreciate that within the next few decades the UK (particularly the South East) will face regular water shortages.

In response to this water efficiency has gained equal billing, alongside energy efficiency. The following are the principle policy drivers.

- The Approved Document G (2015) restricts new build dwellings to a maximum consumption of 125 litres per person per day. The Water Efficiency Calculator of New Dwellings also includes an allowance for external water use.
- The Code for Sustainable Homes was first introduced in April 2007. While now disbanded, Included within the Code was mandatory water efficiency standards. Homes constructed to Code for Sustainable Homes Level 3 and 4 must achieve a maximum internal water consumption of 105 litres per person per day. Dwellings constructed to Code Levels 5 and 6 must achieve an internal water consumption of 80 litres per person per day.
- Part L 2021 and SAP10 will take account of Part G and water consumption in the calculation of the forecasted energy demand of a dwelling.



The below table details the recommended sanitaryware fittings to be adopted by Allison Homes to meet with the requirement to achieve 125 Litres per person per day as required by Building Regulations Part G 2015.

Installation Type	Unit of Measurement	Capacity/Flow Rate	Use Factor	Fixed Use	Litres Per Person Per Day
WC (Dual Flush)	Full Flush (litres)	6	**1.46**	**0.00**	8.76
	Part Flush (litres)	3	**2.96**	**0.00**	8.88
Taps (excluding kitchen tap)	Flow rate (litres/minute)	5	**1.58**	**1.58**	9.48
Baths (where shower present)	Capacity to overflow (litres)	156	**0.11**	**0.00**	17.16
Showers (where bath present)	Flow rate (litres/minute)	9	**4.37**	**0.00**	39.33
Kitchen sink tap	Flow rate (litres/minute)	5	**0.44**	**10.36**	12.56
Washing Machine	Litres/kg dry load	7	**2.1**	**0.00**	14.70
Dishwasher	Litres/place setting	0.9	**3.60**	**0.00**	3.24
				Total	**114.11**

Contribution from Greywater (litres/person/day)	0
Contribution from Rainwater (litres/person/day)	0
Total Internal Water Consumption	114.11
Normalisation Factor	0.91
Water Consumption with Normalisation Factor	103.84
External Use	5.00
Part G Water Consumption	108.84

Table 2 – Water Consumption

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Renewable Technologies

There are a number of recognised renewable technologies which have the potential to reduce the energy consumption of a dwelling. However given the nature of the development, we judge that the following technologies are worthy of consideration;

- Solar thermal panels.
- Biomass
- Photovoltaic panels.
- Air source heat pumps.
- Combined Heat & Power
- Wind Power

Solar Thermal

Solar thermal panels use radiant solar energy to heat water for domestic consumption. The system works successfully across the UK as they can work in diffuse weather conditions. In comparison to other technologies it is considered a reliable and proven technology. The system works most efficiently when the panel or evacuated tube is mounted on a 10-60° pitch facing due south, though other combinations do work successfully. During late spring to early autumn months, the system can be expected to meet some 70-90% of a dwellings domestic hot water needs.

Most systems in the UK are two panel systems, typically 4 sq m in size and accompanied with a 180-250 litre cylinder with a dedicated solar storage capacity of 65-110 litres. The typical installation costs for solar thermal vary, especially when large volumes are considered. However a rough estimate is £3500 per plot.

Occupants can expect annual savings in the region of £50-85 per year, which is relatively modest. Solar thermal panels do not qualify for feed in tariffs, however it is expected that solar thermal systems will benefit from the Renewable Heat Incentive. A 20-25 year payback can be expected, dependent on usage and dwelling type.

Taking into consideration the requirement of the development, a standard two panel system is unfeasible and is not recommended for consideration.



Biomass

Biomass boilers offer an environmentally sound, heating solution. Heating is generated by burning biomass, such as wood pellets or logs. This will emit the same amount of CO2 as is absorbed while the plants were growing, therefore, the biomass is classed as carbon neutral.

Unfortunately, such a provision for this development is both unfeasible and out of proportion to the requirement.



Photovoltaic

Photovoltaic panels convert sunlight into electricity for use within a dwelling. PV panels use cells to convert light into electricity. A PV cell usually consists of 1 or 2 layers of a semi-conducting material such as silicon. The greater the intensity of sunlight, the more electricity is generated. PV systems can come in different forms. The most aesthetically pleasing are PV tiles which resemble roof tiles. However the most popular are modules which can either sit on the roof or be integrated into it. The technology is most efficient when oriented due south. However panels orientated south of east or west are suitable. Generally panels orientated away from due south require a greater surface area to generate a set amount of energy.

PV is a viable option and if installed on a select number of plots across a development, this would be the most cost effective solution to a site wide CO2 reduction.



Air Source Heat Pumps

Air source heat pumps extract heat from the outside air. The heat is absorbed into a fluid, which is pumped through a heat exchanger. Low grade heat is then extracted by the refrigeration system and after passing through the compressor is concentrated into a higher temperature. This energy is then used to heat water for space and hot water use within the dwelling. While heat pumps use national grid electricity, and so are not a renewable resource, they utilise a heat source which is naturally renewed in our environment and so are considered a low carbon technology.

Heat pumps have stated CoPs in the region of 2-4, though test results outside of the laboratory have produced mixed results. Typically the heat pump is located on an external wall. It is generally accepted that 1kW in heat pump size will provide enough heating for 20m2 of floor space.

Allison Homes have confirmed ASHPs will be installed on all dwellings which is future proofing for Future Homes Standard.



Combined Heat and Power (CHP)

Combined heat and power utilises the waste energy in the generation of electricity to provide space heating and hot water to a development. In conventional means of power generation copious amounts of energy is wasted in the form of heat. The utilisation of this waste heat can see efficiencies of CHP systems typically exceed 90%.

Combined heat and power is not a renewable technology but instead is a DECC recognised low carbon technology which qualified for the Low Carbon Building Programme. To qualify as a renewable technology the use of biomass pellet or bio-diesel would be required. At the present time biomass CHP is very much in its infancy in the UK. Furthermore it is imagined there will be significant problems in locating a sustainable and local source of pellet. Without such a source the reliability of such a system and the net carbon benefit of pellet sourced from a distance are questionable. As a result we do not recommend CHP for consideration on this development.



Wind Power

The principle of harnessing wind power is well established in the UK with access to over 40% of the total European wind resource. Until recently, developments have been concentrated within coastal regions; however technological advances mean that wind power is viable in many urban locations.

Wind turbines are a means of capturing the power within a moving air mass (wind) and converting it into electricity. As yet there is no simple and practical method of incorporating wind generated electricity to sites containing a number of buildings, or requiring high energy usage.

Furthermore, the urban location also means that it would prove difficult to harness sufficient wind energy to meet the needs of the development. The high density of urban areas obstructs air patterns and reduces the efficiency of the turbine. The size of the turbine required is also likely to detract unacceptably from the local area and generate a significant amount of noise, both of which prejudice local residential amenity.

For these reasons, together with the high installation costs, potential noise pollution and high likelihood of not achieving planning approval we are not proposing to employ wind turbines on this site.



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Energy Strategy

The Context

The proposed works fall under the scope of Approved Document L 2021. The Approved Document sets minimum fabric energy efficiency standards and a maximum CO2 emission rate for residential buildings. To place the proposed energy strategy into its correct regulatory context it is worthwhile summarising the minimum standards included in the Approved Document.

Element	Part L 2021 Minimum Standard
External Walls	0.26W/m2K
Roof	0.16W/m2K
Floor	0.18W/m2K
Glazing & Doors	1.60W/m2K
Air Test	8.00m3/h.m2 at 50Pa

Table 3 – Minimum Fabric Efficiency Standards

Proposed Strategy

The National Planning Policy Framework requires that all development proposals are in line with the Government's zero carbon buildings programme.

The figures and calculations detailed in this report have been taken from SAP10 (2021 Building Regulations).

In response to this guidance, and recent shifts within the industry, Allison Homes proposes the adoption of a strategy which addresses the core policy goals of sustainable construction:-

- Reduced CO2 emissions to combat the causes of climate change.
- Reduced energy consumption to address legitimate concerns of energy security.

By reducing the energy requirement of the building, the sustainable credentials of each development are enhanced and are not validated by simply bolting on expensive renewable equipment. By focusing on fabric performance and the provision of efficient heating systems each dwelling is intrinsically "green".

Before the potential of various technologies can be assessed, it is first necessary to calculate the base line energy consumption of the development and hence the target reduction.

The proposed dwellings were modelled in SAP10 to determine the energy consumption and corresponding CO2 emissions of the development. Standard Assessment Procedure, or SAP, is the Government's approved methodology for the calculation of energy consumption and CO2 emissions for new build dwellings.

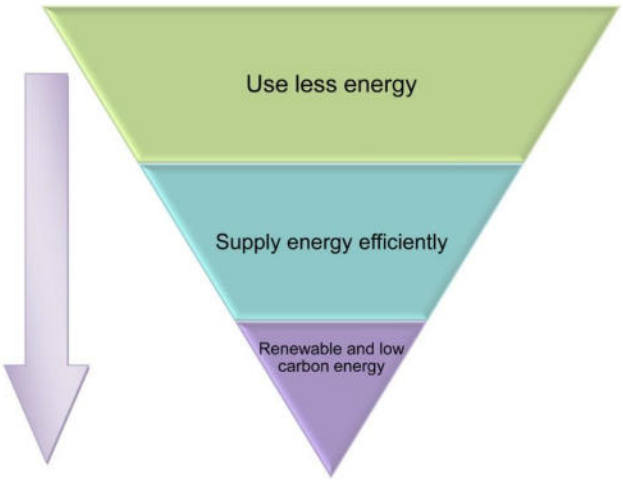
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In line with best practice the proposed energy strategy for North Bradley will adhere to the principles of the Energy Hierarchy;

- Be Lean – reduce the need for energy.
- Be Clean – supply and use energy in the most efficient manner.
- Be Green – supply energy from renewable sources.



Adhering to the principles of the Energy Hierarchy has a number of benefits. The principle benefits are;

- By reducing the energy requirement of each dwelling the renewable requirement shrinks in proportion. This has obvious cost benefits.
- The sustainable credentials of each development are enhanced and are not validated by simply bolting on expensive renewable equipment. By focusing on the fabric performance and the provision of efficient heating systems each dwelling is intrinsically "green".

Be Lean.

Allison Homes have confirmed Lean measures equal to a 7.18% reduction in fabric heat loss across the building envelope. This reduces the need for energy within a dwelling.

Be Clean.

Allison Homes have confirmed Clean measures which include high efficiency ASHPs with heating controls to allow the user to control to ensure efficient use of the main heating system. 100% Low Energy Lighting to be installed alongside dMEV ventilation.

Be Green.

Allison Homes have confirmed Green measures where ASHPs have been installed which is future proofing for the Future Homes Standard along with EV charging points to promote the use of electric/hybrid vehicles.

Establishing a Baseline

To adequately ascertain the potential of Allison Homes' preferred strategy, a baseline energy consumption associated with the development must be calculated. As such the development was modelled in SAP10 to determine the current CO^2 emission and associated energy requirement prior to the incorporation of improved fabric efficiencies and renewable technologies. The table below summarises the results calculated.

House Type	No	Baseline Emission Rate (kg/year)	Baseline Energy Rate (kWh/year)
HT - Burley - DET	1	701.96	3,760.95
HT - Danbury - SEMI	16	13,134.44	68,678.76
HT - Fulford - SEMI	22	20,101.95	104,920.17
HT - Loxley - SEMI-END	6	5,369.73	28,034.00
HT - Loxley - MID	1	798.16	4,154.24
HT - Morley - DET	1	1,058.57	5,537.48
HT - Morley - SEMI-END	6	5,810.03	30,300.33
HT - Morley - MID	1	871.60	4,530.07
HT - Oatley - DET	7	7,365.98	38,490.65
HT - Oatley - SEMI	2	1,890.57	9,847.35
HT - Totley - SEMI-END	6	6,265.90	32,657.46
HT - Totley - MID	1	945.47	4,912.16
TOTAL	**70**	**64,314.37**	**335,823.63**

Table 4 – Baseline Energy Consumption & CO^2

The calculations summarised in the table above confirm North Bradley has a baseline site wide energy requirement of 335,823.63kWh/year and an associated CO2 emission rate of 64,314.37kgCO2/year.

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Fabric and Building Services Specification

Allison Homes proposes a series of fabric and building service enhancements that exceeds the minimum requirements of Part L 2021. By placing a significant emphasis on the performance of the fabric of each property, reductions in energy and carbon will be achieved. The following table details the anticipated fabric efficiency and building services standards to be incorporated into the design. These measures constitute the lean efforts.

Element	Part L 2021	Enhanced Specification
Wall	0.26W/m²K	0.19W/m²K
Roof	0.16W/m²K	0.08W/m²K
Floor	0.18W/m²K	0.11-0.12W/m²K
Glazing & Doors	1.60W/m²K	1.30-1.40W/m²K
Air Test	8.00m3/h.m² at 50Pa	4.50m3/h.m² at 50Pa
Renewables (PV)	40% of Floor Area / 6.50	ASHP

Table 5 – Enhanced Specification Summary & Comparison

The U-values above show that the minimum requirements of Part L have been exceeded.

In addition to the summary above the following additional measures will be incorporated into the design, constituting the **clean** measures to reduce energy consumption;

- Allison Homes have adopted a set of thermal bridging details calculated by Knauf which is being implemented on the site. These reduce thermal bridging throughout junctions and penetrations through the building fabric.
- Efficient independent heating systems will be provided with a programmer, room thermostats and thermostatic radiator values. These will allow the eventual occupants to exercise control over their heating system and thus reduce energy consumption.
- Energy efficient lamps will be installed in each light fitting
- Water consumption is now included in the calculation of a property's energy consumption. Thus each property will adhere to the requirements of Approved Document G– maximum internal water consumption of 125 litres per person per day.

It is clear that the proposed strategy places a great importance on the efficiency of a buildings thermal envelope and internal building services. This emphasis is to be encouraged. It recognises that it is inherently more sustainable to invest resources in reducing a property's long term energy consumption in contrast to short term generation benefits.

Reduced Emission Rate & Energy Requirement

To determine the benefits of the proposed specification, the development was again modelled in SAP10. The table below summarises the results calculated.

House Type	No	Enhanced Emission Rate (kg/year)	Enhanced Energy Rate (kWh/year)
HT - Burley - DET	1	328.37	3,457.63
HT - Danbury - SEMI	16	4,915.81	51,923.29
HT - Fulford - SEMI	22	5,995.96	62,875.56
HT - Loxley - SEMI-END	6	2,023.17	21,350.39
HT - Loxley - MID	1	308.63	3,263.25
HT - Morley - DET	1	324.64	3,389.65
HT - Morley - SEMI-END	6	1,785.98	18,674.70
HT - Morley - MID	1	268.83	2,814.79
HT - Oatley - DET	7	2,807.02	29,502.98
HT - Oatley - SEMI	2	740.60	7,794.89
HT - Totley - SEMI-END	6	1,972.60	20,602.69
HT - Totley - MID	1	298.68	3,130.80
TOTAL	**70**	**21,770.30**	**228,780.63**

Table 6 – Reduced Emission Rate & Energy Requirement

The calculations summarised in the table above confirm North Bradley has a reduced energy requirement of 228,780.63kWh/year and an associated emission rate of 21,770.30kgCO2/year. These are respectively 31.87% and 66.15% reductions over the baseline calculated previously.

Evaluation

The FES Group was instructed by Allison Homes to review the performance of the proposed Energy Strategy for the development at North Bradley. The energy strategy was detailed previously but can be best summarised as follows;

- Allison Homes proposes an energy strategy, which addresses the two policy concerns of sustainable design and construction: climate change and energy security.
- Allison Homes has proposed a fabric first strategy, which aims to achieve long term reductions in CO2 emissions and climate change.
- The proposed fabric and building services specification, with the installation of air source heat pumps will permanently reduce regulated emissions by 66.15% and the proposed energy demand by 31.87%. This is a significant betterment and demonstrates that the proposed development will have a reduced reliance on national resources.

After detailed analysis we can conclude that the preferred energy strategy adheres to the principles and aspirations of sustainable design and construction as advanced by national and local government and the house building industry. We therefore recommend the adoption of the preferred energy strategy by Allison Homes

Future Energy Surveys Ltd T/A The FES Group and its staff shall not to be held liable for any damage or loss sustained as a result of using of the information provided in this report. The report is based on drawings and information provided by the client and/or project design team at the time of issue. The information and the drawings provided to us determine the results within the report. If anything changes during the course of the ongoing design or construction, the reduction and calculations will be incorrect. The FES Group will not be held responsible for the implications of such change.

As such this report should be viewed as providing a reasonable assessment of the predicted performance of the development based on current knowledge.

Appendix A

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Summary for Input Data

Plot Reference	0010034 - HT - Burley - DET	**Issued on Date**	03/09/2026
Assessment Reference	ASHP - As Designed	**Plot Type Ref**	HT - Burley - DET
Plot Address	Plot , HT - Burley - DET, North Bradley	**SAP Version**	10.2

SAP Rating	82 B	**DER**	4.72	**TER**	10.09
Environmental	96 A	**% DER < TER**			53.22
CO_2 Emissions (t/year)	0.3	**DFEE**	37.78	**TFEE**	42.28
Compliance Check	See BREL	**% DFEE < TFEE**			10.63
% DPER < TPER	8.06	**DPER**	49.70	**TPER**	54.06

Assessor Details	Mr. George Leadley	**Assessor ID**	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	Bungalow, Detached	
2.0 Number of Storeys	1	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	33.68 m	69.57 m²	2.40 m

8.0 Living Area 21.73 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	80.68	69.20	0.00	None	11.48	Enter Gross Area

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	92.30
Ground Floor - Block	Dense block, plasterboard on dabs	75.00	45.98

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	69.57	69.57	None	0.00	Enter Gross Area	0.00

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	69.57

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

Summary for Input Data

elmhurst energy

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	3.36	
Rear Windows	Windows	External Wall	West	2.17	
Rear Patio Doors	Patio Door	External Wall	West	3.80	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges	

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	7.59	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	4.76	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	15.30	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	14.52	0.07	0.07	Knauf - Para	No
E10 Eaves (insulation at ceiling level)	Independently assessed	14.52	0.05	0.05	RCD	No
E12 Gable (insulation at ceiling level)	Independently assessed	19.16	0.04	0.04	RCD	No
E16 Corner (normal)	Independently assessed	9.58	0.04	0.04	RCD	No
E5 Ground floor (normal)	Independently assessed	19.16	0.06	0.06	Knauf - Perp	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	2

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

21.0 Fixed Cooling System	No	

22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	m³/(h.m²) @ 50 Pa
Test Method	Blower Door	

22.0 Lighting

No Fixed Lighting	No				
	Name	**Efficacy**	**Power**	**Capacity**	**Count**

Summary for Input Data

elmhurst energy

Downlights	690.00	6.00	4140.00	3
Pendants	115.00	9.00	1035.00	5

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
Controls SAP Code	2210	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	143.00	L
Loss	1.22	kWh/day
Pipes insulation	Fully insulated primary pipework	
31.0 Thermal Store	None	
34.0 Small-scale Hydro	None	

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

Summary for Input Data

None

Summary for Input Data

elmhurst energy

Plot Reference	0010034 - HT - Danbury - SEMI	**Issued on Date**	03/09/2026
Assessment Reference	ASHP - As Designed - As	**Plot Type Ref**	HT - Danbury - SEMI
Plot Address	Plot , HT - Danbury - SEMI, North Bradley	**SAP Version**	10.2

SAP Rating	83 B	**DER**	4.48	**TER**	11.97
Environmental	96 A	**% DER < TER**			62.57
CO_2 Emissions (t/year)	0.28	**DFEE**	33.74	**TFEE**	36.11
Compliance Check	See BREL	**% DFEE < TFEE**			6.58
% DPER < TPER	24.40	**DPER**	47.32	**TPER**	62.59

Assessor Details	Mr. George Leadley	**Assessor ID**	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	16.57 m	34.29 m²	2.31 m
1st Storey:	16.57 m	34.29 m²	2.72 m

8.0 Living Area 17.58 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	83.16	70.50	0.00	None	12.66	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	40.76	0.00	None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	61.08
First Floor	Plasterboard on timber frame	9.00	81.06

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	34.29	34.29	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	34.29

11.0 Heat Loss Floors

Summary for Input Data

elmhurst energy

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.11	None	0.00	75.00	34.29

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	34.29

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	3.23	
Rear Windows	Windows	External Wall	West	2.04	
Rear Patio Doors	Patio Door	External Wall	West	3.80	
LH Windows	Windows	External Wall	South	1.44	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges	

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	8.96	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	6.13	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	19.20	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	8.45	0.07	0.07	Knauf - Para	No
E6 Intermediate floor within a dwelling	Independently assessed	16.57	0.00	0.00	RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	16.57	0.05	0.05	RCD	No
E16 Corner (normal)	Independently assessed	10.04	0.04	0.04	RCD	No
E18 Party wall between dwellings	Independently assessed	10.04	0.04	0.04	RCD	No
P1 Party wall - Ground floor	Independently assessed	8.12	0.09	0.09	Knauf	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	8.12	0.00	0.00		No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	8.12	0.09	0.09	Knauf	No
E5 Ground floor (normal)	Independently assessed	8.12	0.06	0.06	Knauf - Perp	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	3

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

Summary for Input Data

elmhurst energy

Number of flues attached to other heater	0	
Number of blocked chimneys	0	
Number of intermittent extract fans	0	
Number of passive vents	0	
Number of flueless gas fires	0	
21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	m³/(h.m²) @ 50 Pa
Test Method	Blower Door	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Downlights	690.00	6.00	4140.00	8
Pendants	115.00	9.00	1035.00	7

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
Controls SAP Code	2210	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	

Summary for Input Data

Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	143.00	L
Loss	1.22	kWh/day
Pipes insulation	Fully insulated primary pipework	

31.0 Thermal Store None

34.0 Small-scale Hydro None

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	0010034 - HT - Fulford - SEMI	**Issued on Date**	03/09/2026
Assessment Reference	ASHP - As Designed - As	**Plot Type Ref**	HT - Fulford - SEMI
Plot Address	Plot , HT - Fulford - SEMI, North Bradley	**SAP Version**	10.2

SAP Rating	86 B	**DER**	3.29	**TER**	11.03
Environmental	97 A	**% DER < TER**			70.17
CO_2 Emissions (t/year)	0.24	**DFEE**	33.09	**TFEE**	35.47
Compliance Check	See BREL	**% DFEE < TFEE**			6.70
% DPER < TPER	40.07	**DPER**	34.50	**TPER**	57.57

Assessor Details	Mr. George Leadley	**Assessor ID**	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	18.25 m	41.42 m²	2.31 m
1st Storey:	18.25 m	41.42 m²	2.72 m

8.0 Living Area 16.88 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	91.63	78.07	0.00	None	13.56	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	42.46	0.00	None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	73.32
First Floor	Plasterboard on timber frame	9.00	119.41

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	41.42	41.42	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	41.42

11.0 Heat Loss Floors

Summary for Input Data

elmhurst energy

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.11	None	0.00	75.00	41.42

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	41.42

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	3.23	
Rear Windows	Windows	External Wall	West	3.66	
Rear Patio Doors	Patio Door	External Wall	West	3.80	
LH Windows	Windows	External Wall	South	0.72	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	9.64	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	6.81	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	21.75	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	9.79	0.07	0.07	Knauf - Para	No
E6 Intermediate floor within a dwelling	Independently assessed	18.25	0.00	0.00	RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	18.25	0.05	0.05	RCD	No
E16 Corner (normal)	Independently assessed	10.04	0.04	0.04	RCD	No
E18 Party wall between dwellings	Independently assessed	10.04	0.04	0.04	RCD	No
P1 Party wall - Ground floor	Independently assessed	8.46	0.09	0.09	Knauf	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	8.46	0.00	0.00		No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	8.46	0.09	0.09	Knauf	No
E5 Ground floor (normal)	Independently assessed	8.46	0.06	0.06	Knauf - Perp	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	3

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

Summary for Input Data

elmhurst energy

Number of flues attached to other heater	0	
Number of blocked chimneys	0	
Number of intermittent extract fans	0	
Number of passive vents	0	
Number of flueless gas fires	0	
21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	m³/(h.m²) @ 50 Pa
Test Method	Blower Door	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Downlights	690.00	6.00	4140.00	10
Pendants	115.00	9.00	1035.00	7

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
Controls SAP Code	2210	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	

Summary for Input Data

Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	171.00	L
Loss	1.18	kWh/day
Pipes insulation	Fully insulated primary pipework	
31.0 Thermal Store	None	
34.0 Small-scale Hydro	None	

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	0010034 - HT - Loxley - END	**Issued on Date**	03/09/2026
Assessment Reference	ASHP - As Designed - As	**Plot Type Ref**	HT - Loxley - END
Plot Address	Plot , HT - Loxley - END, North Bradley	**SAP Version**	10.2

SAP Rating	83 B	**DER**	4.25	**TER**	11.28
Environmental	96 A	**% DER < TER**			62.32
CO_2 Emissions (t/year)	0.3	**DFEE**	33.60	**TFEE**	35.97
Compliance Check	See BREL	**% DFEE < TFEE**			6.59
% DPER < TPER	23.84	**DPER**	44.85	**TPER**	58.89

Assessor Details	Mr. George Leadley	**Assessor ID**	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, End-Terrace	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	17.82 m	39.67 m²	2.31 m
1st Storey:	17.82 m	39.67 m²	2.72 m

8.0 Living Area 19.94 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	89.46	76.16	0.00	None	13.30	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	43.67	0.00	None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	64.03
First Floor	Plasterboard on timber frame	9.00	85.90

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	39.67	39.67	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	39.67

11.0 Heat Loss Floors

Summary for Input Data

elmhurst energy

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.11	None	0.00	75.00	39.67

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	39.67

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	3.23	
LH Windows	Windows	External Wall	South	0.72	
Rear Windows	Windows	External Wall	West	3.40	
Rear Patio Doors	Patio Door	External Wall	West	3.80	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges	

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	9.41	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	6.57	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	19.50	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	9.12	0.07	0.07	Knauf - Para	No
E6 Intermediate floor within a dwelling	Independently assessed	17.82	0.00	0.00	RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	17.82	0.05	0.05	RCD	No
E16 Corner (normal)	Independently assessed	10.04	0.04	0.04	RCD	No
E18 Party wall between dwellings	Independently assessed	10.04	0.04	0.04	RCD	No
P1 Party wall - Ground floor	Independently assessed	8.70	0.09	0.09	Knauf	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	8.70	0.00	0.00		No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	8.70	0.09	0.09	Knauf	No
E5 Ground floor (normal)	Independently assessed	8.70	0.06	0.06	Knauf - Perp	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	3

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

Summary for Input Data

elmhurst energy

Number of flues attached to other heater	0	
Number of blocked chimneys	0	
Number of intermittent extract fans	0	
Number of passive vents	0	
Number of flueless gas fires	0	
21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	m³/(h.m²) @ 50 Pa
Test Method	Blower Door	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Downlights	690.00	6.00	4140.00	3
Pendants	115.00	9.00	1035.00	8

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
Controls SAP Code	2210	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	

Summary for Input Data

Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	143.00	L
Loss	1.22	kWh/day
Pipes insulation	Fully insulated primary pipework	

31.0 Thermal Store None

34.0 Small-scale Hydro None

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	0010034 - HT - Loxley - MID	**Issued on Date**	03/09/2026
Assessment Reference	ASHP - As Designed	**Plot Type Ref**	HT - Loxley - MID
Plot Address	Plot , HT - Loxley - MID, North Bradley	**SAP Version**	10.2

SAP Rating	84 B	**DER**	3.89	**TER**	10.06
Environmental	97 A	**% DER < TER**			61.33
CO_2 Emissions (t/year)	0.29	**DFEE**	28.17	**TFEE**	30.32
Compliance Check	See BREL	**% DFEE < TFEE**			7.07
% DPER < TPER	21.44	**DPER**	41.13	**TPER**	52.36

Assessor Details	Mr. George Leadley	**Assessor ID**	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Mid-Terrace	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	9.12 m	39.67 m²	2.31 m
1st Storey:	9.12 m	39.67 m²	2.72 m

8.0 Living Area 19.94 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	45.78	33.20	0.00	None	12.58	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	87.35	0.00	None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	64.03
First Floor	Plasterboard on timber frame	9.00	85.90

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	39.67	39.67	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	39.67

11.0 Heat Loss Floors

Summary for Input Data

elmhurst energy

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.10	None	0.00	75.00	39.67

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	39.67

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	3.23	
Rear Windows	Windows	External Wall	West	3.40	
Rear Patio Doors	Patio Door	External Wall	West	3.80	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	8.73	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	5.89	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	17.40	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	9.12	0.07	0.07	Knauf - Para	No
E6 Intermediate floor within a dwelling	Independently assessed	9.12	0.00	0.00	RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	9.12	0.05	0.05	RCD	No
E18 Party wall between dwellings	Independently assessed	20.08	0.04	0.04	RCD	No
P1 Party wall - Ground floor	Independently assessed	17.40	0.09	0.09	Knauf	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	17.40	0.00	0.00		No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	17.40	0.09	0.09	Knauf	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	3

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

Summary for Input Data

elmhurst energy

Number of blocked chimneys	0	
Number of intermittent extract fans	0	
Number of passive vents	0	
Number of flueless gas fires	0	
21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	$m^3/(h.m^2)$ @ 50 Pa
Test Method	Blower Door	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Downlights	690.00	6.00	4140.00	3
Pendants	115.00	9.00	1035.00	8

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
Controls SAP Code	2210	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	

Summary for Input Data

Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	143.00	L
Loss	1.22	kWh/day
Pipes insulation	Fully insulated primary pipework	

31.0 Thermal Store	None
34.0 Small-scale Hydro	None

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

elmhurst energy

Plot Reference	0010034 - HT - Morley - DET	Issued on Date	03/09/2026
Assessment Reference	ASHP - As Designed	Plot Type Ref	HT - Morley - END
Plot Address	Plot , HT - Morley - DET, North Bradley	SAP Version	10.2

SAP Rating	85 B	DER	3.49	TER	11.38
Environmental	97 A	% DER < TER			69.33
CO_2 Emissions (t/year)	0.28	DFEE	36.94	TFEE	39.51
Compliance Check	See BREL	% DFEE < TFEE			6.51
% DPER < TPER	38.79	DPER	36.44	TPER	59.53

Assessor Details	Mr. George Leadley	Assessor ID	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	28.09 m	46.51 m²	2.31 m
1st Storey:	28.09 m	46.51 m²	2.72 m

8.0 Living Area 21.02 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	141.01	127.23	0.00	None	13.78	Enter Gross Area

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	74.52
First Floor	Plasterboard on timber frame	9.00	113.75

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	46.51	46.51	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	46.51

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	46.51

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)

Summary for Input Data

elmhurst energy

First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	46.51

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	3.91	
Rear Windows	Windows	External Wall	West	3.92	
Rear Patio Doors	Patio Door	External Wall	West	3.80	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	9.88	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	7.05	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	23.85	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	10.69	0.07	0.07	Knauf - Para	No
E6 Intermediate floor within a dwelling	Independently assessed	28.09	0.00	0.00	RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	10.69	0.05	0.05	RCD	No
E16 Corner (normal)	Independently assessed	20.08	0.04	0.04	RCD	No
E5 Ground floor (normal)	Independently assessed	17.40	0.06	0.06	Knauf - Perp	No
E12 Gable (insulation at ceiling level)	Independently assessed	17.40	0.04	0.04	RCD	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	3

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

Summary for Input Data

elmhurst energy

21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	$m^3/(h.m^2)$ @ 50 Pa
Test Method	Blower Door	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Downlights	690.00	6.00	4140.00	3
Pendants	115.00	9.00	1035.00	8

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
Controls SAP Code	2210	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	171.00	L
Loss	1.18	kWh/day

Summary for Input Data

Pipes insulation	Fully insulated primary pipework
31.0 Thermal Store	None
34.0 Small-scale Hydro	None

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	0010034 - HT - Morley - END	**Issued on Date**	03/09/2026
Assessment Reference	ASHP - As Designed	**Plot Type Ref**	HT - Morley - END
Plot Address	Plot , HT - Morley - END, North Bradley	**SAP Version**	10.2

SAP Rating	86 B	**DER**	3.20	**TER**	10.41
Environmental	97 A	**% DER < TER**			69.26
CO_2 Emissions (t/year)	0.26	**DFEE**	32.61	**TFEE**	34.98
Compliance Check	See BREL	**% DFEE < TFEE**			6.77
% DPER < TPER	38.37	**DPER**	33.46	**TPER**	54.29

Assessor Details	Mr. George Leadley	**Assessor ID**	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, End-Terrace	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	19.39 m	46.51 m²	2.31 m
1st Storey:	19.39 m	46.51 m²	2.72 m

8.0 Living Area 21.02 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	97.35	83.57	0.00	None	13.78	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	43.66	0.00	None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	74.52
First Floor	Plasterboard on timber frame	9.00	113.75

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	46.51	46.51	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	46.51

11.0 Heat Loss Floors

Summary for Input Data

elmhurst energy

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.11	None	0.00	75.00	46.51

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	46.51

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	3.91	
Rear Windows	Windows	External Wall	West	3.92	
Rear Patio Doors	Patio Door	External Wall	West	3.80	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	9.88	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	7.05	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	23.85	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	10.69	0.07	0.07	Knauf - Para	No
E6 Intermediate floor within a dwelling	Independently assessed	19.39	0.00	0.00	RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	19.39	0.05	0.05	RCD	No
E16 Corner (normal)	Independently assessed	10.04	0.04	0.04	RCD	No
E18 Party wall between dwellings	Independently assessed	10.04	0.04	0.04	RCD	No
P1 Party wall - Ground floor	Independently assessed	8.70	0.09	0.09	Knauf	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	8.70	0.00	0.00		No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	8.70	0.09	0.09	Knauf	No
E5 Ground floor (normal)	Independently assessed	8.70	0.06	0.06	Knauf - Perp	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	3

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

Summary for Input Data

elmhurst energy

Number of flues attached to other heater	0	
Number of blocked chimneys	0	
Number of intermittent extract fans	0	
Number of passive vents	0	
Number of flueless gas fires	0	
21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	m³/(h.m²) @ 50 Pa
Test Method	Blower Door	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Downlights	690.00	6.00	4140.00	3
Pendants	115.00	9.00	1035.00	8

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
Controls SAP Code	2210	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	

Summary for Input Data

Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	171.00	L
Loss	1.18	kWh/day
Pipes insulation	Fully insulated primary pipework	
31.0 Thermal Store	None	
34.0 Small-scale Hydro	None	

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	0010034 - HT - Morley - MID	**Issued on Date**	03/09/2026
Assessment Reference	ASHP - As Designed	**Plot Type Ref**	HT - Morley - MID
Plot Address	Plot , HT - Morley - MID, North Bradley	**SAP Version**	10.2

SAP Rating	88 B	**DER**	2.89	**TER**	9.37
Environmental	97 A	**% DER < TER**			69.16
CO_2 Emissions (t/year)	0.23	**DFEE**	27.95	**TFEE**	30.21
Compliance Check	See BREL	**% DFEE < TFEE**			7.49
% DPER < TPER	37.87	**DPER**	30.26	**TPER**	48.70

Assessor Details	Mr. George Leadley	**Assessor ID**	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Mid-Terrace	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	10.69 m	46.51 m²	2.31 m
1st Storey:	10.69 m	46.51 m²	2.72 m

8.0 Living Area 21.02 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	53.69	39.91	0.00	None	13.78	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	87.32	0.00	None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	74.52
First Floor	Plasterboard on timber frame	9.00	113.75

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	46.51	46.51	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	46.51

11.0 Heat Loss Floors

Summary for Input Data

elmhurst energy

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.10	None	0.00	75.00	46.51

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	46.51

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	3.91	
Rear Windows	Windows	External Wall	West	3.92	
Rear Patio Doors	Patio Door	External Wall	West	3.80	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	9.88	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	7.05	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	23.85	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	10.69	0.07	0.07	Knauf - Para	No
E6 Intermediate floor within a dwelling	Independently assessed	10.69	0.00	0.00	RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	10.69	0.05	0.05	RCD	No
E18 Party wall between dwellings	Independently assessed	20.08	0.04	0.04	RCD	No
P1 Party wall - Ground floor	Independently assessed	17.40	0.09	0.09	Knauf	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	17.40	0.00	0.00		No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	17.40	0.09	0.09	Knauf	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	3

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

Summary for Input Data

elmhurst energy

Number of blocked chimneys	0	
Number of intermittent extract fans	0	
Number of passive vents	0	
Number of flueless gas fires	0	
21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	$m^3/(h.m^2)$ @ 50 Pa
Test Method	Blower Door	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Downlights	690.00	6.00	4140.00	3
Pendants	115.00	9.00	1035.00	8

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
Controls SAP Code	2210	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	

Summary for Input Data

Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	171.00	L
Loss	1.18	kWh/day
Pipes insulation	Fully insulated primary pipework	

31.0 Thermal Store None

34.0 Small-scale Hydro None

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	0010034 - HT - Oatley - DET	**Issued on Date**	03/09/2026
Assessment Reference	ASHP - As Designed - As	**Plot Type Ref**	HT - Oatley - DET
Plot Address	Plot , HT - Oatley - DET, North Bradley	**SAP Version**	10.2

SAP Rating	81 B	**DER**	4.31	**TER**	11.31
Environmental	96 A	**% DER < TER**			61.89
CO_2 Emissions (t/year)	0.36	**DFEE**	36.78	**TFEE**	39.37
Compliance Check	See BREL	**% DFEE < TFEE**			6.59
% DPER < TPER	23.36	**DPER**	45.30	**TPER**	59.10

Assessor Details	Mr. George Leadley	**Assessor ID**	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	207.24	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	28.09 m	46.52 m²	2.31 m
1st Storey:	28.09 m	46.52 m²	2.72 m

8.0 Living Area 15.39 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	141.04	125.34	0.00	None	15.70	Enter Gross Area

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	4.67
First Floor	Plasterboard on timber frame	9.00	105.75
Ground Floor - Block	Dense block, plasterboard on dabs	75.00	74.71

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	46.52	46.52	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	46.52

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	46.52

11.2 Internal Floors

Summary for Input Data

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	46.52

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	5.83	
LH Windows	Windows	External Wall	South	1.28	
LH Patio Doors	Patio Door	External Wall	South	3.80	
RH Windows	Windows	External Wall	North	2.64	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges	

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	11.46	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	8.63	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	26.40	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	17.40	0.07	0.07	Knauf - Para	No
E6 Intermediate floor within a dwelling	Independently assessed	28.09	0.00	0.00	RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	28.09	0.05	0.05	RCD	No
E16 Corner (normal)	Independently assessed	20.08	0.04	0.04	RCD	No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	8.70	0.09	0.09	Knauf	No
E5 Ground floor (normal)	Independently assessed	10.69	0.06	0.06	Knauf - Perp	No

Y-value	0.03	W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	3

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

Summary for Input Data

elmhurst energy

Number of passive vents	0	
Number of flueless gas fires	0	
21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	m³/(h.m²) @ 50 Pa
Test Method	Blower Door	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Downlights	690.00	6.00	4140.00	3
Pendants	115.00	9.00	1035.00	10

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
In Winter	262.09	
In Summer	183.42	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
System Type	Heat Pump	
Controls SAP Code	2210	
Controls description	Programmer, room thermostat and TRVs	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	

Summary for Input Data

Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	163.00	L
Loss	1.54	kWh/day
Pipes insulation	Fully insulated primary pipework	

31.0 Thermal Store	None
34.0 Small-scale Hydro	None

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	0010034 - HT - Oatley - SEMI	**Issued on Date**	03/09/2026
Assessment Reference	ASHP - As Designed - As	**Plot Type Ref**	HT - Oatley - SEMI
Plot Address	Plot , HT - Oatley - SEMI, North Bradley	**SAP Version**	10.2

SAP Rating	83 B	**DER**	3.98	**TER**	10.16
Environmental	96 A	**% DER < TER**			60.83
CO_2 Emissions (t/year)	0.33	**DFEE**	31.66	**TFEE**	34.06
Compliance Check	See BREL	**% DFEE < TFEE**			7.06
% DPER < TPER	20.84	**DPER**	41.89	**TPER**	52.92

Assessor Details	Mr. George Leadley	**Assessor ID**	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Semi-Detached	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	19.39 m	46.52 m²	2.31 m
1st Storey:	19.39 m	46.52 m²	2.72 m

8.0 Living Area 15.39 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	97.36	81.66	0.00	None	15.70	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	43.67	0.00	None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	4.67
First Floor	Plasterboard on timber frame	9.00	105.75
Ground Floor - Block	Dense block, plasterboard on dabs	75.00	74.71

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	46.52	46.52	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	46.52

11.0 Heat Loss Floors

Summary for Input Data

elmhurst energy

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.11	None	0.00	75.00	46.52

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	46.52

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	5.83	
LH Windows	Windows	External Wall	South	1.28	
LH Patio Doors	Patio Door	External Wall	South	3.80	
RH Windows	Windows	External Wall	North	2.64	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	11.46	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	8.63	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	26.40	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	8.70	0.07	0.07	Knauf - Para	No
E6 Intermediate floor within a dwelling	Independently assessed	19.39	0.00	0.00	RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	19.39	0.05	0.05	RCD	No
E16 Corner (normal)	Independently assessed	10.04	0.04	0.04	RCD	No
E18 Party wall between dwellings	Independently assessed	10.04	0.04	0.04	RCD	No
P1 Party wall - Ground floor	Independently assessed	8.70	0.09	0.09	Knauf	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	8.70	0.00	0.00		No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	8.70	0.09	0.09	Knauf	No
E5 Ground floor (normal)	Independently assessed	10.69	0.06	0.06	Knauf - Perp	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	3

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

Summary for Input Data

elmhurst energy

Number of flues attached to other heater	0	
Number of blocked chimneys	0	
Number of intermittent extract fans	0	
Number of passive vents	0	
Number of flueless gas fires	0	
21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	m³/(h.m²) @ 50 Pa
Test Method	Blower Door	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Downlights	690.00	6.00	4140.00	3
Pendants	115.00	9.00	1035.00	10

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
Controls SAP Code	2210	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	

Summary for Input Data

Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	163.00	L
Loss	1.54	kWh/day
Pipes insulation	Fully insulated primary pipework	

31.0 Thermal Store	None	
34.0 Small-scale Hydro	None	

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	0010034 - HT - Totley - END	**Issued on Date**	03/09/2026
Assessment Reference	ASHP - As Designed - As	**Plot Type Ref**	HT - Totley - END
Plot Address	Plot , HT - Totley - END, North Bradley	**SAP Version**	10.2

SAP Rating	86 B	**DER**	3.06	**TER**	9.72
Environmental	97 A	**% DER < TER**			68.52
CO_2 Emissions (t/year)	0.29	**DFEE**	32.49	**TFEE**	34.83
Compliance Check	See BREL	**% DFEE < TFEE**			6.70
% DPER < TPER	36.91	**DPER**	31.96	**TPER**	50.66

Assessor Details	Mr. George Leadley	**Assessor ID**	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, End-Terrace	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	20.90 m	53.72 m²	2.31 m
1st Storey:	20.90 m	53.72 m²	2.72 m

8.0 Living Area 15.42 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	104.91	89.49	0.00	None	15.42	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	45.85	0.00	None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	94.43
First Floor	Plasterboard on timber frame	9.00	134.26

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	53.72	53.72	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	53.72

11.0 Heat Loss Floors

Summary for Input Data

elmhurst energy

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.11	None	0.00	75.00	53.72

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	53.72

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	5.72	
Rear Windows	Windows	External Wall	West	3.75	
Rear Patio Doors	Patio Door	External Wall	West	3.80	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	11.00	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	8.17	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	24.30	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	11.77	0.07	0.07	Knauf - Para	No
E6 Intermediate floor within a dwelling	Independently assessed	20.90	0.00	0.00	RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	20.90	0.05	0.05	RCD	No
E16 Corner (normal)	Independently assessed	10.04	0.04	0.04	RCD	No
E5 Ground floor (normal)	Independently assessed	9.13	0.06	0.06	Knauf - Perp	No
E18 Party wall between dwellings	Independently assessed	10.04	0.04	0.04	RCD	No
P1 Party wall - Ground floor	Independently assessed	9.13	0.09	0.09	Knauf	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	9.13	0.00	0.00		No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	9.13	0.09	0.09	Knauf	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	3

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

Summary for Input Data

elmhurst energy

Number of flues attached to other heater	0	
Number of blocked chimneys	0	
Number of intermittent extract fans	0	
Number of passive vents	0	
Number of flueless gas fires	0	
21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	m³/(h.m²) @ 50 Pa
Test Method	Blower Door	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Downlights	690.00	6.00	4140.00	3
Pendants	115.00	9.00	1035.00	10

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
Controls SAP Code	2210	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	

Summary for Input Data

Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	199.00	L
Loss	1.32	kWh/day
Pipes insulation	Fully insulated primary pipework	

31.0 Thermal Store None

34.0 Small-scale Hydro None

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None

Summary for Input Data

Plot Reference	0010034 - HT - Totley - MID	**Issued on Date**	03/09/2026
Assessment Reference	ASHP - As Designed	**Plot Type Ref**	HT - Totley - END
Plot Address	Plot , HT - Totley - MID, North Bradley	**SAP Version**	10.2

SAP Rating	88 B	**DER**	2.78	**TER**	8.80
Environmental	97 A	**% DER < TER**			68.41
CO_2 Emissions (t/year)	0.26	**DFEE**	28.30	**TFEE**	30.58
Compliance Check	See BREL	**% DFEE < TFEE**			7.45
% DPER < TPER	36.26	**DPER**	29.14	**TPER**	45.72

Assessor Details	Mr. George Leadley	**Assessor ID**	P719-0001
Client	Allison Homes, Allison Homes		

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

Orientation	East	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Mid-Terrace	
2.0 Number of Storeys	2	
3.0 Date Built	2026	
4.0 Sheltered Sides	2	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	0.00	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	11.77 m	53.72 m²	2.31 m
1st Storey:	11.77 m	53.72 m²	2.72 m

8.0 Living Area 15.42 m²

9.0 External Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	59.06	43.64	0.00	None	15.42	Enter Gross Area

9.1 Party Walls

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	Shelter Res	Shelter
Party Wall	Filled Cavity with Edge Sealing	Single plasterboard on dabs both sides, lightweight aggregate blocks, cavity or cavity fill	0.00	110.00	91.69	0.00	None

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Plasterboard on timber frame	9.00	94.43
First Floor	Plasterboard on timber frame	9.00	134.26

10.0 External Roofs

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
Cold Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.08	9.00	53.72	53.72	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Kappa	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	9.00	53.72

11.0 Heat Loss Floors

Summary for Input Data

elmhurst energy

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.10	None	0.00	75.00	53.72

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
First Floor	+1	Plasterboard ceiling, carpeted chipboard floor	18.00	53.72

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Front Door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.30
Windows	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.44			1.30
Patio Door	BFRC, BSI or CERTASS data	Window	Double Low-E Soft 0.05			0.38			1.40

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Front Door	Front Door	External Wall	East	2.15	
Front Windows	Windows	External Wall	East	5.72	
Rear Windows	Windows	External Wall	West	3.75	
Rear Patio Doors	Patio Door	External Wall	West	3.80	

14.0 Conservatory	None	
15.0 Draught Proofing	100	%
16.0 Draught Lobby	No	

17.0 Thermal Bridging	Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted	Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	11.00	0.07	0.07	IGHi-Therm	No
E3 Sill	Independently assessed	8.17	0.03	0.03	RCD	No
E4 Jamb	Independently assessed	24.30	0.02	0.02	RCD	No
E5 Ground floor (normal)	Independently assessed	11.77	0.07	0.07	Knauf - Para	No
E6 Intermediate floor within a dwelling	Independently assessed	11.77	0.00	0.00	RCD	No
E10 Eaves (insulation at ceiling level)	Independently assessed	11.77	0.05	0.05	RCD	No
E18 Party wall between dwellings	Independently assessed	20.08	0.04	0.04	RCD	No
P1 Party wall - Ground floor	Independently assessed	18.26	0.09	0.09	Knauf	No
P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	18.26	0.00	0.00		No
P4 Party wall - Roof (insulation at ceiling level)	Independently assessed	18.26	0.09	0.09	Knauf	No

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes
Approved Installation	Yes
Mechanical Ventilation data Type	Database
Type	Mechanical extract ventilation - decentralised
MV Reference Number	500787
Duct Type	Rigid
Wet Rooms	3

19.1 Mechanical extract ventilation - Decentralised

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

20.0 Fans, Open Fireplaces, Flues

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

Summary for Input Data

elmhurst energy

Number of blocked chimneys	0	
Number of intermittent extract fans	0	
Number of passive vents	0	
Number of flueless gas fires	0	
21.0 Fixed Cooling System	No	
22.0 Pressure Testing	Yes	
Designed AP_{50}	4.50	m³/(h.m²) @ 50 Pa
Test Method	Blower Door	
22.0 Lighting		
No Fixed Lighting	No	

Name	Efficacy	Power	Capacity	Count
Downlights	690.00	6.00	4140.00	3
Pendants	115.00	9.00	1035.00	10

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	107446	
Fuel Type	Electricity	
Model Name	Logic Air 4kW	
Manufacturer	Ideal Boilers	
Controls SAP Code	2210	
Is MHS Pumped	Pump in unheated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	45.00	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
27.0 Secondary Heating	None	
28.0 Water Heating		
Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System	No	
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
Immersion Only Heating Hot Water	No	

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Main Bathroom	Combi boiler or unvented hot water system	6.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	

Summary for Input Data

Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	199.00	L
Loss	1.32	kWh/day
Pipes insulation	Fully insulated primary pipework	

31.0 Thermal Store	None
34.0 Small-scale Hydro	None

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

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None