

# **Energy Statement**

# **Energy and Carbon Reduction**

Accrington Road, Whalley

Reference Number: 008537

Date: December 2022

Issue: Initial

thefesgroup.com



**PLANNING** 



DESIGN



**ON-CONSTRUCTION** 



**EXISTING BUILDINGS** 

Project name: Accrington Road, Whalley

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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 acoustic 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.



#### ACCRINGTON ROAD, WHALLEY

### Introduction

This report has been prepared by the FES Group on behalf of Oakmere Homes to accompany the planning application for the proposed development known as Accrington Road, Whalley.

The development proposals will see the construction of 74 new dwellings, consisting of detached, semi detached and apartments.

This report reviews the proposed energy and carbon reduction strategy advanced by Oakmere 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 2021 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.
- 10% reduction in emissions as confirmed in email from Mark Brown on 29th November 2022.



### 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. Oakmere Homes is dedicated to taking pro-active measures to addressing these issues.

	BRE Green Guide Rating
External Wall	A+
Ground Floor	В
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)

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.



#### **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.



#### 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 Oakmere 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 except the apartments. 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 sanitary ware fittings to be adopted by Oakmere 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)	3	1.46	0.00	4.38
	Part Flush (litres)	6	2.96	0.00	17.76
Taps (excluding kitchen tap)	Flow rate (litres/minute)	7	1.58	1.58	12.64
Baths (where shower present)	Capacity to overflow (litres)	200	0.11	0.00	22
Showers (where bath present)	Flow rate (litres/minute)	9	4.37	0.00	39.33
Kitchen sink tap	Flow rate (litres/minute)	7	0.44	10.36	13.44
Washing Machine	Litres/kg dry load	8.17	2.1	0.00	17.157
Dishwasher	Litres/place setting	1.25	3.60	0.00	4.50
				Total	131.21

Contribution from Greywater (litres/person/day)	0
Contribution from Rainwater (litres/person/day)	0
Total Internal Water Consumption	131.21
Normalisation Factor	0.91
Water Consumption with Normalisation Factor	119.40
External Use	5.00
Part G Water Consumption	124.40

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 proposed development, the site layout and orientation a two panel systems is 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. As a result, Oakmere Homes have confirmed that PV will be installed to achieve compliance and to address the condition.



#### **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.



#### 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.



### **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, Oakmere Homes proposes the adoption of a energy 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.

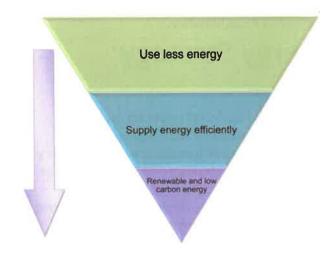
The proposed dwellings were modelled in SAP10 to determine the energy consumption and corresponding CO2 emissions of the development. Standard Assessment Procedure, or SAP, is the Government's approved methodology for the calculation of energy consumption and CO2 emissions for new build dwellings.

In line with best practice the proposed energy strategy for Accrington Road, Whalley 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.

Oakmere Homes have confirmed Lean measures equal to a 0.91% reduction in fabric heat loss across the building envelope. This greatly reduces the need for energy within a dwelling.

#### Be Clean.

Oakmere Homes have confirmed Clean measures which include high efficiency combi gas boilers with time, temperature & zone controls to allow the user to maximise the control to ensure efficient use of the main heating system. 100% Low Energy Lighting to be installed alongside natural ventilation and trickle ventilation.

#### Be Green.

Oakmere Homes have confirmed Green measures where Photovoltaic panels are being considered for the condition to address the 10% reduction in regulated emissions.



### Establishing a Baseline

To adequately ascertain the potential of Oakmere 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<sup>2</sup> 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 - Apartments - GF - End	12	10,452.53	54,565.92
HT - Apartments - GF - Mid	7	5,778.50	30,184.82
HT - Apartments - MF - End	9	6,580.41	34,175.68
HT - Apartments - MF - Mid	8	5,491.40	28,511.04
HT - Apartments - TF - End	11	9,393.62	47,325.93
HT - Apartments - TF - Mid	10	7,945.94	41,453.90
HT - Bowfell - Det	2	2,205.63	11,512.46
HT - Brathay - Semi	4	4,057.10	21,215.53
HT - Grasmere - Det	4	5,728.17	29,975.66
HT - Kirkstone - Det	4	5,075.43	26,518.86
HT - Wasdale - Det	3	4,249.69	22,252.04
TOTAL	74	66,958.41	347,691.83

#### Table 4 - Baseline Energy Consumption & CO<sup>2</sup>

The calculations summarised in the table above confirm Accrington Road, Whalley has a baseline site wide energy requirement of 347,691.83 kWh/year and an associated CO2 emission rate of 66,958.41 kgCO2/year.

#### **Fabric and Building Services Specification**

Oakmere 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	0.18W/m2K
Roof	0.16W/m2K	0.08W/m2K
Floor	0.18W/m2K	0.13-0.16W/m2K
Glazing & Doors	1.60W/m2K	1.20W/m2K
Air Test	8.00m3/h.m2at50Pa	4.00m3/h.m2at50Pa
Renewables (PV)	40% of ground floor area / 6.50	See Table 6

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;

- Oakmere Homes have adopted a set of ACDs and assumed thermal bridging details which is being implemented on the site. These reduce thermal bridging throughout junctions and penetrations through the building fabric however, these values are not final and should be calculated in accordance with the build up.
- 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.

Housetypes	Dwelling Type	Total kWp
Apartment	Ground Floor, End	4.42
Apartment	Ground Floor, Mid	4.42
Apartment	Mid Floor, End	4.76
Apartment	Mid Floor, Mid	4.42
Apartment	Top Floor, End	4.42
Apartment	Top Floor, Mid	4.42
Bowfell	Det	5.78
Brathay	Semi	5.78
Grasmere	Det	6.80
Kirkstone	Det	7.48
Kirkstone	Det	7.48
Wasdale	Det	6.46

#### Table 6 - PV array to achieve compliance

 Table 6 shows the PV array required to achieve compliance under Part L 2021. To address the condition an additional PV array is required which is confirmed on page 12.

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 - Apartments - GF - End	12	9,954.79	53,872.99
HT - Apartments - GF - Mid	7	5,493.84	29,820.46
HT - Apartments - MF - End	9	6,075.35	33,085.04
HT - Apartments - MF - Mid	8	5,244.16	28,498.03
HT - Apartments - TF - End	11	8,597.39	46,547.60
HT - Apartments - TF - Mid	10	7,392.90	40,128.22
HT - Bowfell - Det	2	2,067.54	11,220.71
HT - Brathay - Semi	4	3,783.35	20,724.19
HT - Grasmere - Det	4	5,486.43	29,765.45
HT - Kirkstone - Det	4	4,821.14	26,446.20
HT - Wasdale - Det	3	4,051.17	21,943.24
TOTAL	74	62,968.06	342,052.13

#### Table 7 - Reduced Emission Rate & Energy Requirement

The calculations summarised in the table above confirm Accrington Road, Whalley has a reduced energy requirement of 342,052.13 kWh/year and an associated emission rate of 62,968.06 kgCO2/year. These are respectively 1.62% and 5.96% reductions over the baseline calculated previously.

In order to comply with the planning requirements, it is necessary for this development to show measures have been taken to ensure high energy efficiency and best practice with regards to energy consumption inline with the Energy Hierarchy.



#### **Accrington Road, Whalley**

### **Proposed Solution**

To satisfy the requirements of achieving a 10% site wide carbon reduction, Oakmere Homes proposes the incorporation of solar PV to the development. The technology can be justified on the following grounds:-

- PV is a proven and reliable LZC technology.
- There is sufficient roof space to accommodate the technology.

The Planning Condition requires the incorporation of sufficient solar PV to generate a minimum of 10% onsite emissions. In order to comply with this the client must offset a total of **6,695.84 kg/year**.

A total CO<sub>2</sub> reduction after improvements have been applied reduces CO<sub>2</sub> on the site by 3,990.35 Kg/year.

The client will be required to supply a suitably [proposed technology] capable of generating at least **2,705.49 kg/year**. This figure is **4.04%** of the site wide emissions calculated post fabric improvement.

The above figure can also be converted into kWh/year as follows.

2,705.49 / 0.233 = 11,611.55 kWh/year.



### **Evaluation**

The FES Group was instructed by Oakmere Homes to review the performance of the proposed Energy Strategy for the development at Accrington Road, Whalley. The energy strategy was detailed previously but can be best summarised as follows;

- Oakmere Homes proposes an energy strategy, which addresses the two policy concerns of sustainable design and construction: climate change and energy security.
- Oakmere Homes has proposed a strategy, which aims to achieve long term reductions in CO2 emissions and climate change.
- The proposed fabric and building services specification will permanently reduce regulated emissions by 5.96% and the proposed energy demand by 1.62% This is a significant betterment and demonstrates that the proposed development will have a reduced reliance on national resources (gas and electricity).
- In order to address the planning requirements, renewable technologies have been proposed capable of producing 4.04% on site regulated emissions. This will be achieved through the installation of a solar PV capable of generating 2,705.49 kg/year or 11,611.55 kWh/year.

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 Oakmere 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





Property Reference	0085	37 - HT - A	Apt - GF	- Mid					Iss	ued on D	ate	14/12	/2022
Assessment Reference	As D	esigned				Pro	р Туре	Ref	0085	37-SAP-	Apartm	ent-GF-I	/lid
Property	Plot ,	Accringto	n Road, \	Whalley									
SAP Rating				97 A	DER		9.65	i .		TER		10	.15
Environmental				92 A	% DEF	R < TER						4.9	3
CO <sub>2</sub> Emissions (t/year)				0.8	DFEE	-	28.3	19		TFEE		28	.51
Compliance Check				See BREL	% DFE	E < TFE	E					0.4	
% DPER < TPER		de la		1.20	DPER		52.3	8		TPER			.02
Assessor Details	Mr. Benja	min Wood					- Letterspieler			Asses	sor ID		17-0001
Client	Oakmere									710000			17-0001
SUMMARY FOR INPL			/ Build (	(As Designed)									
Orientation				East									
Property Tenture				ND									
Transaction Type				6									
Terrain Type				Suburban									
1.0 Property Type				Flat, Mid-Terrace									
Position of Flat				Ground-floor flat									
Which Floor				0									
2.0 Number of Storeys				1									
3.0 Date Built				2022									
4.0 Sheltered Sides				2									
5.0 Sunlight/Shade				Average or unknown									
6.0 Thermal Mass Parame	eter			Precise calculation									
7.0 Electricity Tariff				Standard						1			
Smart electricity meter f	fitted			No									
Smart gas meter fitted				No									
7.0 Measurements				Ground floo		Loss P 24.11	erimete m	r In		Floor Are	a A		Storey Hei
8.0 Living Area				18.85						m²			
9.0 External Walls Description	Туре	Construc	tion		U-Vafue	Карра	Gross	Nett	Shelter	Shel	tor	Onenings	Area Calcula
External Wall	Timber Frame Timber Frame			one layer of plasterboard) wo layers of plasterboard)			Area(m²). 25.99 29.46		Res 0.00 0.50	Nor Stairwell Corrio	e Access	6,88 1,90	Type Enter Gross / Enter Gross /
9.1 Party Walls	T		Dam-4	tion				11.1/4-1	P+			al4c -	ON THE
Description	Туре		Construc					U-Value (W/m²K)	(kJ/m	<sup>2</sup> K) (m <sup>2</sup>	) R	elter les	Shelter
Party Wall	Filled Car Edge Sea			asterboard on both si- ut sheathing board	des, twin	timber f	rame	0.00	20.0	0 29.6	4		None
9.2 internal Walls													
Description		Co	onstructi	ion								Kap <sub>i</sub> (kJ/m	
Ground Floor		Pla	asterboai	rd on timber frame								9.0	
10.1 Party Ceilings Description		Co	onstructi	on								Кар	oa Area (
Party Ceiling		Tir	mber I-joi	sts, carpeted								(kJ/m 20.0	²K)
11.0 Heat Loss Floors Description	Туре	Storey		Construction				Value	She	elter Code		Shelter	Kappa Area
Ground Floor	Ground Floor -	Solid Lowest	occupied	Suspended concrete floo	or, carpeted			/ <b>m*K)</b> ).15		None		Factor (	kJ/m²K) 75.00 81
12.0 Opening Types Description	Data Sour	се Туре		Glazing			Glazin Gap	g Filli Ty <sub>l</sub>		9-value	Frame Type		

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Windows Side Door	Manufacturer Windo	o Corrido W lazed Do	Double Low-E Soft 0				0.63 0.63	0.70 0.70	1.20 1.20 1.60
13.0 Openings Name Front Door Rear Windows Rear French Door	Opening Type Solid Door Windows Windows		LocationOrientationWall to CorridorEastExternal WallWestExternal WallWest		Area (m²) 1.90 3.67 3.21	Pite	ch		
14.0 Conservatory			None						
15.0 Draught Proofing			100				%		
16.0 Draught Lobby			Yes						
17.0 Thermal Bridging 17.1 List of Bridges			Calculate Bridges						
Bridge Type E3 Sill E4 Jamb E5 Ground floor (normal) E7 Party floor between d E25 Staggered party wal P1 Party wall - Ground fl P3 Party wall - Intermedi (in blocks of flats) E2 Other lintels (includin	wellings (in blocks of flat Il between dwellings loor iate floor between dwelling of other steel lintels)	Nor Nor Nor Nor Nor Nor Tab	Gov Approved Schemes	Length 3.03 9.07 11.30 11.30 4.60 12.89 12.89 4.56 0.90	Psi 0.04 0.05 0.06 0.07 0.08 0.08 0.00	0.04	Reference: ACD-ExternalWall ACD-ExternalWall Assumed ACD-ExternalWall Assumed ASSumed ACD-ExternalWall ACD-WalltoCorridor		Importe No No No No No No No No
E2 Other lintels (includin E4 Jamb E5 Ground floor (normal) E16 Comer (normal) E7 Party floor between d E18 Party wall between d	) dwellings (in blocks of fla	Nor Nor Nor ts) Nor	Gov Approved Schemes Gov Approved Schemes Gov Approved Schemes Gov Approved Schemes Gov Approved Schemes Gov Approved Schemes	4.20 12.81 2.30 12.81 4.60	0.05 0.06 0.09 0.07 0.06	0.05 0.06 0.09 0.07 0.06	ACD-WalltoCorridor ACD-WalltoCorridor ACD-WalltoCorridor ACD-WalltoCorridor ACD-ExternalWall		No No No No No
Y-value			0.05				W/m²K		
18.0 Pressure Testing			Yes						
Designed APso			4.00				m³/(h.m²) @ 50 Pa		
Test Method			Blower Door						
19.0 Mechanical Ventilation Mechanical Ventilation Mechanical Ventila			No						
20.0 Fans, Open Fireplaces	s, Flues								
21.0 Fixed Cooling System	1		No						
22.0 Lighting No Fixed Lighting				7 <b>cacy</b> 0.00	Pe	ower 9	Capacity 360		unt
24.0 Main Heating 1			Database						
24.0 Main Heating 1 Percentage of Heat			100.00				%		
							%		
Percentage of Heat			100.00				<b>%</b>		
Percentage of Heat  Database Ref. No.			100.00				% 		
Percentage of Heat  Database Ref. No.  Fuel Type			100.00 17507 Mains gas				% 		
Percentage of Heat  Database Ref. No.  Fuel Type  In Winter			100.00 17507 Mains gas 89.00				% 		
Percentage of Heat  Database Ref. No.  Fuel Type  In Winter  In Summer			100.00 17507 Mains gas 89.00 86.60				% 		
Percentage of Heat  Database Ref. No.  Fuel Type  In Winter  In Summer  Model Name			100.00 17507 Mains gas 89.00 86.60 Greenstar				% 		
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer			100.00 17507 Mains gas 89.00 86.60 Greenstar Bosch Thermotechnology				% 		
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type			100.00 17507 Mains gas 89.00 86.60 Greenstar Bosch Thermotechnology Combi boiler				% 		
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code			100.00 17507 Mains gas 89.00 86.60 Greenstar Bosch Thermotechnology Combi boiler 2110				% 		
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code Delayed Start Stat			100.00 17507 Mains gas 89.00 86.60 Greenstar Bosch Thermotechnology Combi boiler 2110 Yes				% 		
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code Delayed Start Stat Flue Type			100.00 17507 Mains gas 89.00 86.60 Greenstar Bosch Thermotechnology Combi boiler 2110 Yes Balanced				% 		

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Heat Emitter				Radiators							
Flow Tempera	ature			Unknown							
Boiler Interloc	:k			Yes							
Combi boiler	type			Standard C	ombi						
Combi keep h	ot type			Gas/Oil, tim	ne clock	(					
25.0 Main Heatin	g 2	300		None							
26.0 Heat Netwo	rks			None							
28.0 Water Heati	ng			12							
Water Heating	9			Main Heatin	ng 1						
SAP Code				901							
Flue Gas Hea	t Recovery Sys	stem		No							
Waste Water	Heat Recovery	Instantaneous	System 1	No							
Waste Water	Heat Recovery	Instantaneous	System 2	No							
Waste Water	Heat Recovery	Storage Syste	m	No							
Solar Panel				No							
Water use <=	125 litres/pers	on/day		Yes							
Cold Water So	ource			From mains	3						
Bath Count				1							
28.1 Showers Description 28.3 Waste Wate	r Heat Recove		Shower Type	e			low Rate Rated F [l/min] [kV		ected Connec	ted To	
29.0 Hot Water C	vlinder			None							
In Airing Cupt	-			No							
32.0 Photovoltale	Unit			Multiple Dw	ellings -	- Connected					
Export Capab	le Meter?			Yes							
Connected To	Dwelling			Yes							
Diverter				No							
Battery Capac	ity [kWh]			0.00							
PV Cells	s kWp	Orientation	Elevation	Oversi	nading	FGHRS	MCS Certificate	Overshad Factor	Certificat		urer
4.42		East	30°	None C	or Little		No	1.00	Referenc	Đ	
34.0 Small-scale	Hydro			None							
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct N	lov Dec	;
Recommendation Lower cost m None Further meas	leasures	ve even higher		ypical Cost	,	Typical savin	gs per year	SAP rating	ıs after improv Envi	ronmental Impa 0	act
								0 0		0 0	

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Property Reference	00853	37 - HT - Apt -	Mid - End			Issu	ed on Date	14/12/2022	
Assessment Reference	As De	esigned			Prop Type Ref	00853	7-SAP-Aparti	ment-Mid-End	
Property	Plot ,	Accrington Ro	ad, Whalley						
SAP Rating			98 A	DER	8.30		TER	8.99	
Environmental			93 A	% DER				7.68	
CO <sub>2</sub> Emissions (t/year)			0.68	DFEE	24.14		TFEE	23.48	
Compliance Check			See BREL		E < TFEE		Anna-a	-2,82	
% DPER < TPER			3.19	DPER	45.20		TPER	46.69	
Assessor Details	Mr. Benjar	nin Mood	1		3444		Assessori	D P717-00	001
Client	Oakmere I						71332333011		, ,
SUMMARY FOR INPL			ild (As Dosignod)						
DUNIMART FOR INPL	DI DATA FC	R: New Du							
Prientation			East						
Property Tenture			ND						
ransaction Type			6						
Terrain Type			Suburban						
I.0 Property Type			Flat, End-Terrace	e					
Position of Flat			Mid-floor flat						
Which Floor			1						
2.0 Number of Storeys			1						
3.0 Date Built			2022						
I.0 Sheltered Sides			2						
5.0 Sunlight/Shade			Average or unkn	own					
6.0 Thermal Mass Parame	eter		Precise calculati	on					
7.0 Electricity Tariff			Standard						
Smart electricity meter	fitted		No						
Smart gas meter fitted			No						
7.0 Measurements									
			Ground		Loss Perimeter 31.31 m		F <b>loor Area</b> 33 m²	Average Stor 2.30	
3.0 Living Area			18.85				m²		
	Туре	Construction		U-Value			Shelter	Openings Area	
9.0 External Walls	Type Timber Frame Timber Frame	Timber framed	wall (one layer of plasterbook wall (two layers of plasterbook	(W/m²K) ard) 0.18	Kappa Gross Ne (kJ/m²K) Area(m²) Area 9.00 42.55 33. 18.00 29.46 27.	(m²) Res 51 0.00	Shelter  None Stairwell Accer Corridor 1	9.04 Ente	Type or Gross Ar
9.0 External Walls  Description  External Wall	Timber Frame	Timber framed		(W/m²K) ard) 0.18	(kJ/m²K) Area(m²) Area 9.00 42.55 33.	(m²) Res 51 0.00	None Stairwell Acces	9.04 Ente	
9.0 External Walls  Description  External Wall  Wall to Corridor	Timber Frame	Timber framed		(W/m²K) ard) 0.18	(kJ/m²K) Area(m²) Area 9.00 42.55 33. 18.00 29.46 27.	(m²) Res 51 0.00 56 0.50	None Stairwell Accer Corridor 1	9.04 Ente ss 1.90 Ente	Type or Gross Ar
Description External Wall Wall to Corridor  9.1 Party Walls	Timber Frame Timber Frame	Timber framed Timber framed  Con  vity with Doul	wall (two layers of plasterbo	(W/m²K) 0.18 0.20 0.20	(kJ/m²\C) Area(m²) Area 9.00 42.55 33. 18.00 29.46 27. U-V (W/ii	(m²) Res 51 0.00 56 0.50	None Stairwell Accer Corridor 1  Da Area  2K) (m²)	9.04 Enters Shelter S	Type or Gross Ar or Gross Ar
9.0 External Walls  Description  External Wall  Wall to Corridor  9.1 Party Walls  Description	Timber Frame Timber Frame  Type  Filled Car	Timber framed Timber framed  Con  vity with Doul	wall (two layers of plasterbo	(W/m²K) 0.18 0.20 0.20	(kJ/m²\C) Area(m²) Area 9.00 42.55 33. 18.00 29.46 27. U-V (W/ii	(m²) Res 51 0.00 56 0.50 alue Kapj m²K) (kJ/m	None Stairwell Accer Corridor 1  Da Area  2K) (m²)	9.04 Ente ss 1.90 Ente Shelter S Res	Type or Gross Ar or Gross Ar helter None
Description External Wall Wall to Corridor  9.1 Party Walls Description Party Wall	Timber Frame Timber Frame  Type  Filled Car	Timber framed Timber framed  Con  vity with Doulaling with	wall (two layers of plasterbo	(W/m²K) 0.18 0.20 0.20	(kJ/m²\C) Area(m²) Area 9.00 42.55 33. 18.00 29.46 27. U-V (W/ii	(m²) Res 51 0.00 56 0.50 alue Kapj m²K) (kJ/m	None Stairwell Accer Corridor 1  Da Area  2K) (m²)	9.04 Ente ss 1.90 Ente  Shelter S Res  Kappa	Type or Gross Ar or Gross Ar helter
Description External Walls Wall to Corridor  9.1 Party Walls Description Party Wall	Timber Frame Timber Frame  Type  Filled Car	Timber framed Timber framed  Con  vity with Doul aling with  Cons	wall (two layers of plasterbosterion  ble plasterboard on bot without sheathing boar	(Wim*K) ard) 0.18 ard) 0.20	(kJ/m²\C) Area(m²) Area 9.00 42.55 33. 18.00 29.46 27. U-V (W/ii	(m²) Res 51 0.00 56 0.50 alue Kapj m²K) (kJ/m	None Stairwell Accer Corridor 1  Da Area  2K) (m²)	9.04 Ente ss 1.90 Ente Shelter S Res	Type or Gross Ar or Gross Ar helter None
9.0 External Walls Description External Wall Wall to Corridor  9.1 Party Walls Description Party Wall  9.2 Internal Walls Description Ground Floor  10.1 Party Cellings	Timber Frame Timber Frame  Type  Filled Car	Timber framed Timber framed  Con vity with aling  Cons Plaste	wall (two layers of plasterbostruction ble plasterboard on bot without sheathing boat truction erboard on timber frame	(Wim*K) ard) 0.18 ard) 0.20	(kJ/m²\C) Area(m²) Area 9.00 42.55 33. 18.00 29.46 27. U-V (W/ii	(m²) Res 51 0.00 56 0.50 alue Kapj m²K) (kJ/m	None Stairwell Accer Corridor 1  Da Area  2K) (m²)	9.04 Ente ss 1.90 Ente  Shelter S Res  Kappa (k.J/m²k) 9.00	Type or Gross Ar ar Gross Ar helter None Area (#
9.0 External Walls Description External Wall Wall to Corridor  9.1 Party Walls Description Party Wall  9.2 Internal Walls Description Ground Floor  10.1 Party Cellings Description	Timber Frame Timber Frame  Type  Filled Car	Timber framed Timber framed  Con vity with aling with  Cons Plaste  Cons	wall (two layers of plasterbo struction ble plasterboard on bot without sheathing boar truction propard on timber frame truction	(Wim*K) ard) 0.18 ard) 0.20	(kJ/m²\C) Area(m²) Area 9.00 42.55 33. 18.00 29.46 27. U-V (W/ii	(m²) Res 51 0.00 56 0.50 alue Kapj m²K) (kJ/m	None Stairwell Accer Corridor 1  Da Area  2K) (m²)	9.04 Enter s 1.90 Enter  Shelter Res  Kappa (kJ/m²K) 9.00  Kappa (kJ/m²K)	Type or Gross Ar Gross Ar Helter None Area (#
9.0 External Walls Description External Wall Wall to Corridor  9.1 Party Walls Description Party Wall  9.2 Internal Walls Description Ground Floor  10.1 Party Ceilings Description Party Ceiling	Timber Frame Timber Frame  Type  Filled Car	Timber framed Timber framed  Con vity with aling with  Cons Plaste  Cons	wall (two layers of plasterbostruction ble plasterboard on bot without sheathing boat truction erboard on timber frame	(Wim*K) ard) 0.18 ard) 0.20	(kJ/m²\C) Area(m²) Area 9.00 42.55 33. 18.00 29.46 27. U-V (W/ii	(m²) Res 51 0.00 56 0.50 alue Kapj m²K) (kJ/m	None Stairwell Accer Corridor 1  Da Area  2K) (m²)	9.04 Ente ss 1.90 Ente  Shelter S Res  Kappa (k.J/m²K) 9.00	Type or Gross Ar ar Gross Ar helter None Area (#
9.0 External Walls Description External Wall Wall to Corridor  9.1 Party Walls Description Party Wall  9.2 Internal Walls Description Ground Floor  10.1 Party Ceilings Description Party Ceiling  11.1 Party Floors	Timber Frame Timber Frame  Type  Filled Car	Timber framed Timber framed  Con vity with aling  Cons Plaste  Cons Timbe	wall (two layers of plasterbostruction  ble plasterboard on botwithout sheathing boat  truction  erboard on timber frame  truction  er I-joists, carpeted	(Wim*K) ard) 0.18 ard) 0.20	(kJ/m²\C) Area(m²) Area 9.00 42.55 33. 18.00 29.46 27. U-V (W/ii	(m²) Res 51 0.00 56 0.50 alue Kapj m²K) (kJ/m	None Stairwell Accer Corridor 1  Da Area  2K) (m²)	9.04 Ente ss 1.90 Ente  Shelter S Res  Kappa (k.J/m²K) 9.00  Kappa (k.J/m²K) 20.00	Type or Gross Ai r Gross Ai helter None Area (n 167.1: Area (n 81.33
9.0 External Walls Description External Wall Wall to Corridor  9.1 Party Walls Description Party Wall  8.2 Internal Walls Description Ground Floor  10.1 Party Cellings Description	Timber Frame Timber Frame  Type  Filled Car	Timber framed Timber framed  Con vity with aling with  Cons Plaste  Cons	wall (two layers of plasterbostruction  ble plasterboard on botwithout sheathing boar  truction  erboard on timber frame  truction  r I-joists, carpeted  Construction  Timber I-joists, carpe	(Wim*K) ard) 0.18 ard) 0.20	(kJ/m²\C) Area(m²) Area 9.00 42.55 33. 18.00 29.46 27. U-V (W/ii	(m²) Res 51 0.00 56 0.50 alue Kapj m²K) (kJ/m	None Stairwell Accer Corridor 1  Da Area  2K) (m²)	9.04 Enter s 1.90 Enter  Shelter Res  Kappa (kJ/m²K) 9.00  Kappa (kJ/m²K)	Type or Gross Ar r Gross Ar helter None  Area (r 167.1  Area (r 81.33

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Description	Data Source	Type		Glazing		Glazing	Filling	G-value	Frame	Frame	U Valu
Solid Door Windows Side Door	Manufacturer Manufacturer Manufacturer	Door to C Window Half Glaze		Double Low-E Soft		Gap	Туре	0.63 0.63	Туре	0.70 0.70	1.20 1.20 1.60
3.0 Openings											
Name Front Door LH Windows Rear Windows Rear French Door	Opening Ty Solid Door Windows Windows Windows	'pe	Ex Ex	cation all to Corridor ternal Wall ternal Wall ternal Wall		Orienta Eas Soul Wes Wes	t h it	Area ( 1.9 2.1 3.6 3.2	0 6 7	Pid	ch
4.0 Conservatory			No	ne							
5.0 Draught Proofing			10	0				<b>%</b>			
6.0 Draught Lobby			Ye	S				j			
17.0 Thermal Bridging			Ca	Iculate Bridges				j			
17.1 List of Bridges Bridge Type E3 Sill E4 Jamb E7 Party floor betweer E16 Corner (normal) E25 Staggered party v P3 Party wall - Interme (in blocks of flats) E2 Other lintels (included to Jamb E16 Corner (normal) E7 Party floor betweer	wall between dwelling other steel linted ding other steel ding other steel linted ding other steel ding other steel linted ding other steel ding other steel ding other steel ding other steel linted ding other steel di	ngs n dwellings els) els)	Non Go Non Go Non Go Table K Non Go Non Go Non Go Non Go	ov Approved Schemes ov Approved Schemes ov Approved Schemes ov Approved Schemes ov Approved Schemes	Length 4.92 13.54 37.00 2.30 4.60 11.38 6.45 0.90 4.60 22.60	Psi 0.04 0.05 0.07 0.09 0.10 0.00 0.30 0.30 0.05 0.09 0.07	0.04 0.05 0.07 0.09 0.10 0.00 0.30 0.30 0.05 0.09	Reference ACD-Extern ACD-Extern ACD-Wallto ACD-Wallto ACD-Wallto ACD-Wallto ACD-Wallto ACD-Wallto ACD-Wallto	nalWall nalWall nalWall oCorridor nalWall oCorridor oCorridor oCorridor		Importo No No No No No No No No No
Y-value			0.1	2				W/m²K			
18.0 Pressure Testing			Yes	3				1			
Designed APso			4.0	0				m³/(h.m	²) @ 50 Pa		
Test Method				wer Door				1	, 0		
19.0 Mechanical Ventilati Mechanical Ventilatio Mechanical Venti 20.0 Fans, Open Fireplac	on ilation System Pres	ent	No								
21.0 Fixed Cooling Syste	m		No								
22.0 Lighting											
No Fixed Lighting			No								
								Capa	city		ınt
					icacy 0.00	Pow 9	er	36		6	
4.0 Main Heating 1			L	ighting 40			er				
_			Dat	ighting 40 tabase			er	36			
Percentage of Heat			Dat	ighting 40 labase			er				
Percentage of Heat Database Ref. No.			100 175	ighting 40 labase 0.00			er	36			
Percentage of Heat Database Ref. No. Fuel Type			100 175 Ma	ighting 40 iabase 0.00 io7			er	36			
Percentage of Heat Database Ref. No. Fuel Type In Winter			100 175 Ma 89.	ighting 40 labase 0.00 loo7 lins gas			er	36			
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer			Dai 100 175 Ma 89.	ighting 40 tabase 0.00 507 ins gas 00			er	36			
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name			Dai 100 175 Ma 89. 66. Gre	ighting 40 labase 0.00 loo7 lins gas 000 loo0			er	36			
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer			Dai 100 175 Ma 89. 86. Gree Bos	abase  0.00  607  ins gas  000  600  enstar  ach Thermotechnology			er	36			
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type			Dat 100 175 Ma 89. 86. Gre Bos Con	abase  0.00  0.07  ins gas  00  60  eenstar  sch Thermotechnology mbi boiler			er	36			
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code			Dat 100 175 Ma 89. 86. Gree Bos 211	ighting 40 iabase 0.00 ions gas 00 ions gas ions			er	36			
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code Delayed Start Stat			Dai 100 175 Ma 89. 86. Gree Bos Coi 211 Yes	ighting 40 iabase 0.00 ions gas 00 ions gas ions			er	36			
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code Delayed Start Stat Flue Type			Dai	ighting 40 tabase 0.00 507 tins gas 00 60 tenstar thermotechnology mbi boiler 0			er	36			
Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code Delayed Start Stat			Dai 100 175 Ma 89. 86. Gree Bos Coi 211 Yes	ighting 40 tabase 0.00 507 tins gas 00 60 tenstar thermotechnology mbi boiler 0			er	36			
Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code Delayed Start Stat Flue Type			Dar  100 175 Ma 89. 86. Gre Bos Con 211 Yes Bal	ighting 40 tabase 0.00 507 tins gas 00 60 tenstar thermotechnology mbi boiler 0			er	36			

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Heat Emitter		[	Radiators							
Flow Temperature		[	Unknown							
Boiler Interlock		[	Yes							
Combi boiler type		[	Standard Co	mbi						
Combi keep hot type		[	Gas/Oil, time	e clock						
25.0 Main Heating 2		[	None							
26.0 Heat Networks		[	None							
28.0 Water Heating										
Water Heating		I	Main Heatin	g 1						
SAP Code			901							
Flue Gas Heat Recovery Syste	m		No							
Waste Water Heat Recovery In	stantaneous S	ystem 1	No							
Waste Water Heat Recovery In	stantaneous S	ystem 2	No							
Waste Water Heat Recovery S	orage System		No							
Solar Panel			No							
Water use <= 125 litres/person	/day		Yes							
Cold Water Source		1	From mains							
Bath Count			1							
28.1 Showers Description 28.3 Waste Water Heat Recovery		hower Type	•			ow Rate Rated Politing [kW		onnecte	d Connected	То
29.0 Hot Water Cylinder			None							
In Airing Cupboard			No							
32.0 Photovoltaic Unit			Multiple Dw	ellings -	- Connected					
Export Capable Meter?			Yes							
Connected To Dwelling			Yes							
Diverter			No							
Battery Capacity [kWh]			0.00							
PV Cells kWp	Orientation	Elevation	Oversi	nading	FGHRS	MCS Certificate	Overs Facto	shading r	MCS Certificate Reference	Panel Manufacturer
4.76	East	30°	None (	Or Little		No	1.00		Velalatica	
34.0 Small-scale Hydro			None							
Jan Feb	Mar /	Apr	May	Jun	Jul	Aug	Sep	Oc	t Nov	Dec
Recommendations Lower cost measures None Further measures to achieve	even higher :		ypical Cost		Typical savin	gs per year	R SAP ra		fter improvem Environ	ent mental Impact 0

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Property Reference	008	537 - HT - Apt	- Mid - Mid				Iss	ued on Date	14/12/202	22
Assessment Reference	e As [	Designed			Prop	Type Ref	0085	37-SAP-Apart	ment-Mid-Mid	
Property	Plot	, Accrington R	oad, Whalley							
SAP Rating			98 A	DER		8.06		TER	8,44	
Environmental			93 A	% DER	< TER		WEST OF		4.50	
CO₂ Emissions (t/year)			0.66	DFEE		20.82		TFEE	20.47	
Compliance Check			See BREL	% DFE	E < TFEE				-1.72	
% DPER < TPER			0.05	DPER		43.80		TPER	43.82	
Assessor Details	Mr Panis	amin Wood				***		Assessor	D P717-0	2004
Client	Oakmere							Assessor	P717-0	1001
SUMMARY FOR INP			uild (As Designed)			7				
	OIDAIAI	OIX. New D						i		
Orientation			East							
Property Tenture			ND							
Transaction Type			6							
Terrain Type			Suburban							
1.0 Property Type			Flat, Mid-Terrace							
Position of Flat Which Floor			Mid-floor flat							
			1							
2.0 Number of Storeys 3.0 Date Built			2022							
4.0 Sheltered Sides			2							
5.0 Sunlight/Shade			Average or unkno	14/15						
5.0 Thermai Mass Parame	eter		Precise calculatio							
			-					0		
7.0 Electricity Tariff			Standard							
Smart electricity meter	fitted		No							
Smart gas meter fitted			No							
7.0 Measurements				Heat	Loss Peri	imeter	Internal	Floor Area	Average Sto	rev Heigh
			Ground fl		24.11 m			33 m²	2.30	
3.0 Living Area			18.85					m²		
9.0 External Walls										
Description	Type	Construction		U-Value (W/m²K)		ea(m²) Area (		Shelter	Openings Are	a Calculatio Type
External Wall Wall to Corridor	Timber Frame Timber Frame	Timber framed Timber framed	wall (one layer of plasterboard wall (two layers of plasterboard	i) 0.18	9.00	25.99 19.1 29.46 27.5	1 0.00	None Stairwell Access Corridor 1	6.88 Ente s 1.90 Ente	er Gross Are er Gross Are
9.1 Party Walls	There	Δ-	atmostic v			10.10	lue 1		the land	16 - k
Description	Type		struction		tt-	(W/m	lue Kapı 12K) (kJ/m	<sup>2</sup> K) (m²)	Res	helter
Party Wall	Filled Ca Edge Se		ole plasterboard on both without sheathing board	sides, twin t	imber f ra	me 0.0	0 20.0	0 29.64		None
9.2 Internal Walls										
Description		Const	truction						Kappa (kJ/m²K)	Area (m
Ground Floor		Plaste	rboard on timber frame						9.00	167.12
10.1 Party Ceilings		A	h-ation							Au
Description			truction						Kappa (kJ/m²K)	Area (m²
Party Ceiling		Timbe	r I-joists, carpeted						20.00	81.33
I1.1 Party Floors  Description		Storey	Construction						Карра	Area (m
									rappa	) Mrea (III

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Description	Data Source	Туре	. de e	Glazing		Glazing Gap	Filling Type	G-value		Frame Factor	U Value (W/m²K)
Solid Door Windows Side Door	Manufacturer Manufacturer Manufacturer	Door to C Window Half Glaze		Double Low-E Soft				0.63 0.63		0.70 0.70	1.20 1.20 1.60
3.0 Openings											
Name Front Door Rear Windows Rear French Door	Opening Ty Solid Door Windows Windows	pe	V	Location Wall to Corridor External Wall External Wall		Orient Eas We We	st st	Area 1,9 3,6 3,2	io . 7	Pi	tch
4.0 Conservatory			N	None							
5.0 Draught Proofing			1	100				%			
6.0 Draught Lobby			Y	Yes							
7,0 Thermal Bridging			[	Calculate Bridges							
7.1 List of Bridges Bridge Type			Sour	се Туре	Length	Psi	Adjusted	Reference			Importe
E3 Sill E4 Jamb			Non (	Gov Approved Schemes Gov Approved Schemes	3.03 9.07	0.04 0.05	0.04 0.05	ACD-Exter			No No
E7 Party floor between			Non (	Gov Approved Schemes	22.60	0.07	0.07	ACD-Exter			No
E25 Staggered party v P3 Party wall - Interme (in blocks of flats)	ediate floor betwee	n dwellings	Table		4.60 25.77	0.08	0.08	Assumed			No No
E2 Other lintels (include E3 Other lintels (				Gov Approved Schemes Gov Approved Schemes	4,56 0,90	0.30	0.30 0.30	ACD-Exter ACD-Wall			No No
E4 Jamb		0.07	Non (	Gov Approved Schemes	4.20	0.05	0.05	ACD-Wall			No No
E16 Corner (normal) E7 Party floor between		ks of flats)	Non (	Gov Approved Schemes Gov Approved Schemes	2.30 25.62	0.09	0.09 0.07	ACD-Wall	oCorridor		No
E18 Party wall betwee	en dwellings		-	Gov Approved Schemes	4.60	0,06	0.06	ACD-Exte			No
Y-value				0.12				W/m²K			
O O Diversion Trading			- 1	Yes							
8.0 Pressure resting			-					<b>—</b>			
Designed AP <sub>50</sub>				4.00				m³/(h.r	n²) @ 50 Pa		
Test Method	ion							m³/(h.r	n²) @ 50 Pa		
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilate Mechanical Ventilation		sent	[4	4.00				m³/(h.r	n²) @ 50 Pa		
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilate Mechanical Ventilation	on tilation System Pre	sent	[4	4.00 Blower Door				m³/(h.r	n²) @ 50 Pa		
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilati Mechanical Ventilati Mechanical Ventilation	on tilation System Pre ces, Flues	sent	[4] [6]	4.00 Blower Door				m³/(h.r	n²) @ 50 Pa		
Designed AP <sub>39</sub> Test Method  19.0 Mechanical Ventilate Mechanical Ventilation	on tilation System Pre ces, Flues	sent	[4] [6]	4.00 Blower Door				m³/(h.r	n²) @ 50 Pa		
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilati Mechanical Ventilati Mechanical Ventilati 0.0 Fans, Open Fireplace 1.0 Fixed Cooling System	on tilation System Pre ces, Flues	sent		4.00 Blower Door No No							
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilati Mechanical Ventilati Mechanical Ventilati 0.0 Fans, Open Fireplac  1.0 Fixed Cooling Syste	on tilation System Pre ces, Flues	sent		4.00 Blower Door No No No No No Name E	fficacy 40.00	Po	wer 9	Cap	n²) @ 50 Pa		ount 9
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate O.0 Fans, Open Fireplate 1.0 Fixed Cooling System No Fixed Lighting No Fixed Lighting	on tilation System Pre ces, Flues	sent		4.00 Blower Door No No No No No Name E		Pc		Cap	acity		ount 9
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate O.0 Fans, Open Fireplate 1.0 Fixed Cooling System 2.0 Lighting No Fixed Lighting	on tilation System Pre ces, Flues	sent		4.00  Blower Door  No  No  No  Name Lighting		Pc		Cap	acity		ount 9
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate 10.0 Fans, Open Fireplace 1.0 Fixed Cooling System 1.0 Lighting No Fixed Lighting 14.0 Main Heating 1	on tilation System Pre ces, Flues	sent		4.00  Blower Door  No  No  No  Name E Lighting  Database		Pc		Cap	acity		ount 9
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilation Mechanical V	on tilation System Pre ces, Flues	sent		4.00  Blower Door  No  No  No  Name E Lighting  Database  100.00		Pc		Cap	acity		ount 9
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilate Mechanical Ventila	on tilation System Pre ces, Flues	sent		A.00  Blower Door  No  No  No  Name Lighting  Database  100.00		Pc		Cap	acity		ount 9
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate O.0 Fans, Open Fireplace 1.0 Fixed Cooling System 2.0 Lighting No Fixed Lighting  4.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type	on tilation System Pre ces, Flues	sent		A.00  Blower Door  No  No  No  Name Elighting  Database  100.00  17507  Mains gas		Pc		Cap	acity		ount 9
Designed AP30 Test Method  9.0 Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate O.0 Fans, Open Fireplace 1.0 Fixed Cooling Syste 2.0 Lighting No Fixed Lighting  4.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type In Winter	on tilation System Pre ces, Flues	sent		4.00 Blower Door  No No No Name E Lighting Database 100.00 17507 Mains gas 89.00		Pc		Cap	acity		ount 9
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilate Mechanical Ventila	on tilation System Pre ces, Flues	sent		A.00  Blower Door  No  No  No  Name Lighting  Database  100.00  17507  Mains gas  89.00  86.60	40.00	Po		Cap	acity		ount 9
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate O.0 Fans, Open Fireplace 1.0 Fixed Cooling System 2.0 Lighting No Fixed Lighting  4.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name	on tilation System Pre ces, Flues	sent		A.00 Blower Door  No No No Name Lighting Database 100.00 17507 Mains gas 89.00 86.60 Greenstar	40.00	Pc		Cap	acity		ount 9
Designed AP30 Test Method  9.0 Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate O.0 Fans, Open Fireplace 1.0 Fixed Cooling Syste 2.0 Lighting No Fixed Lighting  4.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer	on tilation System Pre ces, Flues	sent		4.00 Blower Door  No No No Name E Lighting Database 100.00 17507 Mains gas 89.00 86.60 Greenstar Bosch Thermotechnolog	40.00	Po		Cap	acity		ount 9
Designed AP <sub>39</sub> Test Method  9.0 Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate  0.0 Fans, Open Fireplace  1.0 Fixed Cooling System  2.0 Lighting No Fixed Lighting  4.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type	on tilation System Pre ces, Flues	sent		A.00  Blower Door  No  No  No  Name Lighting  Database  100.00  17507  Mains gas  89.00  86.60  Greenstar  Bosch Thermotechnolog  Combi boiler	40.00	Pc		Cap	acity		ount 9
Designed AP30 Test Method  9.0 Mechanical Ventilate Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code	on tilation System Pre ces, Flues	sent		A.00 Blower Door  No No No Name E Lighting Database 100.00 17507 Mains gas 89.00 86.60 Greenstar Bosch Thermotechnolog Combi boiler	40.00	Pc		Cap	acity		ount 9
Designed AP30 Test Method  9.0 Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate Mechanical Ventilate 20.0 Fans, Open Fireplace 21.0 Fixed Cooling Syste 22.0 Lighting No Fixed Lighting  24.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code Delayed Start Stat	on tilation System Pre ces, Flues	sent		A.00 Blower Door  No No No Name Lighting Database 100.00 17507 Mains gas 89.00 86.60 Greenstar Bosch Thermotechnolog Combi boiler 2110 Yes	40.00	Pc		Cap	acity		ount 9
Designed AP30 Test Method  9.0 Mechanical Ventilate Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code Delayed Start Stat Flue Type	on tilation System Pre ces, Flues	sent		A.00  Blower Door  No  No  Name Lighting  Database  100.00  17507  Mains gas  89.00  86.60  Greenstar  Bosch Thermotechnolog  Combi boiler  2110  Yes  Balanced	40.00	Pc		Cap	acity		ount 9
Designed AP 30 Test Method  19.0 Mechanical Ventilation System Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code Delayed Start Stat Flue Type Fan Assisted Flue	on tilation System Pre ces, Flues	sent		A.00 Blower Door  No No No Name E Lighting  Database 100.00 17507  Mains gas 89.00 86.60  Greenstar Bosch Thermotechnolog Combi boiler 2110 Yes Balanced Yes	40.00	Pc		Cap	acity		ount 9

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Flow Tempera	ture			Unknown								
Boiler Interloc	k			Yes								
Combi boiler t	уре			Standard C	ombi							
Combi keep h	ot type			Gas/Oil, tim	e cloc	k						
25.0 Main Heating	g 2			None								
26.0 Heat Networ	ks			None								
28.0 Water Heatin	ıg											
Water Heating				Main Heatin	g 1							
SAP Code				901								
Flue Gas Heat	Recovery Sys	stem		No								
Waste Water I	leat Recovery	Instantaneous	System 1	No								
Waste Water H	leat Recovery	Instantaneous	System 2	No								
Waste Water I	leat Recovery	Storage Syste	m	No								
Solar Panel	Water use <= 125 litres/person/day											
				Yes								
Cold Water Source				From mains								
Bath Count				1								
28.1 Showers Description 28.3 Waste Water	Hast Pacava		Shower Type	Ð			Flow Rate [l/min]	Rated F		nnecte	d Connected	То
		ry System		-								
29.0 Hot Water Cy				None								
In Airing Cupbe	oard			No								
32.0 Photovoltaic	Unit			Multiple Dwe	ellings	– Connected	d					
Export Capable	e Meter?			Yes								
Connected To	Dwelling			Yes								
Diverter				No								
Battery Capaci	ty [kWh]			0.00								
PV Cells	kWp	Orientation	Elevation	Oversh	ading	FGHRS	MCS Ce	ertificate	Oversi Factor	nading	MCS Certificate	Panel Manufacturer
4.42		East	30°	None O	r Little		No		1.00		Reference	
34.0 Small-scale I	lydro			None								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	)	Sep	Oct	Nov	Dec
Recommendation Lower cost m None Further measu	easures	re even higher		/pical Cost		Typical savi	ings per yea	ar	SAP rati	ilngs af ng	ter improvem Environ	mental Impact 0
									0			0

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Property Reference	008537	' - HT - Apt - Top	- End			Issu	ed on Date	14/12/2022
Assessment Reference	As Desi	igned			Prop Type Ref	00853	7-SAP-Apartn	nent-Top-End
Property	Plot , A	ccrington Road,	Whalley					
SAP Rating			97 A	DER	9.61		TER	10,15
Environmental			92 A	% DER <	*********			5,32
CO <sub>2</sub> Emissions (t/year)			0.8	DFEE	28.71		TFEE	29,08
Compliance Check			See BREL	% DFEE				1,29
% DPER < TPER			1.65	DPER	52.03		TPER	52.90
	M. Desired	: 184 d					Assessor II	P717-0001
Assessor Details Client	Mr. Benjami Oakmere He						A3303301 II	1711-0001
SUMMARY FOR INP			L(Ac Dosignod)					
	JI DAIA FOR	K. New Build						
Prientation			East					
roperty Tenture			ND					
ransaction Type			6					
errain Type			Suburban					
.0 Property Type			Flat, End-Terrace					
Position of Flat			Top-floor flat					
Which Floor			2					
.0 Number of Storeys			1					
.0 Date Built			2022					
.0 Sheltered Sides			2					
i.0 Sunlight/Shade			Average or unknov					
5.0 Thermal Mass Param	eter		Precise calculation					
.0 Electricity Tariff			Standard					
Smart electricity meter	fitted		No					
Smart gas meter fitted			No					
7.0 Measurements				11	mark and a	forta un al l	Plana Anna	Syramona Chamay Hale
			Ground flo		oss Perimeter 31.31 m		Floor Area 33 m²	Average Storey Helg 2.30 m
3.0 Living Area			18.85				m²	
-								
) 0 External Walls								
3.0 External Walls Description	Туре	Construction		U-Value I	(appa Gross	Nett Shelter	Shelter	Openings Area Calcula Type
	Type Timber Frame Timber Frame	Timber framed wa	ili (one layer of plasterboard ili (two layers of plasterboard	(W/m²K) (k ) 0.18	J/m <sup>2</sup> K) Area(m <sup>2</sup> ) Are 9.00 42.55 3		Shelter  None Stairwell Acces Corridor 1	9.04 Enter Gross
External Wall	Timber Frame	Timber framed wa Timber framed wa	ill (two layers of plasterboar	(W/m²K) (k ) 0.18	J/m²K) Area(m²) Are 9.00 42.55 3 18,00 29.46 2	sa (m²) Res 3.51 0.00 7.56 0.50	None Stairwell Acces Corridor 1	9.04 Enter Gross A
Description  External Wall  Wall to Corridor	Timber Frame	Timber framed wa	ill (two layers of plasterboar	(W/m²K) (k ) 0.18	J/m²K) Area(m²) Are 9,00 42,55 3 18,00 29,46 2	sa (m²) Res 3.51 0.00	None Stairwell Acces Corridor 1	9.04 Enter Gross
Description  External Wall  Wall to Corridor  3.1 Party Walls	Timber Frame Timber Frame	Timber framed wa Timber framed wa Constructive with Double	ill (two layers of plasterboar	(W/m²K) (k ) 0.18 d) 0.20	J/m <sup>2</sup> K) Area(m <sup>2</sup> ) Are 9.00 42.55 3 18.00 29.46 2	ea (m²) Res 3.51 0.00 7.56 0.50	None Stairwell Acces Corridor 1  pa Area 3 2K) (m²)	9.04 Enter Gross A ss 1.90 Enter Gross A
Description  External Wall Wall to Corridor  3.1 Party Walls Description Party Wall  9.2 Internal Walls	Timber Frame Timber Frame Type Filled Cavi	Timber framed wa Timber framed wa  Constr  ity with Double ling with/with	ruction  plasterboard on both thout sheathing board	(W/m²K) (k ) 0.18 d) 0.20	J/m <sup>2</sup> K) Area(m <sup>2</sup> ) Are 9.00 42.55 3 18.00 29.46 2	(m²) Res 3.51 0.00 17.56 0.50 -Value Kap I/m²K) (kJ/m²K)	None Stairwell Acces Corridor 1  pa Area 2K) (m²)	9.04 Enter Gross / Shelter Res None
Description  External Wall Wall to Corridor  3.1 Party Walls  Description  Party Wall	Timber Frame Timber Frame Type Filled Cavi	Timber framed wa Timber framed wa Constructive with Double	ruction  plasterboard on both thout sheathing board	(W/m²K) (k ) 0.18 d) 0.20	J/m <sup>2</sup> K) Area(m <sup>2</sup> ) Are 9.00 42.55 3 18.00 29.46 2	(m²) Res 3.51 0.00 17.56 0.50 -Value Kap I/m²K) (kJ/m²K)	None Stairwell Acces Corridor 1  pa Area 2K) (m²)	9.04 Enter Gross / Enter Gross / Shelter Shelter Res None  Kappa Area (kJ/m²K)
Description External Wall Wall to Corridor  3.1 Party Walls Description Party Wall	Timber Frame Timber Frame Type Filled Cavi	Timber framed wa Timber framed wa  Constr  ity with Double with/with  Constru	ruction  plasterboard on both thout sheathing board	(W/m²K) (k ) 0.18 d) 0.20	J/m <sup>2</sup> K) Area(m <sup>2</sup> ) Are 9.00 42.55 3 18.00 29.46 2	(m²) Res 3.51 0.00 17.56 0.50 -Value Kap I/m²K) (kJ/m²K)	None Stairwell Acces Corridor 1  pa Area 2K) (m²)	9.04 Enter Gross / Enter Gross / Shelter Shelter Res None
Description External Wall Wall to Corridor  3.1 Party Walls Description Party Wall  9.2 Internal Walls Description Ground Floor	Timber Frame Timber Frame  Type  Filled Cavi Edge Seal	Timber framed wa Timber framed wa  Construction Tity with Double with/with  Construction Plasterb	ruction  plasterboard on both thout sheathing board  iction  oard on timber frame	(W/m³K) (k ) 0.18 d) 0.20	J/m <sup>4</sup> () Area(m <sup>2</sup> ) Are 9.00 42.55 3 18.00 29.46 2 U (V nber f rame	ea (m²) Res 3.51 0.00 17.56 0.50 -Value Kap J/m²K) (kJ/m 0.00 20.0	None Stainwell Acces Corridor 1  pa Area : *K) (m²) 10 13.09	Shelter Res  Kappa Area (K.//m²K) 9.00 167.
Description  External Wall Wall to Corridor  3.1 Party Walls Description Party Wall  9.2 Internal Walls Description Ground Floor	Timber Frame Timber Frame Type Filled Cavi	Timber framed wa Timber framed wa  Constr  ity with Double with/with  Constru	ruction  plasterboard on both thout sheathing board  iction  oard on timber frame	(W/m³K) (k ) 0.18 d) 0.20	J/m <sup>2</sup> K) Area(m <sup>2</sup> ) Are 9.00 42.55 3 18.00 29.46 2	na (m²) Res 13.51 0.00 17.56 0.50 -Value Kapi 1/m²K) (k.J/m 0.00 20.0 ross Nett 1a(m²) Area	None Stainwell Acces Corridor 1  pa Area : *K) (m²) 10 13.09	Shelter Res  Kappa (kJ/m²K) 9,00 167.
Description External Wall Wall to Corridor  3.1 Party Walls Description Party Wall  9.2 Internal Walls Description Ground Floor	Timber Frame Timber Frame  Type  Filled Cavi Edge Seal	Timber framed wa Timber framed wa  Construction  Construction  Construction	ruction  plasterboard on both thout sheathing board  iction  oard on timber frame	(W/m³k) (k ) 0.18 d) 0.20 sides, twin tin	J/m*K) Area(m*) Area(	Page (m²) Res 13.51 0.00 17.56 0.50 PValue Kapp 1/m²K) (kJ/m 0.00 20.0	None Stainwell Acces Corridor 1  pa Area (** *K) (m**) 0 13.09  Shelter She Code Fac	Shelter Res  Kappa (kJ/m²K) 9,00 167.
Description External Wall Wall to Corridor  9.1 Party Walls Description Party Wall  9.2 Internal Walls Description Ground Floor  10.0 External Roofs Description	Timber Frame Timber Frame  Type Filled Cavi Edge Seal	Timber framed wa Timber framed wa  Construction  Construction  Construction	ruction plasterboard on both thout sheathing board on timber frame	(W/m³k) (k ) 0.18 d) 0.20 sides, twin tin	J/m*K) Area(m*) Area(	Page (m²) Res 13.51 0.00 17.56 0.50 P-Value Kapp 1/m²K) (k.J/m 10.00 20.0 P-Value Kapp 1/m²K) (k.J/m 10.00 4.00 P-Value Kapp 1/m²K) (k.J/m 1/m²K) (	None Stainwell Acces Corridor 1  pa Area (** *K) (m**) 0 13.09  Shelter She Code Fac	Shelter Res None  Kappa Area (kJ/m²K) 9.00 167.  Steer CalculationOpenictor Type 00 Enter Gross 0.0 Area
Description External Wall Wall to Corridor  9.1 Party Walls Description Party Wall  9.2 Internal Walls Description Ground Floor  10.0 External Roofs Description Insulated Plane	Timber Frame Timber Frame  Type Filled Cavi Edge Seal	Timber framed wa Timber framed wa  Construction  Construction  Construction  Construction  Plasterboar	ruction plasterboard on both thout sheathing board on timber frame	(W/m³k) (k ) 0.18 d) 0.20 sides, twin tin	J/m*K) Area(m*) Area(	Page (m²) Res 13.51 0.00 17.56 0.50 P-Value Kapp 1/m²K) (k.J/m 10.00 20.0 P-Value Kapp 1/m²K) (k.J/m 10.00 4.00 P-Value Kapp 1/m²K) (k.J/m 1/m²K) (	None Stainwell Acces Corridor 1  pa Area (** *K) (m**) 0 13.09  Shelter She Code Fac	Shelter Res  Kappa Area ((k,J/m²K) 9.00 167.  Shelter CalculationOpen Type



12.0 Opening Types Description	Data Source	Гуре		Glazing		Glazing	Filling	G-value	Frame	Frame	U Valı
Solid Door	Manufacturer [	Door to C	orridor	-		Gap	Туре		Туре	Factor	(W/m² 1.20
Windows Side Door		Mindow Half Glaze	ed Door	Double Low-E S Double Low-E S				0.63 0.63		0.70 0.70	1.20 1.60
3.0 Openings											
Name Front Door	Opening Type Solid Door	•		cation II to Corridor		Orienta Eas		Area (		Pit	tch
LH Windows	Windows		Ext	ernal Wall		Sout		2.1			
Rear Windows Rear French Door	Windows Windows			ernal Wall		Wes		3.6			
	vvindows			ernal Wall		Wes	ST .	3.2	1		
4.0 Conservatory			No								
5.0 Draught Proofing 6.0 Draught Lobby			100 Yes					<u></u> %			
			100								
7.0 Thermal Bridging 7.1 List of Bridges			Cal	culate Bridges							
Bridge Type			Source	Type	Length	Psi	Adjusted	Reference			Impor
E3 Sill			Non Go	Approved Scheme	es 4.92	0.04	0.04	ACD-Exten			No
E4 Jamb E7 Party floor between	dwellings (in blocks	of flate)		<ul> <li>Approved Scheme</li> <li>Approved Scheme</li> </ul>		0.05 0.07	0.05 0.07	ACD-Extern ACD-Extern			No
E16 Corner (normal)	dwellings (iii blocks	OI IIats)		Approved Scheme		0.07	0.07	ACD-Exten			No No
E25 Staggered party wa				Approved Scheme		0.10	0.10	Assumed			No
P3 Party wall - Intermed (in blocks of flats)	nate noor between d	weilings	iable K	- Default	5.69	0.00	0.00				No
È2 Other lintels (includir				Approved Scheme		0.30	0.30	ACD-Exter			No
E2 Other lintels (including E4 Jamb	ng other steel lintels)	)		/ Approved Scheme / Approved Scheme		0.30 0.05	0.30 0.05	ACD-Wallto			No No
E16 Corner (normal)			Non Go	Approved Scheme	es 4.60	0.09	0.09	ACD-Wallto			No
E7 Party floor between of E10 Eaves (insulation at	dwellings (in blocks	of flats)		Approved Scheme		0.07	0.07	ACD-Wallto	Corridor		No
E12 Gable (insulation at				Approved Scheme Approved Scheme		0.06 0.12	0.06 0.12	ACD-Extern Assumed	naivvaii		No No
E12 Gable (insulation at	t ceiling level)	85	Non Gov	Approved Scheme	es 8.70	0.12	0.12	ACD-Wallto	Corridor		No
P4 Party wall - Roof (ins	sulation at ceiling lev	rel)		Approved Scheme	es 5.69	0.06	0.06	Assumed			No
Y-value			0.06	3				W/m²K			
8.0 Pressure Testing			Yes								
Designed AP₅₀			4.00	)				m³/(h.m	²) @ 50 Pa	3	
Test Method			Blov	ver Door							
9.0 Mechanical Ventilatio	n										
Mechanical Ventilation	1		,								
Mechanical Ventila	ation System Presen	it	No								
0.0 Fans, Open Fireplace	s, Flues										
1.0 Fixed Cooling System	n		No								
2.0 Lighting											
No Fixed Lighting			No								
				lame ghting	Efficacy 40.00	Pow 9	er	Capa 360		Co.	
1.0 Main Heating 1			Data	abase				7			
Percentage of Heat			100	00				7 %			
Database Ref. No.			175					Ħ			
Fuel Type				ns gas				i i			
In Winter			89.0					ī .			
In Summer			86.6	0				ī			
			Gre	enstar				j			
Model Name			-								
Model Name Manufacturer			Bos	ch Thermotechnolo	gy						
				ch Thermotechnolo bi boiler	gy						
Manufacturer				bi boiler	gy			]			
Manufacturer System Type			Con	bi boiler	gy			] ] ]			

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Fan Assisted Flue		ĺ	Yes								
Is MHS Pumped		Ì	Pump in heat	ed spa	ce						
Heating Pump Age			2013 or later								
Heat Emitter			Radiators								
Flow Temperature			Unknown								
Boiler Interlock			Yes								
Combi boiler type			Standard Cor	nbi							
Combi keep hot type		1	Gas/Oil, time	clock							
25.0 Main Heating 2			None								
26.0 Heat Networks			None								
28.0 Water Heating											
Water Heating			Main Heating	1							
SAP Code			901								
Flue Gas Heat Recover	y System		No								
Waste Water Heat Reco	overy Instantaneous	System 1	No								
Waste Water Heat Reco	overy Instantaneous	System 2	No								
Waste Water Heat Reco	overy Storage Syster	n	No								
Solar Panel			No								
Water use <= 125 litres	/person/day		Yes								
Cold Water Source			From mains								
Bath Count			1								
28.1 Showers Description	:	Shower Type	9			Flow			onnected	d Connected	То
						[l/m	in] [kW	1			
28.3 Waste Water Heat Re	covery System										
29.0 Hot Water Cylinder			None								
In Airing Cupboard			No								
32.0 Photovoltalc Unit			Multiple Dwe	llings -	- Connecte	d					
Export Capable Meter?			Yes								
Connected To Dwelling			Yes								
Diverter			No								
Battery Capacity [kWh]			0.00								
PV Cells kWp	Orientation	Elevation	o Oversh	ading	FGHRS	M	ICS Certificate	Oven	shading r	MCS Certificate Reference	Panel Manufacturer
4.42	East	30°	None O	r Little		N	0	1,00			
34.0 Small-scale Hydro			None	- Luca	41		A	San	0.4	h Blov	Dec
Jan Feb	Mar	Apr	May	Jun	Jul		Aug	Sep	Oct	t Nov	Dec
Recommendations Lower cost measures None Further measures to								R	atings at	fter improvem	ent
		Т	ypical Cost		Typical sav	/ings	per year	SAP ra		Environ	mental Impact
								0			0

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Property Reference		008537	' - HT - Ap	ot - Top	o - Mid					lss	ued on	Date	14	/12/202	2
Assessment Referenc	e	As Desi	igned				Prop	Туре I	Ref	0085	37-SAP	-Apartr	ment-To	p-Mid	
Property		Plot , A	ccrington	Road,	Whalley										
SAP Rating		T			97 A	DER		9.09	N .		TER		< 1	9.77	
Environmental					92 A	% DER	< TER							6.96	
CO₂ Emissions (t/year)	( )			7	0.75	DFEE		25.7	9		TFEE			26.84	
Compliance Check					See BREL	% DFE	E < TFE							3.91	
% DPER < TPER					3.20	DPER		49,3	4		TPEF	2		50.97	
Assessor Details	Mr. E	Benjamir	n Wood								Asse	ssor II	D	P717-0	001
Client	Oakı	mere Ho	omes												
SUMMARY FOR INP	UT DAT	A FOF	R: New I	Build	(As Designed)			7,11							
Orientation					East										
Property Tenture					ND										
Transaction Type					6										
Terrain Type					Suburban										
1.0 Property Type					Flat, Mid-Terrace										
Position of Flat					Top-floor flat										
Which Floor					2										
2.0 Number of Storeys					1										
3.0 Date Built					2022										
4.0 Sheltered Sides					2										
5.0 Sunlight/Shade					Average or unknow	/n									
6.0 Thermal Mass Param	eter				Precise calculation										
7.0 Electricity Tariff					Standard						1				
Smart electricity meter	fitted				No					_					
Smart gas meter fitted	III.ea				No					_					
					INO										
7.0 Measurements							Loss Per		Int		Floor Ar	ea	Avera	ge Stor	ey Heigh
					Ground flo	or:	24.11 m	1		81.3	33 m²			2.30 ı	n
8.0 Living Area					18.85						m²				
9.0 External Walls Description	Туре	(	Construction	n		U-Value	Карра	Gross	Nett	Shelter	She	elter	Openia	ngs Ares	Calculatio
External Wall	Timber Fra				(one layer of plasterboard)	(W/m²K) 0.18	(kJ/m²K) A 9.00			Res 0.00	No	ne	6.88		Type Gross Are
Wall to Corridor	Timber Fra	me 1	Timber frame	ed wall (	(two layers of plasterboard	0.20	18.00	29,46	27.56	0,50	Stairwel Corri		1.90	) Ente	Gross Are
9.1 Party Walls															
Description	Тур	9	Co	nstru	ction				J-Value				helter	Si	elter
Party Wall		d Cavity e Sealin			lasterboard on both sout sheathing board	ides, twin 1	timber f ra	ame	W/m²K) 0.00	20.0			Res	N	lone
9.2 Internal Walls															
Description			Con	struct	tion										Area (m
0 151			Plas	terboa	ard on timber frame									l/m²K) 9.00	167.12
Ground Floor															
10.0 External Roofs			Constr	uction	1		/alue Ka 'm²K)(kJ/		Gross rea(m²)	Nett Area		r Shelt Fact		culatior Type	Opening
	Туре					faal	12/(1/0)	13/14	andiii)		Sout	ı dül	A) I	·ype	
10.0 External Roofs		al Plane	Plastert	board,	insulated at ceiling le	vel 0	.08 9.	.00	81.33	(m²) 0.00	None	0.0		er Gross Area	0.00
10.0 External Roofs Description Insulated Plane	Externa	al Plane	Plasteri	board,	insulated at ceiling le	vel 0	.08 9.	.00	81.33		None	0.0			0.00
10.0 External Roofs Description	Externa	al Plane	Storey		insulated at ceiling le	vel 0	.08 9.	.00	81.33		None	0.0	ŀ	Area (appa	0.00 Area (m
10.0 External Roofs Description Insulated Plane 11.1 Party Floors	Externa	al Plane		Co			.08 9.	.00 8	81.33		None	0.0	je (k	Area	



Solid Door	Manufacturer	Type  Door to Co	midor	Glazing		Gap	Туре		Туре	Factor	(W/m²K) 1.20
Windows Side Door		Window Half Glaze	d Door	Double Low-E Soft ( Double Low-E Soft (				0.63 0.63		0.70 0.70	1.20 1.60
3.0 Openings										-	
Name Front Door	Opening Typ Solid Door	0		cation III to Corridor		Orienta Eas		Area 1,9		Pit	tch
Rear Windows	Windows		Ex	ternal Wall		We	st	3.6	7		
Rear French Door	Windows		Ex	ternal Wall		We	st	3.2	:1		
4.0 Conservatory			No	ne							
15.0 Draught Proofing			100	)				%			
16.0 Draught Lobby			Yes	3							
17.0 Thermal Bridging			Ca	Iculate Bridges							
17.1 List of Bridges											
Bridge Type E3 Sill			Source Non Co	Type ov Approved Schemes	Length 3.03	Psi 0.04	Adjusted 0.04	Reference ACD-Exte			Importe No
E4 Jamb				v Approved Schemes	9.07	0.05	0.05	ACD-Exte	malWall		No
E7 Party floor between			Non Go	v Approved Schemes	11.30	0.07		ACD-Exte	rnalWali		No
E25 Staggered party w P3 Party wall - Interme	all between dwellin	gs dwellings		v Approved Schemes 1 - Default	4.60 12.89	0.08	0.08	Assumed			No No
(in blocks of flats)									B * * **		
E2 Other lintels (includ				v Approved Schemes v Approved Schemes	4.56 0.90	0.30 0.30		ACD-Exte ACD-Wall			No No
E2 Other lintels (includ E4 Jamb	ing other steer linter	3)		v Approved Schemes	4.20	0.05	0.05	ACD-Wall	oCorridor		No
E16 Corner (normal)	155-W 25-6-145-185			v Approved Schemes	2.30	0.09		ACD-Wall			No No
E7 Party floor between E18 Party wall between		s of flats)	Non Go	ov Approved Schemes ov Approved Schemes	12.81 4.60	0.07 0.06		ACD-Wall ACD-Exte			No
E10 Eaves (insulation	at ceiling level)		Non Go	v Approved Schemes	11.30	0.06		ACD-Exte			No
E12 Gable (insulation a P4 Party wall - Roof (in	at ceiling level) Isulation at ceiling l	evel)		ov Approved Schemes ov Approved Schemes	12.81 12.89	0.12 0.06		ACD-Wall Assumed	oComaor		No No
Y-value			0.0					W/m²K			
40.0 Duna a como Tarable e			- Iva					7			
18.0 Pressure Testing			Ye					m <sup>3</sup> //h r	n²) @ 50 P	2	
Designed APso			4.0	ower Door				7 117(11.3	117@301	a	
Test Method			БІС	Wet Door							
19.0 Mechanical Ventilati Mechanical Ventilation											
	ilation System Pres	ent	No								
20.0 Fans, Open Fireplac	es, Flues										
21.0 Fixed Cooling Syste	em		No								
22.0 Lighting											
			No								
22.0 Lighting				Name Ef	ficacy 10.00	Po	wer 9		acity 60	C	ount 9
22.0 Lighting				Name Ef		Po				C	
22.0 Lighting No Fixed Lighting			De	Name Ef Lighting 4		Po				Co	
22.0 Lighting No Fixed Lighting 24.0 Main Heating 1			Da	Name Ef Lighting 4 stabase		Po		3		C	
22.0 Lighting No Fixed Lighting  24.0 Main Heating 1  Percentage of Heat			Da 10	Name Ef Lighting 4 stabase		Po		3		C	
22.0 Lighting No Fixed Lighting  24.0 Main Heating 1  Percentage of Heat Database Ref. No.			Da 10 17 Ma	Name Ef Lighting 4 stabase 0.00		Po		3		C	
22.0 Lighting No Fixed Lighting  24.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type			Da 10 17 Ma	Name Ef Lighting 4 stabase 0.00 507		Po		3		C	
22.0 Lighting No Fixed Lighting  24.0 Main Heating 1  Percentage of Heat Database Ref. No. Fuel Type In Winter			De 10 17 Ma 89 86	Name Ef Lighting 4 stabase 0.00 507 ains gas		Po		3		C	
22.0 Lighting  No Fixed Lighting  24.0 Main Heating 1  Percentage of Heat  Database Ref. No.  Fuel Type  In Winter  In Summer			Da 10 17 Ma 89 86 Gr	Name Ef Lighting 4 stabase 0.00 507 ains gas .00	40.00	Po		3		C	
22.0 Lighting No Fixed Lighting  24.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name			D8 100 177 M4 89 866 Gr Bc	Name Ef Lighting 4 stabase 0.00 507 ains gas .00	40.00	Po		3		C	
22.0 Lighting No Fixed Lighting  24.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer			D8 100 177 M4 89 866 Gr Bc	Name Ef Lighting 4 stabase 0.00 507 ains gas .00 .60 eenstar esch Thermotechnology	40.00	Po		3		C	
22.0 Lighting No Fixed Lighting  24.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type Controls SAP Code			De 100 177 Mai 899 866 Gr Bc Cc	Name Ef Lighting 4 stabase 0.00 507 sins gas .00 .60 eenstar esch Thermotechnology ombi boiler	40.00	Po		3		C	
22.0 Lighting No Fixed Lighting  24.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type In Winter In Summer Model Name Manufacturer System Type			Da 100 177 Mai 899 866 Gr Ccc 211 Yes	Name Ef Lighting 4  Itabase  0.00  507  ains gas  .00  .60  eenstar  esch Thermotechnology  mbi boiler	40.00	Po		3		C	



Is MHS Pumped			Pump in hea	ated enco	Δ					
Heating Pump Age			2013 or late		<b>c</b>					
Heat Emitter			Radiators	ii .						
Flow Temperature			Unknown							
Boiler Interlock			Yes							
Combi boiler type			Standard Co	ombi						
•							_			
Combi keep hot type			Gas/Oil, tim	e clock						
25.0 Main Heating 2			None							
26.0 Heat Networks			None							
28.0 Water Heating										
Water Heating			Main Heatin	ıg 1						
SAP Code			901							
Flue Gas Heat Recovery Sy	/stem		No							
Waste Water Heat Recover	y Instantaneous	System 1	No							
Waste Water Heat Recover	y Instantaneous	System 2	No							
Waste Water Heat Recover	y Storage System	m	No							
Solar Panel	No									
Water use <= 125 litres/per	son/day		Yes							
Cold Water Source			From mains							
Bath Count			1							
28.1 Showers Description		Shower Type	P			ow Rate Rated F I/min] [kW		nnecte	d Connected	То
28.3 Waste Water Heat Recov	ery System		E:							
29.0 Hot Water Cylinder			None							
In Airing Cupboard			No							
32.0 Photovoltalc Unit			Multiple Dw	ellings – C	Connected					
Export Capable Meter?			Yes							
Connected To Dwelling			Yes							
Diverter			No							
Battery Capacity [kWh]			0.00							
PV Cells kWp	Orientation	Elevation	Oversh	ading F	GHRS	MCS Certificate	Oversh Factor		Certificate	Panel Manufacturer
4.42	East	30°	None O	r Little		No	1.00		Reference	
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 achie	eve even higher		ypical Cost	Туј	pical saving	s per year	Rat SAP rati		ter improvem Environs	ent nental Impact 0

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Property Reference	008537 - HT - Bowfell - Det							ued on Date 14/12/2022			
Assessment Reference	Asi	Designed	Prop Type Ref 0088				00853	537-SAP-Bowfell-Det			
Property	Plot	, Accrington Road,	Whalley								
SAP Rating			98 A	DER	10	.63		TER		11.34	
Environmental			91 B	% DER < TER					6.26		
CO <sub>2</sub> Emissions (t/year)			1,06	DFEE 39.46				TFEE			
Compliance Check			See BREL	% DFEE < TFEE					2.86		
% DPER < TPER			2.53	DPER	57	.69		TPER		59.19	
Assessor Details	Mr. Poni	amin Wood						Assess	or ID	P717-0	1001
Client		e Homes						7,55050	VI 15	1717-0	1001
SUMMARY FOR INPL			(As Designed)								
Orientation			East								
Property Tenture			ND								
Fransaction Type			6								
Terrain Type			Suburban				$\equiv$				
1.0 Property Type			House, Detached								
2.0 Number of Storeys			2				一				
3.0 Date Built			2022				_				
4.0 Sheltered Sides			2								
5.0 Sunlight/Shade			Average or unknown								
5.0 Thermal Mass Parameter			Precise calculation								
							=				
7.0 Electricity Tariff			Standard								
Smart electricity meter fitted			No								
Smart gas meter fitted			No								
7,0 Measurements			Ground flo	or:	Loss Perime 33.31 m 29.44 m	ter in	ternal F 45.2 52.0		a A	verage Sto 2.72 2.45	m
0.016.4				·y ·	29.44 111		32.0			2,40	111
B.0 Living Area			16.08					m²			
9.0 External Walls Description	Туре	Construction		U-Value	Kappa Gros	s Nett	Shelter	Shelt	er 1	Openings Are	a Calculatio
External Wall Wall to Garage	Timber Frame Timber Frame	Timber framed wall	(one layer of plasterboard) (two layers of plasterboard	0.18	(kJ/m²K) Area(r 9,00 42,5 18,00 20,4	20,12	Res 0.00 0.35	Non-			Type er Gross Are er Gross Are
wall to Galage	Illipei Liallia	Timber hamed wall	(two layers or plastersoard	0.21	10.00 20.4.	. 10.45	0.35	Outsi		1.83 EIII	61 G1083 A16
9.1 Party Walls	70	0				11 Malua	. V		Ch.	-14 6	\h_16-
Description	Туре	Constru				(W/m²K		K) (m²)	R	elter S es	Shelter
Party Wall	Filled C Edge S		plasterboard on both s rout sheathing board	ides, twin 1	imber f rame	0.00	20.00	13.09	•		None
9.2 Internal Walls											
Description		Construc	tion							(kJ/m²K)	Area (m²
Ground Floor First Floor	Plasterboard on timber fram Plasterboard on timber fram									9.00 9.00	81.87 135.39
10.0 External Roofs											
Description	Туре	Construction	n		U-Value Kappa Gros (W/m²K)(kJ/m²K)Area(s		Nett Area		heiter Sheiter CalculationOpenin Code Factor Type		
Insulated Plane	External F	Plane Plasterboard	, insulated at ceiling le		.08 9.00	56.67	(m²) 0.00	None		Enter Gro	ss 0.00
10.1 Party Ceilings											
Description		Construc	tion							Kappa (kJ/m²K)	Area (m
Party Ceiling		Timber I-j	oists, carpeted							20.00	81.33
10.2 Internal Ceilings										-	4
Description		Storey	Construction							Δr	ea (m²)



										<u> </u>	
Ground Floor	Lowest	occupie	d Pla	sterboard ceiling, c	arpeted chip	board floor				4	0.58
I1.0 Heat Loss Floors  Description	Type Store	Index	Cons	truction		U-Val		Shelter Code		elter Kapı	
Ground Floor	Ground Floor - Solid Lowes	t occupied	Susp	ended concrete floor, ca	rpeted	(W/m² 0.13		None		ictor (kJ/m ).00 75.0	
11.2 Internal Floors											
Description	Stor Inde	x	nstruc							Kappa (kJ/m²K)	
First Floor		Pla	sterboa	ard ceiling, carpeted	d chipboard f	loor				9.00	40.5
12.0 Opening Types											
Description	Data Source Type			Glazing		Glazing	Filling	G-value	Frame	Frame	U Val
Half Glazed Door		Glazed D	оог	Double Low-E Soft		Gap	Type	0.63	Туре	Factor 0.70	(W/m <sup>2</sup>
Windows Side Door	Manufacturer Wind Manufacturer Solid	ow Door		Double Low-E Soft	0.05			0.63		0.70	1.20
French Door	Manufacturer Wind			Double Low-E Soft	0.05			0,63		0.70	1.20
3.0 Openings											
Name	Opening Type		Loca			Orienta	tion	Area (	m²)	Pit	ch
Front Door Front Windows	Half Glazed Door Windows			nal Wall nal Wall		Eas Eas		2.13 6.96			
LH Windows	Windows		Exten	nal Wall		Sout		1.94			
RH Windows Garage Door	Windows Side Door			nal Wall o Garage		Norti		1.94			
Rear Windows	Windows			nai Wali		Eas Wes		1.93 6.31			
Rear French Door	French Door		Exten	nai Wali		Wes	t	3.15			
4.0 Conservatory			None					7			
5.0 Draught Proofing			100					<b>7</b> %			
6.0 Draught Lobby			Yes					╡ ~			
			160								
7.0 Thermal Bridging			Calcul	ate Bridges							
7.1 List of Bridges											
Bridge Type E3 Sill			rce Ty		Length			Reference:			Import
E4 Jamb				pproved Schemes pproved Schemes	14.09 28.80	0.04 0.05	0.04 0.05	ACD-Extern ACD-Extern			No No
E5 Ground floor (normal) E16 Corner (normal)				pproved Schemes	25.81	0.06	0.06	Assumed			No
E2 Other lintels (including	other steel lintels)			pproved Schemes pproved Schemes	24.11 16.61	0,09 0,30	0.09 0.30	ACD-Extern ACD-Extern			No No
E2 Other lintels (including E4 Jamb	other steel lintels)	Non	Gov A	pproved Schemes	0.92	0.30	0.30	ACD-alltoGa	rage		No
E5 Ground floor (normal)				pproved Schemes	4.20 6.80	0.05 0.06	0.05 0.06	ACD-alltoGa Assumed	rage		No No
E16 Corner (normal)	.n	Non	Gov A	pproved Schemes	5.44	0.09	0.09	ACD-alltoGa	rage		No
E20 Exposed floor (norma E21 Exposed floor (inverte				pproved Schemes pproved Schemes	6.80 6.80	0.06 0.06	0.06 0.06	Assumed Assumed			No No
E10 Eaves (insulation at c	eiling level)	Non	Gov A	pproved Schemes	18.92	0.06	0.06	ACD-Externa			No
E12 Gable (insulation at c E24 Eaves (insulation at c		Non Non	Gov A	oproved Schemes	19.20 4.80	0.12 0.10	0.12 0.10	ACD-Externa Assumed	alWall		No
E17 Comer (inverted – int	ernal area greater that			pproved Schemes	12.51	-0.09	-0.09	Assumed			No No
external area) E6 Intermediate floor withi	n a dwelling	Non	Gov A	pproved Schemes	22.43	0.03	0.03	ACD-Externa	al\//ail		No
Y-value		0	0.08					W/m²K			- 110
0.0 December 7-16-1								7			
8.0 Pressure Testing			Yes								
Designed APso		- 1	4.00					m³/(h.m²)	@ 50 Pa	ı	
Test Method		Į	Blower	Door							
9.0 Mechanical Ventilation											
Mechanical Ventilation	n Cuotom Decaret	î	Me					7			
Mechanical Ventilation	on System Present		No								
0.0 Fans, Open Fireplaces,	Flues										
1.0 Fixed Cooling System		[	No								
2.0 Lighting		16									
No Fixed Lighting		Į.	No								
			Nan Light		icacy 0.00	Powe 9	er	Capac 360	ity	Cou 14	
1.0 Main Heating 1		1	Databa					7			
Percentage of Heat			100.00					<b>1</b> %			
Database Ref. No.								i '°			
			17483					I			



Fuel Type	Mains gas	
In Winter	89.00	
	80.00	
In Summer  Model Name	Greenstar	
	Bosch Thermotechnology	
Manufacturer	Regular boiler	
System Type	2110	
Controls SAP Code	Yes	
Delayed Start Stat	Balanced	
Flue Type Fan Assisted Flue	Yes	
	Pump in heated space	
Is MHS Pumped	2013 or later	
Heating Pump Age	Radiators	
Heat Emitter		
Flow Temperature	Unknown	
Boiler Interlock	Yes	
25.0 Main Heating 2	None	
26.0 Heat Networks	None	
28.0 Water Heating Water Heating	Main Heating 1	
SAP Code	901	
Flue Gas Heat Recovery System	No	
	No	
Waste Water Heat Recovery Instantaneous System 1	No	
Waste Water Heat Recovery Instantaneous System 2	No	
Waste Water Heat Recovery Storage System		
Solar Panel	No	
Water use <= 125 litres/person/day	Yes	
Cold Water Source	From mains	
Bath Count	1	
28.1 Showers  Description Shower Typ	ne Flow Rate Rated Power C	onnected Connected To
	[l/min] [kW]	
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	150.00	L
Loss	1.23	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	
31.0 Thermal Store	None	
32.0 Photovoltaic Unit	Multiple Dwellings – Connected	
Export Capable Meter?	Yes	]
Connected To Dwelling	Yes	]
Diverter	No	]
Battery Capacity [kWh]	0.00	]



	PV Cells k	:Wp	Orientati	on Elevat	vation Overshading FGHRS		MCS Certifica	ate Oversha Factor	vershading MCS actor Certificate Reference		Panel Manufacturer	
	5.78		East	30°	Nor	ne Or Little		No	1.00		Keierence	
34.0 Sma	all-scale Hy	dro			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

**Typical Cost** £4,000 - £6,000 Typical savings per year

£23

Ratings after improvement

SAP rating Environmental Impact
A 99 A 93
0 0
0 0



Property Reference	008537	- HT - Brathay - S	Semi				Issue	d on Dat	te	14/12/	2022	
Assessment Reference	As Desig	gned			Prop Typ	e Ref	008537	-SAP-Br	athay-S	Semi		
Property	Plot , Ac	crington Road, V	Vhalley									
SAP Rating	100		98 A	DER	10	0.78		TER		11.	56	
Environmental			91 B	% DER	-				-	6,7		
			0.97	DFEE		9,04		TFEE	-	39.		
CO <sub>2</sub> Emissions (t/year)  Compliance Check			See BREL	-	< TFEE	5.04				1.3		
				DPER	-	9.05		TPER		60.		
% DPER < TPER			2.32	DEEK	[3:	9,05		TI LIX		00.	40	
Assessor Details	Mr. Benjamir	1 Wood						Assess	or ID	P7	17-000	1
Client	Oakmere Ho	mes										
SUMMARY FOR INPUT	DATA FOR	: New Build (	As Designed)									
rientation			East									
roperty Tenture			ND									
ransaction Type			6									
errain Type			Suburban									
.0 Property Type			House, Semi-Detac	hed								
.0 Number of Storeys			2									
.0 Date Built			2022									
.0 Sheltered Sides			2									
.0 Sunlight/Shade			Average or unknow	rn.								
.0 Thermal Mass Parameter	,		Precise calculation									
.0 Thermal Mass Parameter			Frecise Calculation									
.0 Electricity Tariff			Standard									
Smart electricity meter fitte	ed		No									
Smart gas meter fitted			No									
.0 Measurements			Ground flo 1st Stor	or:	Loss Perime 20.24 m 20.24 m	eter In	ternal FI 43.87 43.87		a A		<b>Store</b> ) 2.42 m 2.78 m	/ Heigh
.0 Living Area			14.94					m <sub>3</sub>				
0.0 External Walls		044		U-Value	Kappa Gro	ss Nett	Shelter	Shelte		hanlan	Ama C	alculation
Description Type  External Wall Time		Construction  Timber framed wall (	one layer of plasterboard	(W/m <sup>2</sup> K)	(kJ/m*K) Area( 9.00 105.	m²) Area (m²)	Res 0,00	None		14.32		Type Gross Are
.1 Party Walls	IDOI FIGILIO	Timpor named want	one tayor or places addrag	0.10	0.00		-					
Description	Туре	Construc	tion			U-Value					She	elter
Party Wall	Filled Cavit		asterboard on both s out sheathing board	sides, twin	limber f rame	(W/m*K)	(kJ/m²) 20.00		IRe	98	No	ne
.2 Internal Walls												
Description		Construct	ion							Kap		rea (n
• "		Diagtorhoo	rd on timber frame							(kJ/n 9.0 9.0	00	77.92 137.7
Ground Floor			rd on timber frame								_	
Ground Floor First Floor			rd on timber frame									
Ground Floor First Floor	уре		rd on timber frame		/alue Kapp: /m²K)(kJ/m²		Area	Sheiter Code			lation(	)penin
Ground Floor First Floor  0.0 External Roofs Description  Insulated Plane	Type External Plane Roof	Plasterboa	rd on timber frame	(W					Factor	Ty Enter	pe	•
Ground Floor First Floor  10.0 External Roofs Description Insulated Plane F	External Plane	Plasterboa  Construction  Plasterboard,		(W	/m²K)(kJ/m²l	K)Area(m²)	Area (m²)	Code	Factor	Ty Enter	<b>pe</b> Gross	0.00
Ground Floor First Floor  0.0 External Roofs Description  Insulated Plane	External Plane	Plasterboa	insulated at ceiling l	(W evel (	/m²K)(kJ/m²l	K)Area(m²) 43.87	Area (m²)	Code	Factor	Ty Enter	pe Gross ea	0.00 (m²)
Ground Floor First Floor  0.0 External Roofs Description Insulated Plane F  0.2 Internal Ceilings Description Ground Floor  1.0 Heat Loss Floors	External Plane	Plasterboard,  Plasterboard,  Storey	insulated at ceiling l	(W evel (	/m²K)(kJ/m²l	K)Area(m²) 43.87	Area (m²) 0.00	Code	0.00	Ty Enter	Gross ea Area 43.	0.00 (m²) 87



11.2 Internal Floors Description		Storey Index	Cons	struction								Area (m
First Floor		IIIGEX	Plast	terboard c	eiling, carpe	ted chipboard fl	oor				(kJ/m²K) 9.00	43.87
12.0 Opening Types												
Description	Data Source	Type		Glaz	ing		Glazing Gap	Filling	G-value	Frame Type	Frame Factor	U Valu (W/m²k
Half Glazed Door	Manufacturer	Half Glaz	ed Do		ole Low-E S		Cap	Type	0.63	Type	0.70	1.20
Windows Side Door	Manufacturer Manufacturer	Window Solid Do	or		ble Low-E S				0,63		0.70	1.20 1.20
French Door	Manufacturer	Window		Dou	ole Low-E S	oft 0.05			0.63		0.70	1.20
13.0 Openings							_					
Name Front Door	Opening Ty Half Glazed			Location External V	/ali		Orient Ea		Area 2.1		Pit	tch
Front Windows LH Windows	Windows Windows			External V External V			Ea Sou		4.2 1.3			
Rear Windows	Windows		İ	External V	<i>l</i> all		We	st	3.4	6		
Rear French Door	French Door		135	External V	/all		We	est	3,1	5		
14.0 Conservatory			[	None								
15.0 Draught Proofing			Ŀ	100					%			
16.0 Draught Lobby				Yes								
17.0 Thermal Bridging			To	Calculate I	Bridaes							
17.1 List of Bridges			L									
Bridge Type E3 Sill				ce Type	ved Scheme	Length	<b>Psi</b> 0.04		Reference			Importe
E4 Jamb			Non (	Gov Appro	ved Scheme	es 26.40	0.05	0.04 0.05	ACD-Exter ACD-Exter			No No
E5 Ground floor (normal) E16 Corner (normal)					ved Scheme		0.06 0.09	0.06 0.09	Assumed ACD-Exter	nat\A/ali		No No
E2 Other lintels (including		ls)	Non (	Gov Appro	ved Scheme	es 10.43	0.30	0.30	ACD-Exter	nalWall		No
E10 Eaves (insulation at of E12 Gable (insulation at of E12 Gable)	ceiling level)		Non (	Gov Appro Gov Appro	ved Scheme ved Scheme	es 9.25 es 10.99	0.06 0.12	0.06 0.12	ACD-Exter ACD-Exter			No No
E17 Corner (inverted – intexternal area)	ternal area great	ter than			ved Scheme		-0.09	-0.09	ACD-Exter			No
E6 Intermediate floor with					ved Scheme		0.03	0.03	ACD-Exter			No
E18 Party wall between d P1 Party wall - Ground flo					ved Scheme ved Scheme		0.06 0.08	0.06 0.08	ACD-Exter Assumed	nalVVall		No No
P4 Party wall - Roof (insu P2 Party wall - Intermedia			Non (		ved Scheme		0.06	0.06	Assumed			No No
Y-value		a		0.05	uit	7,00	0.00	0.00	W/m²K			140
18.0 Pressure Testing			-	res								
Designed AP₅			-	1.00					m³/(h.m	²) @ 50 Pa	ı	
Test Method			E	Blower Do	or							
19.0 Mechanical Ventilation												
Mechanical Ventilation	ion Custom Buo		i.						_			
Mechanical Ventilati	on System Pres	ent	<u> </u>	No					_			
0.0 Fans, Open Fireplaces,	, Flues		4,000									
21.0 Fixed Cooling System			N	No								
22.0 Lighting												
No Fixed Lighting			N	No								
				Name Lighting		Efficacy 40,00		wer 9	Capa 36			unt 2
4.0 Main Heating 1			lo.	Database					7			
Percentage of Heat			-	00.00					<b>=</b> %			
Database Ref. No.				7481					= ~			
Fuel Type				/lains gas					Ħ			
In Winter				9.10					$\exists$			
In Summer				0.10								
Model Name			-	Greenstar					=			
			-						=			
Manufacturer					motechnolo	gy			_			
System Type			IR.	Regular bo	ler							

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Jan Feb	Mar	Арг	May Jun	Jul	Aug	Sep	Oct	t Nov	Dec
			1				A.		
34.0 Small-scale Hydro			None						
5.78	East	30°	None Or Little	)	No	Factor 1.00	or	Certificate Reference	Manufacture
PV Cells kWp	Orientation	Elevation		FGHRS	MCS Certificate		shading		Panel
Battery Capacity [kWh]			0.00						
Diverter			No						
Connected To Dwelling			Yes						
Export Capable Meter?			Yes						
32.0 Photovoltaic Unit			Multiple Dwellings	- Connected					
31.0 Thermal Store			None						
In Airing Cupboard			No						
Pipes insulation			Fully insulated prir	mary pipework					
Loss			1.23				kWh/da	ny	
Cylinder Volume			150.00				L		
Insulation Type			Measured Loss						
Independent Time Control			Yes						
Cylinder In Heated Space			Yes						
Cylinder Stat			Yes						
29.0 Hot Water Cylinder			Hot Water Cylinde	r					
28.3 Waste Water Heat Recove	ery System								
28.1 Showers Description	s	hower Type			ow Rate Rated F		onnecte	d Connected	То
Bath Count			1						
Cold Water Source			From mains						
Water use <= 125 litres/pers	on/day		Yes						
Solar Panel			No						
Waste Water Heat Recovery	Storage System		No						
Waste Water Heat Recovery			No						
Waste Water Heat Recovery			No						
Flue Gas Heat Recovery Sys			No						
SAP Code			901						
Water Heating			Main Heating 1						
28.0 Water Heating		-							
26.0 Heat Networks			None						
25.0 Main Heating 2		[	None						
Boiler Interlock			Yes						
Flow Temperature			Unknown						
Heat Emitter		ř	Radiators						
Heating Pump Age		1	2013 or later						
Is MHS Pumped		,	Pump in heated sp	ace					
Fan Assisted Flue			Yes						
Flue Type		L	Balanced						
Delayed Start Stat			Yes						
Controls SAP Code			2110						



None Further measures to achieve even higher standards

Typical Cost £4,000 - £6,000

Typical savings per year

£23

Ratings after improvement

SAP rating Environmental Impact
A 99 A 93
0 0
0 0

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Property Reference	008537 -	HT - Grasmere -	Det	- ne				on Date		4/12/20:	22	_
Assessment Reference	As Design	ned		Pro	p Type R	ef 0	08537-	SAP-Bow	rfell-Det	t		
Property	Plot , Acc	rington Road, W	halley									
SAP Rating			98 A	DER	10.44	r -		TER		10.90		
Environmental			90 B	% DER < TER						4.22		
CO <sub>2</sub> Emissions (t/year)			1.43	DFEE	44.00	)	6	TFEE		44.74		
Compliance Check			See BREL	% DFEE < TFE	EE					1.65		
% DPER < TPER			0,71	DPER	56.64	4		TPER		57.04		
				Literature .				Assesso	r ID	P717	0001	
Assessor Details	Mr. Benjamin							A330330		11717	-0001	_
Client	Oakmere Hon				-				_	4 - 4		
SUMMARY FOR INPL	JT DATA FOR:	New Build (A	As Designed)									_
rientation		[	East									
roperty Tenture		Į	ND				_					
ransaction Type		[	6									
errain Type			Suburban									
.0 Property Type			House, Detached									
.0 Number of Storeys			2									
.0 Date Built			2022									
.0 Sheltered Sides			2									
.0 Sunlight/Shade			Average or unknows	1								
.0 Thermal Mass Parame	eter		Precise calculation									
.0 Electricity Tariff			Standard									
Smart electricity meter	fitted		No									
Smart gas meter fitted	Integ		No									
7.0 Measurements			Ground floo	Heat Loss		er Inte	rnal Fl 58,25	oor Area	Av		torey H	elgh
			1st Store				73.13			2.	38 m	_
8.0 Living Area			16.52					m²				
9.0 External Walls						81-44 #		Shelte		noninge	Area Calc	ulatic
Description		Construction	and the second	U-Value Kapp (W/m²K) (kJ/m²	K) Area(m²	Area (m²)	Res 0.00	None			Type Enter Gros	е
External Wall Wall to Garage	Timber Frame Timber Frame	Timber framed wall (i Timber framed wall (i	one layer of plasterboard) two layers of plasterboard	0.18 9.00 0.27 18.00		17.30	0.35	Garage Sir Outsid	ngle 1		Enter Gros	
9.1 Party Walls											01:-11	
Description	Туре	Construc				U-Value (W/m²K)		K) (m <sup>2</sup> )	Re		Shelte	
Party Wall	Filled Cavity Edge Sealir		lasterboard on both s out sheathing board	ides, twin timber	r f rame	0.00	20.00		)		None	1
9.2 Internal Walls Description		Construct	ilon							Kapp (kJ/m²		a (n
Ground Floor First Floor			ard on timber frame							9.00	9	5.74 60.60
	Туре	Construction	1		Kappa	Gross Area(m²)	Nett Area	Shelter Code				enir
10.0 External Roofs Description	iype			danna 10)	Manager 17	79.77	(m²) 0.00	None	0.00			0.00
	External Plane	e Plasterboard,	insulated at ceiling le	evel 0.08	9.00	(9.11		rtorie		Are	а	0.00
Description Insulated Plane		e Plasterboard,	insulated at ceiling le	evel 0.08	9.00	(9.17		110119			a	
Description	External Plane	Plasterboard, Storey Lowest occupies	Construction					110119			Area (n 51.62	



ata Source	Storey Index	Constru							Kappa (kJ/m²K)	Area (m
ata Source										
ata Source	index	Plasterb	nard ceiling carne						(K'N)LLI-IF	
ata Source			bara cennig, carpe	ted chipboard fi	oor				9.00	40.58
ata Source										
	Туре		Glazing		Glazing	Filling	G-value	Frame	Frame	U Valu
anufacturer	Half Glaz	ed Door	Double Low-E S		Gap	Туре	0.63	Туре	Factor 0.70	(W/m²k 1.20
anufacturer anufacturer	Window Half Glaz	ed Door	Double Low-E S Double Low-E S				0.63 0.63		0.70 0.70	1.20 1.20
anufacturer	Window		Double Low-E S				0.63		0.70	1.20
									Pit	tch
Windows							8.42	2		
Windows										
Side Door										
French Door										
		Non	e				1			
		100					╡"			
		-					Ħ			
		100								
		Calc	ulate Bridges							
		6	B	141-	D-1	A .d (	D-f			
					PSI 0.04					Importe No
		Non Gov	Approved Schem	es 36.09	0.05			alWall		No
					0.06			alWall		No No
ner steel linte	ls)	Non Gov	Approved Schem	es 21,13	0.30	0.30	ACD-Extern			No
5 Ground floor (normal) 16 Corner (normal)								arage		No No
		Non Gov	Approved Schem	es 13.29	0.06	0.06	Assumed			No
na level)								alWall		No No
ng level)		Non Gov	Approved Schem	es 16.82	0.12	0.12	ACD-Extern			No
							Assumed			No No
			• •				ACD Extorn	ol\A6II		No
dweiling				es 24.33	0.03	0.03	7	alvvali		NO
		0.05					VV/m²K			
		Yes								
		4.00					m³/(h.m²	) @ 50 Pa	a	
		Blow	er Door							
System Prese	ent	No								
ues										
		No								
		-					=:			
		No								
				40.00			Capac 360	city )		unt 4
		Data	base				7			
		100.	00				<b>%</b>			
		1748	33				ī			
							ī			
							ī i			
		80.0					Ħ			
			U							
THE STATE OF THE S	Half Glazed Windows Windows Windows Side Door Windows French Door Windows French Door deep level) ng level - invial area great dwelling	Windows Windows Side Door Windows French Door  Her steel lintels)  Ing level) Ing level - inverted) Ing level	Half Glazed Door Windows Windows Windows Side Door Windows Side Door Windows French Door  Non  100  Yes  Calc  Source T Non Gov Non Go	Half Glazed Door Windows Windows External Wall Windows Side Door Windows External Wall	Haif Glazed Door	Haif Glazed Door	Marriago   External Wall   East   East   Windows   External Wall   East   External Wall   East   External Wall   South   Windows   External Wall   North   Windows   External Wall   North   West   External Wall   West   West   External Wall   West   West   External Wall   West   West   External Wall   East   External Wall   West   External Wall   East   External Wall   West   External Wall   West   External Wall   West   External Wall   East   External Wall   West   External Wall   West   External Wall   East   External Wall   West   External Wall   West   External Wall   East   External Wall   West   External Wall   West   External Wall   East   External Wall   East   External Wall   West   External Wall   East   External Wall   East   External Wall   West   External Wall   East   External Wall   East   External Wall   West   External Wall   East   External W	Main   Beast   Beast	East	Haif Clazed Door

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34.0 Small-scale Hydro	None	1
6.80 East 30°	None Or Little No 1.00	Reference
PV Cells kWp Orientation Elevation	Overshading FGHRS MCS Certificate Over Fact	
, , , , ,	0.00	
	No	]
Connected To Dwelling	Yes	]
Export Capable Meter?	Yes	J i
	Multiple Dwellings – Connected	
	None	1
		1
	No	
	Fully insulated primary pipework ,	
· ·	1.32	kWh/day
Cylinder Volume	180.00	L
	Measured Loss	
· · · · · · · · · · · · · · · · · · ·	Yes	
Cylinder In Heated Space	Yes	
Cylinder Stat	Yes	
	Hot Water Cylinder	
28.3 Waste Water Heat Recovery System	framil fraal	
Description Shower Type	Flow Rate Rated Power (	Connected Connected To
Bath Count 28.1 Showers	ı	I
Cold Water Source	From mains 1	] ]
Water use <= 125 litres/person/day	Yes	
	No	]
	No	
ALSO	No	
	No .	]
	No	
3.00	901	
	Main Heating 1	1
28.0 Water Heating		
26.0 Heat Networks	None	
25.0 Main Heating 2	None	
Boiler Interlock	Yes	
	Unknown	
	Radiators	
	2013 or later	
·	Pump in heated space	
	Yes	
Flue Type	Balanced	
Delayed Start Stat	Yes	
Controls SAP Code	2110	
System Type	Regular boiler	
Manufacturer	Bosch Thermotechnology	

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Nov Dec Jun Jul Aug Sep Jan Apr

Recommendations Lower cost measures

None Further measures to achieve even higher standards

Typical Cost Typical savings per year Ratings after improvement

SAP rating Environmental Impact

A 98 B 91
0 0
0 0

Page 4 of 4 SAP 10 Online 2.1.6



Property Reference			HT - Kirksto	ne - Det						Iss	o beu	n Dat	te	14/12	/2022	
Assessment Referenc	e As [	Design	ed - As				Pro	ор Тур	e Ref	0085	37-SA	P-Kir	kstone	-Det		
Property	Plot	, Accr	rington Roa	d, Whalley												
SAP Rating				99 A		DER		9.2	29		TE	R		9,7	78	
Environmental				91 B		% DEF	< TER	1						5.0		
CO: Emissions (t/year)				1.25		DFEE		40	.31		TF	EE		40	.40	
Compliance Check				See BR	REL	% DFE	E < TF	EE						0,2	24	
% DPER < TPER			1	0.27		DPER		50	.96		TP	ER	1	51	.10	
Assessor Details	Mr. Benja	amin V	Mood								Ac	sesso	or ID	Da	17-000	14
Client	Oakmere										713	0000	J. 10	F /	17-000	, ,
SUMMARY FOR INP				d (As Des	sianed)				7 1-11							
Prientation				East	,					_						
Property Tenture				ND						_						
ransaction Type				6						_						
Terrain Type				Suburba	an											
I.0 Property Type					Detached											
2.0 Number of Storeys				2												
3.0 Date Built				2022												
I.0 Sheltered Sides				2						$\equiv$						
i.0 Sunlight/Shade				Average	or unknowr	1										
.0 Thermal Mass Param	eter			Precise	calculation											
.0 Electricity Tariff				Standar	d											
Smart electricity meter	fitted			No	u					_						
Smart gas meter fitted				No												
.0 Measurements																
					Ground floo		Loss F 34.86	Perimet	er In	ternal l	loor 7 m²	Area	Av		Storey 2.45 m	/ Heigh
					1st Store		34.86				7 m²				2.45 m	
.0 Living Area				17.06							m²					
0.0 External Walls Description	Туре	Coi	nstruction			U-Value	Kappa	Gross	Nett	Shelter		Shelter	, 0	penings	Area C	alculatio
External Wall Wall to Garage	Timber Frame Timber Frame			all (one layer of all (two layers o		(W/m²K) 0.18 0.27	(kJ/m²K 9,00 18.00	146.41		0.00		None		25.20	Enter 0	<b>Type</b> Gross Are
Gable End Above Garage Roof	Timber Frame			all (one layer of		0.15	9.00	18.68 11.06	18.68 11.06	0.00		None None		0,00		Gross Are Gross Are
.1 Party Walls																
Description	Type		Const	ruction					U-Value			\rea	She		She	lter
Party Wall	Filled Ca Edge Se			plasterboai	rd on both sid	des, twin	timber 1	f rame	(W/m²K) 0.00	20.0		( <b>m²)</b> 3.09	Re	:8	No	ne
0.2 Internal Walls					<b>Q</b>											
Description			Constru	iction										Kap		rea (m
Ground Floor First Floor				oard on timb										( <b>kJ/m</b> 9.0 9.0	0	114.91 155.61
0.0 External Roofs																
Description	Туре	(	Constructi	on					Gross Area(m²)	Nett Area	Shel		helter actor	Calcul Tyl		pening
Insulated Plane	External Pla	ane f	Plasterboar	d, insulated	at ceiling lev		0.08	9.00	64.87	(m²) 0.00	Nor			Enter (	Gross	0.00
0.2 Internal Ceilings																
Description Ground Floor			orey west occup		truction rboard ceilin	g, carnet	ed chirl	board fl	oor						Area 64.8	
						av Earland									0.9.1	
1.0 Heat Loss Floors Description	Туре		Storey Index	Constru												



					(W/m	alc)		Esates	e    Jan 210"	
Ground Floor	Ground Floor - Solid Low	est occupied	Suspended concrete floor, ca	irpeted	(w/m 0.1		None	Factor 0,00	75.00	64.8
11.2 Internal Floors										
Description		orey Co: lex	nstruction					Kaj (kJ/i	opa <i>A</i> n²K)	Area (
First Floor		Pla	sterboard ceiling, carpete	d chipboard f	loor			9.0		64.8
2.0 Opening Types										
Description	Data Source Ty	pe	Glazing		Glazing Gap	Filling Type		ame Fra ype Fac		U Val (W/m²
Half Glazed Door		If Glazed D			Сар	Type	0.63	0.	70	1.20
Windows Side Door		ndow If Glazed D	Double Low-E Sof por Double Low-E Sof				0.63 0.63	0.1 0.1		1.20
French Door		ndow	Double Low-E Sof				0.63	0.1		1.20
3.0 Openings										
Name Front Door	Opening Type Half Glazed Doo		Location External Wall		Orient Ea:		Area (m²) 2.13		Pitcl	h
Front Windows	Windows	"	External Wall		Eas	st	8,54			
RH Windows RH Door	Windows Side Door		External Wall External Wall		Nor Nor		1.35 1.90			
Rear Windows	Windows		External Wall		We	st	5.48			
Rear French Door	French Door		External Wall		We	st	5.80			
4.0 Conservatory			None							
5.0 Draught Proofing			100				%			
6.0 Draught Lobby			Yes							
7.0 Thermal Bridging			Calculate Bridges							
7.1 List of Bridges		_								
Bridge Type E3 Sill			I <b>rce Type</b> Gov Approved Schemes	Length 12.42	Psi 0.04	Adjusted 0.04	I Reference: ACD-ExternalV	Vall	łı	mpor No
E4 Jamb		Nor	Gov Approved Schemes	38.10	0.05	0.05	ACD-ExternalV			No
E5 Ground floor (normal E16 Comer (normal)	)		Gov Approved Schemes Gov Approved Schemes		0.06 0.04	0.06 0.04	Assumed ACD-ExternalV	Vall		No No
E2 Other lintels (including		Nor	Gov Approved Schemes	17.43	0.30	0.30	ACD-ExternalV			No
E5 Ground floor (normal E16 Comer (normal)	)		Gov Approved Schemes Gov Approved Schemes		0.06 0.04	0.06 0.04	Assumed ACD-alltoGarag	ae		No No
E10 Eaves (insulation at		Nor	Gov Approved Schemes	14.91	0.06	0.06	ACD-ExternalV	Vall		No
E12 Gable (insulation at E17 Corner (inverted – in			Gov Approved Schemes Gov Approved Schemes		0.12 -0.09	0.12 -0.09	ACD-ExternalV ACD-ExternalV			No No
external area) E6 Intermediate floor wit	thin a dwelling	Nor	Gov Approved Schemes	34.86	0.03	0.03	ACD-ExternalV	Vall		No
Y-value			0.05				W/m²K			
8.0 Pressure Testing			Yes				7			
							=			
Designed APso			4.00				m³/(h.m²) @	) 50 Pa		
Test Method			Blower Door							
9.0 Mechanical Ventilation  Mechanical Ventilation										
Mechanical Ventila	tion System Present		No							
0.0 Fans, Open Fireplace	s, Flues									
1.0 Fixed Cooling System	1		No							
2.0 Lighting										
			No	***					_	
No Fixed Lighting			Name E	fficacy 40.00		wer }	Capacity 360		Cour 14	
No Fixed Lighting			Lighting	40.00						
			Lighting '	40.00						
				40.00						
4.0 Main Heating 1			Database	40.00			%			
4.0 Main Heating 1 Percentage of Heat			Database 100.00	40.00						
4.0 Main Heating 1 Percentage of Heat Database Ref. No.			Database 100.00 17483	40.00			\ % 			
4.0 Main Heating 1 Percentage of Heat Database Ref. No. Fuel Type			Database 100.00 17483 Mains gas	40.00	,		% %			
4.0 Main Heating 1  Percentage of Heat  Database Ref. No.  Fuel Type  In Winter			Database 100.00 17483 Mains gas 89.00	40.00			% %			

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System Type			Regular be	oiler						
Controls SAP Code		j	2110							
Delayed Start Stat		Ì	Yes							
Flue Type			Balanced							
Fan Assisted Flue		i	Yes							
Is MHS Pumped		i	Pump in h	eated spac	e					
Heating Pump Age			2013 or la							
Heat Emitter			Radiators							
Flow Temperature		i	Unknown							
Boiler Interlock			Yes							
25.0 Main Heating 2			None					1		
26.0 Heat Networks			None					1		
28.0 Water Heating Water Heating			Main Hea	ting 1						
SAP Code			901							
Flue Gas Heat Recovery Sys	tem		No							
Waste Water Heat Recovery		System 1	No							
Waste Water Heat Recovery			No							
Waste Water Heat Recovery		- (	No							
Solar Panel	ololage oyalel	· · ·	No							
Water use <= 125 litres/perso	n/day		Yes							
Cold Water Source	niruay		From mai	ne						
Bath Count			1	110						
28.1 Showers Description	9	Shower Type			FI	ow Rate Rated	Power C	onnecte	d Connecte	d To
							kW]	981 1-94 21		
28.3 Waste Water Heat Recover	ry System		J							
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			180,00					L		
Loss			1.32					kWh/da	ау	
Pipes insulation			Fully insu	lated prima	ry pipework					
In Airing Cupboard			No							
31.0 Thermal Store			None							
32.0 Photovoltaic Unit			Multiple D	wellings –	Connected					
Export Capable Meter?			Yes							
Connected To Dwelling			Yes							
Diverter			No							
Battery Capacity [kWh]			0.00					]		
PV Cells kWp	Orientation	Elevation	Over	shading f	GHRS	MCS Certifica	te Over Fact	shading or	MCS Certificate Reference	Panel Manufacturer
7.48	East	30°	None	Or Little		No	1.00			
34.0 Small-scale Hydro										
			None							



Recommendations
Lower cost measures
None
Further measures to achieve even higher standards

Typical Cost Typical savings per year

Ratings after improvement
SAP rating Environmental Impact
A 100 A 93
0 0
0 0

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Property Reference	008537	- HT - Wasdale -	Det				Issu	ed on Da	te	14/12/202	2
Assessment Reference	As Desi	gned - As			Prop Typ	e Ref	00853	7-SAP-W	asdale-	Det	
Property	Plot , Ad	crington Road, \	Mhalley								
SAP Rating			97 A	DER	11	.02		TER		11.56	
Environmental			90 B	% DER	< TER					4.67	
CO2 Emissions (t/year)			1.4	DFEE	44	1.80		TFEE		45.88	
Compliance Check			See BREL	% DFE	E < TFEE				Ţ.	2.35	
% DPER < TPER			1.39	DPER	59	9.69		TPER		60.53	
Assessor Details	Mr. Benjamir	n Wood						Assess	or ID	P717-0	0001
Client	Oakmere Ho										
SUMMARY FOR INPL	JT DATA FOR	R: 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			2022								
4.0 Sheltered Sides			2								
5.0 Sunlight/Shade			Average or unknow	'n							
6,0 Thermal Mass Parame	ter		Precise calculation								
7.0 Electricity Tariff			Standard								
Smart electricity meter	fitted		No								
Smart gas meter fitted			No								
7.0 Measurements			Ground flo 1st Stor	or:	Loss Perime 35.86 m 34.16 m	eter In	54.8	Floor Are 36 m² 38 m²	a A	verage Sto 2.72 2.37	
8.0 Living Area			16.13					m <sup>2</sup>			
9.0 External Walls Description	Туре	Construction		U-Value			Shelter	Shelt	er C	penings Are	a Calculation
External Wall Wall to Garage			one layer of plasterboard) two layers of plasterboard	0.18	(kJ/m²K) Area(i 9.00 154.7 18.00 19.5	0 128,24	0.00 0.35	Non- Garage Si Outsi	ingle 1		Type ter Gross Area ter Gross Area
9.1 Party Walls Description Party Wall	Type Filled Cavity Edge Seali		ction lasterboard on both s out sheathing board	sides, twin	limber f rame	(W/m²K	e Kapp () (kJ/m² 20.0	K) (m²)	Re		Shelter None
9,2 Internal Walls Description		Construct	ilon							Kappa	Area (m²
Ground Floor First Floor			ard on timber frame ard on timber frame							(kJ/m²K) 9.00 9.00	91.61 159.03
10.0 External Roofs	_				false 15		y 6 11 2 2	01	Mb - Pr	0.1: 1:0	
Description	Туре	Construction			/alue Kappa /m²K)(kJ/m²k				Shelter Factor		onOpening
Insulated Plane	External Plane Roof	e Plasterboard,	insulated at ceiling le	evel (	.08 9.00	69.67	(m²) 0.00	None	0.00	Enter Gro Area	ss 0.00
10.1 Party Ceilings											
Description		Construct								Kappa (kJ/m²K)	
Party Ceiling		Timber I-jo	pists, carpeted							20.00	81.33
10.2 Internal Ceilings Description		Storey	Construction							Ar	ea (m²)



Ground Floor	L	owest occ	upied	Plasterboard	ceiling, car	peted chipb	oard floor					52	86
11.0 Heat Loss Floors	D.m.o.	Character lands		Construction									
	Гуре	Storey Inde		Construction			U-Valı (W/m²		Shelter Code		Shelter Factor	Kappa (kJ/m <sup>2</sup> l	a Area(m Ki
Floor above Garage	Ground Floor - Solid Exposed Floor - Timber	d Lowest occi +1	upied	Suspended concre Timber exposed fl			0.13		None age Single 1 Ou		0,00 0,35	75.00 20.00	81,33
11.2 Internal Floors													
Description		Storey Index	Cor	struction								ppa m²K)	Area (m
First Floor			Plas	sterboard ceiling	carpeted o	chipboard flo	oor					.00	52.86
12.0 Opening Types													
Description	Data Source	Type		Glazing			Glazing	Filling	G-value	Frame		ame	U Value
Half Glazed Door	Manufacturer	Half Glaz	zed Do		w-E Soft 0		Gap	Туре	0.63	Туре	0.	<b>ctor</b> .70	(W/m²K) 1.20
Windows Side Door	Manufacturer Manufacturer	Window Solid Doo	or	Double Lo	ow-E Soft 0	.05			0.63		0.	70	1.20 1.20
French Door Side Door (Half Glazed)	Manufacturer Manufacturer	Window Half Glaz	ed Do		ow-E Soft 0				0.63 0.63			70 70	1.20 1.20
3.0 Openings													
Name	Opening Ty			Location			Orienta		Area			Pito	ch
Front Door Front Windows	Half Glazed Windows	DOOL		External Wall External Wall			Eas Eas	-	2.1 7.0				
LH Windows	Windows			External Wall			Sout	h	3.2	7			
RH Windows Garage Door	Windows Side Door			External Wall Wall to Garage			Norti Norti		1.5 1.9				
Rear Windows	Windows			External Wall			Wes	t	4.5				
Rear French Door LH Door	French Door Side Door (H		d)	External Wall External Wall			Wes Sout		5.8 2.1				
4.0 Conservatory			1	None									
5.0 Draught Proofing				100					%				
6.0 Draught Lobby				Yes									
7.0 Thermal Bridging				Calculate Bridge	s								
7.1 List of Bridges													
Bridge Type				rce Type		Length			Reference				Imported
E3 Sill E4 Jamb				Gov Approved 8 Gov Approved 8		13.54 36.00	0.04 0.05	0.04 0.05	ACD-Extern ACD-Extern				No No
E5 Ground floor (normal)			Non	Gov Approved S	Schemes	27.46	0.06	0.06	Assumed				No
E16 Corner (normal) E2 Other lintels (including	other steel linte	ie)		Gov Approved 8 Gov Approved 8		24.25 18.32	0.09 0.30	0.09 0.30	ACD-Extern ACD-Extern				No No
E2 Other lintels (including				Gov Approved S		0.92	0.30	0.30	ACD-Exten				No
E4 Jamb				Gov Approved S		4.20	0.05	0.05	ACD-alitoG	arage			No
E5 Ground floor (normal) E16 Corner (normal)				Gov Approved S Gov Approved S		8.40 8.17	0.06 0.09	0.06 0.09	Assumed ACD-alitoG	arane			No No
E20 Exposed floor (normal			Non	Gov Approved S	Schemes	8.40	0.06	0.06	Assumed	alago			No
E21 Exposed floor (inverte E10 Eaves (insulation at co				Gov Approved S		8.40	0.06	0.06	Assumed	Laj A (la L			No
E12 Gable (insulation at ce	eiling level)		Non	Gov Approved S Gov Approved S	Schemes	18.44 19.77	0.06 0.12	0.06 0.12	ACD-Exteri				No No
E24 Eaves (insulation at co			Non	Gov Approved S	Schemes	2.35	0.10	0.10	Assumed				No
E17 Corner (inverted – inte external area)	-	ter than		Gov Approved S		14.74	-0.09	-0.09					No
E6 Intermediate floor within	n a owelling			Gov Approved S	ichemes	25.76	0.03	0.03	ACD-Extern	nalWall			No
Y-value			L	0.05					W/m²K				
8.0 Pressure Testing			[	Yes									
Designed APso			Į	4.00					m³/(h.m	²) @ 50	Pa		
Test Method			L	Blower Door									
9.0 Mechanical Ventilation													
Mechanical Ventilation	in System Deca	ent	F	No									
Mechanical Ventilatio		ent	L	No									
1.0 Fixed Cooling System	riues		Г	No									
2.0 Lighting			L	110									
No Fixed Lighting				No									
				Name		асу	Pow	er	Capa			Cou	
				Lighting	40.	.00	9		36	0		14	
4.0 Main Heating 1			Г	Lighting Database	40.	00	9		36	0		14	



Percentage of Heat	100.00	%
Database Ref. No.	17483	
Fuel Type	Mains gas	
In Winter	89.00	
In Summer	80.00	
Model Name	Greenstar	
Manufacturer	Bosch Thermotechnology	
System Type	Regular boiler	
Controls SAP Code	2110	
Delayed Start Stat	Yes	
Flue Type	Balanced	
Fan Assisted Flue	Yes	
Is MHS Pumped	Pump in heated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Unknown	
Boiler Interlock	Yes	
25.0 Main Heating 2	None	
26.0 Heat Networks	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	
28.1 Showers Description Shower Typ	e Flow Rate Rated Power (	Connected Connected To
Description Shower Typ	[l/min] [kW]	
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	180.00	] L
Loss	1.32	kWh/day
Pipes insulation	Fully insulated primary pipework	]
In Airing Cupboard	No	]
31.0 Thermal Store	None	]
32.0 Photovoltaic Unit	Multiple Dwellings – Connected	]
Export Capable Meter?	Yes	ī
	Yes	1
Connected To Dwelling	100	



Di	verter				No							
Battery Capacity [kWh]					0.00			i				
PV Cells kWp		Orientation Eleva		Overshading FGHRS		FGHRS	MCS Certificate O		shading or	Certificate	Panel Manufacturer	
		East	30°	None Or Little		No	1.00		Reference			
34.0 S	mall-scale	Hydro			None							
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Recor	nmendatio	one										

Lower cost measures

None
Further measures to achieve even higher standards

**Typical Cost** Typical savings per year Ratings after improvement

SAP rating Environmental Impact

A 98 B 91

0 0

0 0



Property Reference		7 - HT - Ap	pt - GF - E	-na				D.f.		sued o			/12/202	.£.	_
Assessment Reference	As De:	signed				Prop	Туре	Ref	008	537-SA	P-Apa	rtment-(	SF-End		
Property	Plot , A	Accrington	Road, W	halley											
SAP Rating				97 A	DER		10.	20		TE	R		10.71		
Environmental				92 A	% DER	< TER							4.76		
CO₂ Emissions (t/year)		4		0.84	DFEE		31.	29		TF	EE		31.46		
Compliance Check			HH.	See BREL	% DFE	E < TFE	E						0.53		
% DPER < TPER				1.27	DPER	4	55.	20		TP	ER		55.91		
Assessor Details	Mr. Benjan	ain Maad								As	sesso	r ID	P717-	0001	
Client	Oakmere I						_						1		
SUMMARY FOR INPU			Ruild //	As Designed)				111							
	DAIATO	IX. INEW	-1				_	_		7					
Orientation			, L	East						=					
Property Tenture			r.	ND						╡					
Fransaction Type				6						╡					
Terrain Type			1	Suburban						=					
1.0 Property Type			1	Flat, End-Terrace						=					
Position of Flat				Ground-floor flat						=					
Which Floor			-	0						-					
2.0 Number of Storeys			1	1						=					
3.0 Date Built				2022						=					
1.0 Sheltered Sides				2						=					
5.0 Sunlight/Shade				Average or unknow	'n					_					
6.0 Thermal Mass Parame	ter			Precise calculation											
7.0 Electricity Tariff				Standard											
Smart electricity meter f	itted			No											
Smart gas meter fitted				No											
7.0 Measurements				Ground flo		Loss Po 31.31		ter	Interna 8	ai Fioo 1.33 m		Ave	rage St 2.3	orey 1 0 m	Heig
8.0 Living Area				18.85						m²					
9.0 External Walls															
Description	Туре	Construc	tion		U-Value (W/m°K)	Kappa (kJ/m²K)	Gross				Sheiter	Оре	enings A		iculati pe
External Wall Wall to Corridor	Timber Frame Timber Frame			one layer of plasterboard wo layers of plasterboard	0.18	9.00 18.00	42.55 29.46	33,51	0.0	0 0 Sta	None irwell Ac Corridor	cess		nter Gr nter Gr	ross A
9.1 Party Walls Description	Туре	(	Construc	tion					lue Ka <sup>2</sup> K) (kJ		Area (m²)	Shelt Res		Shelf	ter
Party Wall	Filled Car Edge Sea			asterboard on both ut sheathing board	sides, twin	timber f	rame	0.0		0.00	13.09			Non	ie
9.2 Internal Walls Description		C	onstructi	ion									Kappa (kJ/m²ł		rea (ı
Ground Floor		Pl	lasterboai	rd on timber frame									9.00		167.1
10.1 Party Ceilings Description		C	onstructi	ion									Kappa (kJ/m²l		rea (I
Party Ceiling		Ti	imber I-joi	sts, carpeted									20.00		81.3
11.0 Heat Loss Floors Description	Туре	Storey	/ Index	Construction				U-Value (W/m²K)		Shelter	Code			appa I/m²K)	Area
Ground Floor	Ground Floor -	Solid Lowes	t occupied	Suspended concrete	loor, carpete	d		0.15		Non	9			5.00	81.
12.0 Opening Types Description	Data Soul	rce Type	•	Glazing			Glaz Ga		Filling Type	G-va	lue	Frame Type	Fram Facto		J Val W/m



Ostid Pass	Manufacture, Daniel	0						4.00
Solid Door Windows Side Door	Manufacturer Window	Corridor zed Door	Double Low-E Soft C Double Low-E Soft C			0.63 0.63	0.70 0.70	1.30 1.20 1.60
13.0 Openings								
Name Front Door	Opening Type Solid Door		cation Ill to Corridor		Orientation East	Area (m²) 1.90	Pite	ch
LH Windows	Windows	Ex	ternal Wall		South	2.16		
Rear Windows Rear French Door	Windows Windows		ternal Wall ternal Wall		West West	3.67 3.21		
14.0 Conservatory		No	ne					
15.0 Draught Proofing		100	)			%		
16.0 Draught Lobby		Yes	<b>.</b>					
17.0 Thermal Bridging		Cal	culate Bridges					
17.1 List of Bridges								
Bridge Type E3 Sill		Source Non Go	Type v Approved Schemes	Length 4.92	Psi Adjuste 0.04 0.04	d Reference: ACD-ExternalWall		Importe No
E4 Jamb		Non Go	v Approved Schemes	13.54	0.05 0.05	ACD-ExternalWall		No
E5 Ground floor (norm E7 Party floor between	nal) n dwellings (in blocks of flats)		v Approved Schemes v Approved Schemes	18.50 18.50	0.06 0.06 0.07 0.07	Assumed ACD-ExternalWall		No No
E16 Corner (normal)	,	Non Go	v Approved Schemes	2.30	0.09 0.09	ACD-WalltoCorridor		No
P1 Party wall - Ground	wall between dwellings d floor		v Approved Schemes v Approved Schemes	4.60 5.69	0.08 0.08 0.08 0.08	Assumed Assumed		No No
P3 Party wall - Intermo	ediate floor between dwelling	s Table K	1 - Default	5.69	0.00 0.00			No
E2 Other lintels (include	ding other steel lintels)		v Approved Schemes	6.45	0.30 0.30	ACD-ExternalWall		No
E2 Other lintels (included E4 Jamb	ding other steel lintels)		v Approved Schemes v Approved Schemes	0.90 4.20	0.30 0.30 0.05 0.05	ACD-WalltoCorridor ACD-WalltoCorridor		No No
E5 Ground floor (norm	ıal)	Non Go	v Approved Schemes	12.81	0.06 0.06	ACD-Assumed		No
E16 Corner (normal) E7 Party floor between	n dwellings (in blocks of flats)		v Approved Schemes v Approved Schemes	4.60 12.81	0.09 0.09 0.07 0.07	ACD-WalltoCorridor ACD-WalltoCorridor		No No
Y-value		0.0	6			W/m²K		
18.0 Pressure Testing		Yes	•			7.		
Designed AP₅		4.0	0			m³/(h.m²) @ 50 Pa	1	
Test Method		Blo	wer Door					
19.0 Mechanical Ventilat	ion							
Mechanical Ventilation	on							
Mechanical Vent	tilation System Present	No						
20.0 Fans, Open Firepla	ces, Flues							
21.0 Fixed Cooling Syste	em	No						
22.0 Lighting								
No Fixed Lighting		No					_	
				<b>cacy</b> .00	Power 9	Capacity 360	Co.	
24.0 Main Heating 1		Dat	abase					
Percentage of Heat		100	.00			%		
Database Ref. No.		175	07					
Fuel Type		Ma	ins gas					
In Winter		89.	00					
In Summer		86.	60					
Model Name		Gre	enstar					
Manufacturer		Bos	sch Thermotechnology					
System Type		Con	nbi boiler			_		
Controls SAP Code		211	0			_		
Delayed Start Stat		Yes						
Flue Type		Bal	anced					
Fan Assisted Flue		Yes						
Is MHS Pumped		Pur	np in heated space					
Heating Pump Age		201	3 or later					

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Heat Emitter			Radiators							
Flow Temperature			Unknown							
Boiler Interlock			Yes							
Combi boiler type			Standard Con	ıbi						
Combi keep hot type			Gas/Oil, time	clock						
25.0 Main Heating 2			None							
26.0 Heat Networks			None							
28.0 Water Heating										
Water Heating			Main Heating	1						
SAP Code			901							
Flue Gas Heat Recovery Sys	stem		No							
Waste Water Heat Recovery	Instantaneous	System 1	No							
Waste Water Heat Recovery	Instantaneous	System 2	No							
Waste Water Heat Recovery	Storage Systen	n	No							
Solar Panel			No							
Water use <= 125 litres/pers	on/day		Yes							
Cold Water Source			From mains							
Bath Count			1							
28.3 Waste Water Heat Recove		Shower Type	Đ		F	low Rate Rated F [l/min] [kW		nnecte	d Connected	То
29.0 Hot Water Cylinder			None							
In Airing Cupboard			No							
32.0 Photovoltaic Unit			Multiple Dwell	lings	- Connected					
Export Capable Meter?			Yes							
Connected To Dwelling			Yes							
Diverter			No							
Battery Capacity [kWh]			0.00							
PV Cells kWp	Orientation	Elevation	o Oversha	ding	FGHRS	MCS Certificate	Overs Facto	hading r	MCS Certificate	Panel Manufacturer
4.42	East	30°	None Or	Little		No	1.00		Reference	
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 achie	ve even higher		ypical Cost		Typical savin	gs per year	Ra SAP rai 0 0	itings af ling	fter improvem Environi	ent mental Impact 0 0

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