#### PREDICTED ENERGY ASSESSMENT



Plot 58, Pennysylvania Close, Dwelling type: House, End-Terrace

Portland, Date of assessment: 28/07/2023
Weymouth, Produced by: Robyn Berr

Produced by: Robyn Berry Energy & Sustainability

Services

Total floor area: 123.16 m<sup>2</sup>

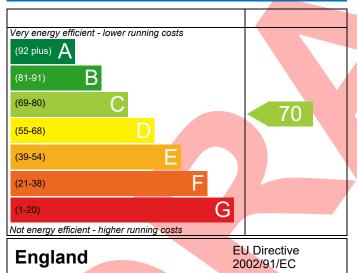
This document is a Predicted Energy Assessment for properties marketed when they are incomplete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, this rating will be updated and an official Energy Performance Certificate will be created for the property. This will include more detailed information about the energy performance of the completed property.

The energy performance has been assessed using the Government approved SAP2012 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO<sub>2</sub>) emissions.

### **Energy Efficiency Rating**

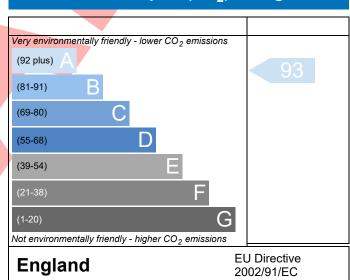
Dorset,

DT5



The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.

#### **Environmental Impact (CO<sub>2</sub>) Rating**



The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO<sub>2</sub>) emissions. The higher the rating the less impact it has on the environment.

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# **BUILDING REGULATION COMPLIANCE Calculation Type: New Build (As Designed)**



Property   Plot 58   Prop Type Ref   Plot 58   Property	15.38 47.88 54-0001
Property   Plot 58, Pennysylvania Close, Portland, Weymouth, Dorset, DT5	47.88
SAP Rating 70 C DER 7.84 TER  Environmental 93 A % DER <ter %="" &="" (as="" (c)="" (der)="" (dfee)="" (max.="" (t="" (ter)="" (tfee)="" -<="" 0.00="" 0.15="" 0.20)="" 0.30)="" 0.70)="" 0.81="" 07595="" 1="" 15.38="" 1a="" 2="" 24.58="" 359,="" 36.11="" 49.04="" 945="" a7.84="" a7.88="" achieving="" and="" assessor="" average="" aw="" berry="" berry,="" biomass="" build="" carbon="" client="" co2="" compliance="" criterion="" data="" der="" design="" designed)="" details="" dfee="" dfee<tfee="" dioxide="" dwelling="" efficiency="" element="" emission="" emissions="" energy="" external="" fabric="" flexibility="" for="" fuel="" general="" heating="" highest="" id="" input="" kgco2="" kwh="" limiting="" limits="" main="" ms.="" m²="" new="" on="" party="" pass="" properties="" properties,="" rate="" rbess@outlook.com="" requirements="" robyn="" services,="" standards="" sumary="" sustainability="" target="" tel:="" ter="" tfee="" th="" the="" u-values="" vivir="" wall="" year)="" yr="" –=""><th>47.88</th></ter>	47.88
Environmental 93 A % DER <ter %="" &="" (as="" (biomass)="" (c)="" (der)="" (dfee)="" (max.="" (t="" (ter)="" (tfee)="" 0.20)="" 0.20)<="" 0.30)="" 0.70)="" 0.81="" 07595="" 1="" 1.00="" 1a="" 2="" 24.5.8="" 24.58="" 359,="" 36.11="" 49.04="" 94.0.1.1="" 945="" achieving="" and="" assessor="" average="" aw="" berry="" berry,="" biomass="" build="" carbon="" client="" co2="" compliance="" criterion="" d.00="" d.15="" d.20="" d.21="" d.22="" d.23="" d.24="" d.25="" d.26="" d.27="" d.28="" d.29="" data="" dee="" der="" designed)="" details="" dfee="" dfee<="" dioxide="" dwelling="" efficiency="" element="" emission="" emissions="" energy="" external="" fabric="" for="" fuel="" general="" heating="" highest="" id="" input="" main="" ms.="" new="" pass="" properties="" properties,="" rate="" rbess@outlook.com="" requirements="" robyn="" services,="" standards="" sumary="" sustainability="" target="" tel:="" ter="" tfee="" th="" the="" u-values="" vivir="" wall="" year)="" —=""><th>47.88</th></ter>	47.88
CO2 Emissions (t/year)  General Requirements Compliance  Pass  MS. Robyn Berry, Robyn Berry Energy & Sustainability Services, Tel: 07595  945 359, rbess@outlook.com  Client  Vivir Properties, Vivir Properties  SUMARY FOR INPUT DATA FOR New Build (As Designed)  Criterion 1 — Achieving the TER and TFEE rate  1a TER and DER  Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER)  Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE)  Target Fabric Energy Efficiency (DFEE)  Dwelling Fabric Standards  2 Fabric U-values  Element External wall  O.15 (max. 0.30) O.00 (max. 0.20)  AW  945 36.11  TFEE  24.58  Assessor ID  AW  AW  AW  AW  AW  ASSESSOR ID  AW  AW  AW  ASSESSOR ID  AW  AW  ASSESSOR ID  AW  AW  AW  ASSESSOR ID  AW  AW  ASSESSOR ID  AW  AW  ASSESSOR ID  AW  AW  AW  ASSESSOR ID  AW  AVEASE  1.00 (biomass)  1.00 (biomass)  7.84	
Assessor Details  Ms. Robyn Berry, Robyn Berry Energy & Sustainability Services, Tel: 07595  945 359, rbess@outlook.com  Client  Vivir Properties, Vivir Properties  SUMARY FOR INPUT DATA FOR New Build (As Designed)  Criterion 1 — Achieving the TER and TFEE rate  1a TER and DER  Fuel for main heating Fuel factor  Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER)  Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE)  Target Fabric Energy Efficiency (DFEE)  Dwelling Fabric Standards  2 Fabric U-values Element External wall Party wall  O.00 (max. 0.20)  Assessor ID  AW 945 359, Pbest (TFEE) 945 36.10  AW 945 359, rbess@outlook.com  AW 945 36.9  Assessor ID  AW 945 359, rbess@outlook.com  AW 945 359, rbess@o	
Assessor Details  Ms. Robyn Berry, Robyn Berry Energy & Sustainability Services, Tel: 07595  Assessor ID  AW 945 359, rbess@outlook.com  Vivir Properties, Vivir Properties  SUMARY FOR INPUT DATA FOR New Build (As Designed)  Criterion 1 – Achieving the TER and TFEE rate  1a TER and DER  Fuel for main heating Fuel factor  Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER)  Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE)  Target Fabric Energy Efficiency (DFEE)  Dwelling Fabric Standards  2 Fabric U-values  Element External wall Party wall  O.00 (max. 0.30) O.15 (max. 0.70) Party wall  Oxide Emission Rate (DER)  Assessor ID  AW  AW  ASSESSOR ID  AW  AW  ASSESSOR ID  AW  ASSESCA  ASSESSOR ID  AW  ASSESCA  ASSESSOR ID  AW  ASSESSOR ID  AW  ASSESSOR ID  ASSESSOR ID  AW  ASSESSOR ID  AW  ASSESSOR ID  AS	54-0001
Q45 359, rbess@outlook.com  Vivir Properties, Vivir Properties  SUMARY FOR INPUT DATA FOR New Build (As Designed)  Criterion 1 – Achieving the TER and TFEE rate  1a TER and DER  Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER)  Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE)  Dwelling Fabric Energy Efficiency (DFEE)  Criterion 2 – Limits on design flexibility  Limiting Fabric Standards  2 Fabric U-values  Element External wall O.15 (max. 0.30) O.00 (max. 0.20)  Party wall  Party wall  Criterion 2 – Limits on	54-0001
SUMARY FOR INPUT DATA FOR New Build (As Designed)  Criterion 1 – Achieving the TER and TFEE rate  1a TER and DER  Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER)  Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE)  Dwelling Fabric Standards  2 Fabric U-values Element External wall D-15 (max. 0.30) Party wall  Average Fuel for New Build (As Designed)  Biomass (c) Flow Biomass (c)	
Criterion 1 — Achieving the TER and TFEE rate  1a TER and DER  Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER)  Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE)  Target Fabric U-values Element External wall External wall DAVE A SIGNAR SERVICE SERV	
Fuel for main heating Fuel factor Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER)  Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE)  Target Fabric Energy Efficiency (TFEE)  Target Fabric Energy Efficiency	
Fuel for main heating Fuel factor  Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER)  Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE)  Target Fabric Energy Efficiency (DFEE)  Tar	
Fuel factor  Target Carbon Dioxide Emission Rate (TER)  Dwelling Carbon Dioxide Emission Rate (DER)  Total Carbon	
Target Carbon Dioxide Emission Rate (TER)  Dwelling Carbon Dioxide Emission Rate (DER)  7.84  -7.54 (-49.0%)  Ib TFEE and DFEE  Target Fabric Energy Efficiency (TFEE)  Dwelling Fabric Energy Efficiency (DFEE)  36.11  kWh/m²/yr  -11.8 (-24.6%)  Criterion 2 – Limits on design flexibility  Limiting Fabric Standards  2 Fabric U-values  Element  Average  Highest  External wall  0.15 (max. 0.30)  Party wall  0.00 (max. 0.20)  -	
Dwelling Carbon Dioxide Emission Rate (DER)  7.84  -7.54 (-49.0%)  Ib TFEE and DFEE  Target Fabric Energy Efficiency (TFEE)  Dwelling Fabric Energy Efficiency (DFEE)  Average  Element  External wall  O.15 (max. 0.30)  Party wall  Party wall  Average  O.00 (max. 0.20)  AgCO <sub>2</sub> /m²  kgCO <sub>2</sub> /m²  kgCO <sub>2</sub> /m²  kgCO <sub>2</sub> /m²  kgCO <sub>2</sub> /m²  kWh/m²/yr  kWh/m²/yr  kWh/m²/yr  kWh/m²/yr  Limiting Fabric Standards  O.15 (max. 0.30)  O.15 (max. 0.70)	
Target Fabric Energy Efficiency (TFEE)  Dwelling Fabric Energy Efficiency (DFEE)  Criterion 2 – Limits on design flexibility  Limiting Fabric Standards  2 Fabric U-values  Element  External wall  Date of the problem	
Target Fabric Energy Efficiency (TFEE)  Dwelling Fabric Energy Efficiency (DFEE)  Criterion 2 – Limits on design flexibility  Limiting Fabric Standards  2 Fabric U-values  Element  External wall  Party wall  O.00 (max. 0.20)  Average  Highest  O.15 (max. 0.70)  O.00 (max. 0.20)	Pass
Target Fabric Energy Efficiency (TFEE)  Dwelling Fabric Energy Efficiency (DFEE)  36.11  kWh/m²/yr  -11.8 (-24.6%)  Criterion 2 – Limits on design flexibility  Limiting Fabric Standards  2 Fabric U-values  Element  External wall  0.15 (max. 0.30)  Party wall  0.00 (max. 0.20)  -	
Dwelling Fabric Energy Efficiency (DFEE)  36.11  kWh/m²/yr  -11.8 (-24.6%)  Criterion 2 – Limits on design flexibility  Limiting Fabric Standards  2 Fabric U-values  Element  External wall  0.15 (max. 0.30)  Party wall  0.00 (max. 0.20)  -	
Criterion 2 – Limits on design flexibility  Limiting Fabric Standards  2 Fabric U-values  Element External wall O.15 (max. 0.30) Party wall O.00 (max. 0.20)  - kWh/m²/yr  kWh/m²/yr  kWh/m²/yr  conditions the standards  Limiting Fabric Standards  0.15 (max. 0.70) 0.015 (max. 0.70)	
Criterion 2 – Limits on design flexibility  Limiting Fabric Standards  2 Fabric U-values  Element External wall Party wall  0.15 (max. 0.30) 0.00 (max. 0.20)  -	Doss
Limiting Fabric Standards  2 Fabric U-values  Element Average Highest  External wall 0.15 (max. 0.30) 0.15 (max. 0.70)  Party wall 0.00 (max. 0.20) -	Pass
2 Fabric U-values         Average         Highest           External wall         0.15 (max. 0.30)         0.15 (max. 0.70)           Party wall         0.00 (max. 0.20)         -	
Element         Average         Highest           External wall         0.15 (max. 0.30)         0.15 (max. 0.70)           Party wall         0.00 (max. 0.20)         -	
External wall 0.15 (max. 0.30) 0.15 (max. 0.70)	
Party wall 0.00 (max. 0.20) -	Pass
	Pass
	Pass
Roof 0.15 (max. 0.20) 0.15 (max. 0.35)	Pass
Openings 0.82 (max. 2.00) 1.00 (max. 3.30)	Pass
2a Thermal bridging	
Thermal bridging calculated from linear thermal transmittances for each junction	
3 Air permeability	
Air permeability at 50 pascals 3.00 (design value) m³/(h.m²) @ 50 Pa	
Maximum m³/(h.m²) @ 50 Pa	
Limiting System Efficiencies	Pass
4 Heating efficiency	Pass
Main heating system Community heating scheme	Pass
Secondary heating system None	Pass

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Regs Region: England Elmhurst Energy Systems SAP2012 Calculator (Design System) version 4.14r19

# **BUILDING REGULATION COMPLIANCE Calculation Type: New Build (As Designed)**



5 Cylinder insulation				
Hot water storage	Measured cylinder loss: 2.24 kWh/day Permitted by DBSCG 2.24			
Primary pipework insulated	Yes (assumed)			
6 Controls				
Space heating controls	Charging system linked to use of community heating, TRVs	Pass		
Hot water controls	Cylinderstat	Pass		
7 Low energy lights				
Percentage of fixed lights with low-energy fittings	100 %			
Minimum	75 %	Pass		
8 Mechanical ventilation				
Not applicable				
Criterion 3 – Limiting the effects of heat gains in sun	nmer			
9 Summertime temperature				
Overheating risk (Southern England)	Medium	Pass		
Based on:				
Overshading	Average			
Windows facing East	7.46 m², No overhang	]		
Windows facing West	7.84 m², No overhang	_		
Air change rate	2.50 ach	_		
Blinds/curtains	None			
Criterion 4 – Building performance consistent with I	DER and DFEE rate			
Party Walls				
Туре	U-value			
Filled Cavity with Edge Sealing	0.00 W/m²K	Pass		
Air permeability and pressure testing				
3 Air permeability				
Air permeability at 50 pascals	3.00 (design value) m <sup>3</sup> /(h.m <sup>2</sup> ) @ 50 Pa			
Maximum	10.0 m <sup>3</sup> /(h.m <sup>2</sup> ) @ 50 Pa	Pass		
10 Key features				
Party wall U-value	0.00 W/m²K			
Floor U-value	0.09 W/m²K			
Door U-value	1.00 W/m²K			
Window U-value	0.80 W/m²K			
Air permeability	$m^{3}/m^{2}h$			
Community heating, Biomass	N/A			

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### **RECOMMENDATIONS**



	Typical cost	Typical savings per year	Energy efficiency	Environmental impact	Result
Low energy lights			0	0	Already installed
Solar water heating	£4,000 - £6,000	£409	C 74	A 94	Recommended
Photovoltaic	£3,500 - £5,500	£777	B 82	A 101	Recommended
Wind turbine			0	0	Not applicable
Totals	£7,500 - £11,500	£1185	B 82	A 101	



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