Anderson Goddard Ltd

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Independent Energy Specialists, SAP, SBEM, EPC's, U-Value & Condensation Risk, 2D & 3D Thermal Modelling

Post Construction Stage (PCS), Energy Report

Brigham Street, MANCHESTER, M11 2JR

AG-79050-PCS-Rev A

22nd July 2025

Abacus House, 450 Warrington Road, Culcheth, Cheshire, WA3 5QX

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1. Executive summary

The original planning report provided by Watt Energy Consultants for the development at Brigham Street, MANCHESTER, M11 2JR recommended the following measures to achieve a 46% reduction in Carbon Emissions over and above the requirements of Approved Document Part L1 of the building regulations 2013.

- Improvements to fabric (Be Lean)
- Installation of High Efficient Heat Pump Technology (Be Lean)

The measures as installed provide the following As-Built improvement over Approved Document Part L1 of the building regulations 2021.

Reduction in Carbon Emissions 64.18% (Over AD.L1 2021)

Compliance with AD.L1 2021 would represent a 31% reduction in Carbon emissions over L1 2013 requirement and therefore s 64.18% improvement over AD.L21 would represent a 95% reduction in carbon emissions over L13 standards.

2. Methodology

The findings of the initial recommendations report were incorporated into the final design for the development. Photographic Evidence Reports, Energy Performance Certification and Building Regulation Compliance Documentation have been provided to validate the energy and carbon performance of the design against the savings targeted.

The scheme was designed and constructed in accordance with the National Energy Hierarchy, incorporating the need to reduce energy use, then supply energy efficiently and to utilize renewable energy.

3. Local Planning Requirements

The development is required to comply with Manchester City Council's Local Development Framework Core Strategy Development Plan Document. As this report considers energy use and carbon emissions relating to the proposed dwellings, it is concerned with the following elements of the Core Strategy:

CS Policy EN 4 – Reducing CO2 Emissions: This policy targets the reducing of CO2 emissions through the following of the energy hierarchy; firstly, reducing the need for energy through efficient design measures, followed by clean energy and lastly, the application of renewable or LZC technologies. In addition to this point, MCC states within this policy all new development is required to use building materials that have low embodied carbon.

CS Policy EN 6 - Target Framework for CO2 Reductions from Low or Zero Carbon Energy Supplies: This Policy requires electricity intense residential development of 10 or more units to meet, as a minimum, a 15% reduction in domestic CO2 emissions over Part L of the 2010 Building Regulations, unless proven to be unviable. As Part L 2013 of the Building Regulations represents a 6% improvement on 2010 levels, this target is subsequently equivalent to a 9% improvement in CO2 emissions over Part L 2013. Section

4. Conclusion

Detailed energy performance data and the supporting system inputs are recorded in the Elmhurst Energy "BREL", "Combined Report" and "EPC" documents for each individual unit.

The development incorporated the following measures, as recommended in the original energy statement report:

1. Building elements exceeding Building Regulations minimum standards of thermal performance
2. Air source heat pumps delivering heating and hot water

The SAP and EPC results are tabulated in the table below.

	AD.L Volume 1 2021														
Plot N°	GIFA	DER	TER	DER / TER %	DER =< TER	DPER	TPER	DPER / TPER %	TPER =< TPER	DFEE	TFEE	DFEE / TFEE %	DFEE =< TFEE	SAP Rating	Band
1	102.38	3.63	10.22	64.48%	PASS	38.10	53.31	28.53%	PASS	34.98	35.86	2.45%	PASS	84	B
2	102.38	3.59	10.11	64.49%	PASS	37.77	52.73	28.37%	PASS	34.30	35.35	2.97%	PASS	84	B
3	87.92	3.84	10.86	64.64%	PASS	40.39	56.67	28.72%	PASS	34.83	35.70	2.43%	PASS	84	B
4	87.92	3.84	10.86	64.64%	PASS	40.39	56.67	28.72%	PASS	34.89	35.70	2.26%	PASS	84	B
5	87.92	3.84	10.86	64.64%	PASS	40.39	56.67	28.72%	PASS	34.87	35.70	2.32%	PASS	84	B
6	87.92	3.84	10.86	64.64%	PASS	40.39	56.67	28.72%	PASS	34.94	35.70	2.12%	PASS	84	B
7	87.92	3.84	10.86	64.64%	PASS	40.39	56.67	28.72%	PASS	34.89	35.70	2.26%	PASS	84	B
8	87.92	3.84	10.86	64.64%	PASS	40.39	56.67	28.72%	PASS	34.89	35.70	2.26%	PASS	84	B
9	70.64	4.37	12.33	64.55%	PASS	46.10	64.48	28.50%	PASS	37.41	38.25	2.19%	PASS	83	B
10	70.64	4.37	12.33	64.55%	PASS	46.10	64.48	28.50%	PASS	37.25	38.25	2.61%	PASS	83	B
11	70.64	4.37	12.33	64.55%	PASS	46.10	64.48	28.50%	PASS	37.43	38.25	2.14%	PASS	83	B
12	70.64	4.37	12.33	64.55%	PASS	46.10	64.48	28.50%	PASS	37.52	38.25	1.90%	PASS	83	B
13	61.97	4.36	11.54	62.21%	PASS	46.15	60.45	23.65%	PASS	33.16	34.18	2.98%	PASS	84	B
14	61.97	4.59	12.32	62.74%	PASS	48.49	64.62	24.96%	PASS	37.29	38.11	2.15%	PASS	83	B
15	71.90	4.13	10.61	61.07%	PASS	43.78	55.42	21.00%	PASS	30.28	32.16	5.84%	PASS	84	B
16	71.90	4.13	10.73	61.50%	PASS	43.70	56.04	22.01%	PASS	30.65	33.00	7.12%	PASS	84	B
17	70.64	4.37	12.30	64.47%	PASS	46.08	64.33	28.36%	PASS	37.62	38.39	2.00%	PASS	83	B
18	70.64	4.37	12.33	64.55%	PASS	46.10	64.48	28.50%	PASS	37.52	38.25	1.90%	PASS	83	B
19	70.64	4.37	12.33	64.55%	PASS	46.10	64.48	28.50%	PASS	36.96	38.25	3.37%	PASS	83	B
20	70.64	4.37	12.33	64.55%	PASS	46.10	64.48	28.50%	PASS	37.01	38.25	3.24%	PASS	83	B
21	70.64	4.37	12.33	64.55%	PASS	46.10	64.48	28.50%	PASS	37.46	38.25	2.06%	PASS	83	B
22	70.64	4.37	12.33	64.55%	PASS	46.10	64.48	28.50%	PASS	37.51	38.25	1.93%	PASS	83	B
23	87.92	3.96	11.17	64.54%	PASS	41.58	58.27	28.64%	PASS	36.73	37.45	1.92%	PASS	83	B
24	102.38	3.72	10.46	64.43%	PASS	39.05	54.62	28.50%	PASS	36.06	36.91	2.30%	PASS	83	B

The SAP and EPC results show that all properties achieved the following:

- EPC 'B' Rating
- Carbon emission saving of 64% +
- Primary energy saving of 27% +
- Fabric efficiency rating better than target

The scheme complies with local Planning and Building Regulations targets and exceeds the targeted energy and carbon performance identified in the original energy statement report.

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