

# Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60  
Printed on 14 May 2025 at 10:29:48

## Project Information:

**Assessed By:** Paul Byrne (STRO011431)

**Building Type:** Flat

## Dwelling Details:

**NEW DWELLING AS BUILT**

Total Floor Area: 41.4m<sup>2</sup>

**Site Reference :** Greenwood Place

**Plot Reference:** 111

**Address :** Flat 23, Gladeside House, 2 Gladeside Road, Wythenshawe, M22 9QH

## Client Details:

**Name:** Challenger Building Services Ltd

**Address :**

**This report covers items included within the SAP calculations.**

**It is not a complete report of regulations compliance.**

## 1a TER and DER

Fuel for main heating system: Electricity (c)

Fuel factor: 1.55 (electricity (c))

Target Carbon Dioxide Emission Rate (TER) 24.22 kg/m<sup>2</sup>

Dwelling Carbon Dioxide Emission Rate (DER) 12.15 kg/m<sup>2</sup>

OK

## 1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 26.0 kWh/m<sup>2</sup>

Dwelling Fabric Energy Efficiency (DFEE) 27.2 kWh/m<sup>2</sup>

Fail

Excess energy = 1.21 kg/m<sup>2</sup> (04.7 %)

## 2 Fabric U-values

| Element       | Average          | Highest          |    |
|---------------|------------------|------------------|----|
| External wall | 0.24 (max. 0.30) | 0.24 (max. 0.70) | OK |
| Party wall    | 0.00 (max. 0.20) | -                | OK |
| Floor         | (no floor)       |                  |    |
| Roof          | (no roof)        |                  |    |
| Openings      | 1.40 (max. 2.00) | 1.40 (max. 3.30) | OK |

## 2a Thermal bridging

Thermal bridging calculated from linear thermal transmittances for each junction

## 3 Air permeability

|                                |                                                                 |    |
|--------------------------------|-----------------------------------------------------------------|----|
| Air permeability at 50 pascals | 6.8m <sup>3</sup> /m <sup>2</sup> h (average for dwelling type) |    |
| Maximum                        | 10.0                                                            | OK |

## 4 Heating efficiency

Main Heating system: Community heating schemes - Heat pump

Main Heating system 2:

Heat pumps with radiators or underfloor heating - electric  
KERS Energy Recovery KERS MVHR-W160

Secondary heating system: None

# Regulations Compliance Report

## 5 Cylinder insulation

Hot water Storage: No cylinder

## 6 Controls

|                           |                                                                         |    |
|---------------------------|-------------------------------------------------------------------------|----|
| Space heating controls    | Charging system linked to use of community heating, programmer and TRVs | OK |
| Space heating controls 2: | Not applicable (boiler provides DHW only)                               | OK |
| Hot water controls:       | No cylinder thermostat                                                  |    |
|                           | No cylinder                                                             |    |

## 7 Low energy lights

|                                                     |        |    |
|-----------------------------------------------------|--------|----|
| Percentage of fixed lights with low-energy fittings | 100.0% |    |
| Minimum                                             | 75.0%  | OK |

## 8 Mechanical ventilation

|                                      |      |    |
|--------------------------------------|------|----|
| Continuous supply and extract system |      |    |
| Specific fan power:                  | 0.55 |    |
| Maximum                              | 1.5  | OK |
| MVHR efficiency:                     | 90%  |    |
| Minimum                              | 70%  | OK |

## 9 Summertime temperature

|                                        |                    |    |
|----------------------------------------|--------------------|----|
| Overheating risk (North West England): | Not significant    | OK |
| Based on:                              |                    |    |
| Overshading:                           | Average or unknown |    |
| Windows facing: East                   | 7.4m <sup>2</sup>  |    |
| Ventilation rate:                      | 4.00               |    |

## 10 Key features

|                                                 |                      |
|-------------------------------------------------|----------------------|
| Party Walls U-value                             | 0 W/m <sup>2</sup> K |
| Community heating, heat from electric heat pump |                      |

# SAP Input

## Property Details: 111

Address: Flat 23, Gladeside House, 2 Gladeside Road, Wythenshawe, M22 9QH  
 Located in: England  
 Region: North West England  
 UPRN:  
 Date of assessment: 13 May 2025  
 Date of certificate: 14 May 2025  
 Assessment type: New dwelling as built  
 Transaction type: New dwelling  
 Tenure type: Unknown  
 Related party disclosure: No related party  
 Thermal Mass Parameter: Indicative Value Low  
 Water use <= 125 litres/person/day: True  
 PCDF Version: 512

## Property description:

Dwelling type: Flat  
 Detachment:  
 Year Completed: 2025  
 Floor Location: Floor area: Storey height:  
 Floor 0 41.4 m<sup>2</sup> 2.4 m  
 Living area: 18.3 m<sup>2</sup> (fraction 0.442)  
 Front of dwelling faces: East

## Opening types:

|       |              |         |                             |        |        |
|-------|--------------|---------|-----------------------------|--------|--------|
| Name: | Source:      | Type:   | Glazing:                    | Argon: | Frame: |
| East  | Manufacturer | Windows | low-E, En = 0.05, soft coat | Yes    | PVC-U  |

  

|              |              |                      |                 |                 |              |                         |
|--------------|--------------|----------------------|-----------------|-----------------|--------------|-------------------------|
| <b>Name:</b> | <b>Gap:</b>  | <b>Frame Factor:</b> | <b>g-value:</b> | <b>U-value:</b> | <b>Area:</b> | <b>No. of Openings:</b> |
| East         | 16mm or more | 0.7                  | 0.63            | 1.4             | 7.4          | 1                       |

  

|       |            |               |         |        |         |
|-------|------------|---------------|---------|--------|---------|
| Name: | Type-Name: | Location:     | Orient: | Width: | Height: |
| East  |            | External wall | East    | 0      | 0       |

Overshading: Average or unknown

## Opaque Elements:

| Type:                    | Gross area: | Openings: | Net area: | U-value: | Ru value: | Curtain wall: | Kappa: |
|--------------------------|-------------|-----------|-----------|----------|-----------|---------------|--------|
| <u>External Elements</u> |             |           |           |          |           |               |        |
| External wall            | 14.6        | 7.4       | 7.2       | 0.24     | 0         | False         | N/A    |
| <u>Internal Elements</u> |             |           |           |          |           |               |        |
| <u>Party Elements</u>    |             |           |           |          |           |               |        |
| Party wall               | 32.4        |           |           |          |           |               | N/A    |
| Party ceiling            | 41.4        |           |           |          |           |               | N/A    |
| Party floor              | 41.4        |           |           |          |           |               | N/A    |

## Thermal bridges:

Thermal bridges: User-defined (individual PSI-values) Y-Value = 0.1789

|            | Length | Psi-value |                                                       |
|------------|--------|-----------|-------------------------------------------------------|
| [Approved] | 3.5    | 0.3       | E2 Other lintels (including other steel lintels)      |
| [Approved] | 8.4    | 0.05      | E4 Jamb                                               |
| [Approved] | 0      | 0.16      | E5 Ground floor (normal)                              |
|            | 0      | 0         | E20 Exposed floor (normal)                            |
| [Approved] | 12.2   | 0.07      | E7 Party floor between dwellings (in blocks of flats) |

# SAP Input

|            |     |       |     |                                                            |
|------------|-----|-------|-----|------------------------------------------------------------|
|            | 0   | 0     | E15 | Flat roof with parapet                                     |
| [Approved] | 0   | 0.09  | E16 | Corner (normal)                                            |
| [Approved] | 0   | -0.09 | E17 | Corner (inverted internal area greater than external area) |
| [Approved] | 4.8 | 0.06  | E18 | Party wall between dwellings                               |
|            | 0   | 0     | P1  | Ground floor                                               |
|            | 0   | 0     | P7  | Exposed floor (normal)                                     |
|            | 27  | 0     | P3  | Intermediate floor between dwellings (in blocks of flats)  |
|            | 0   | 0     | P4  | Roof (insulation at ceiling level)                         |

## Ventilation:

|                            |                                                                |
|----------------------------|----------------------------------------------------------------|
| Pressure test:             | Yes (As built)                                                 |
| Ventilation:               | Balanced with heat recovery                                    |
|                            | Number of wet rooms: Kitchen + 1                               |
|                            | Ductwork: Insulation, rigid                                    |
|                            | Approved Installation Scheme: False                            |
| Number of chimneys:        | 0                                                              |
| Number of open flues:      | 0                                                              |
| Number of fans:            | 0                                                              |
| Number of passive stacks:  | 0                                                              |
| Number of sides sheltered: | 3                                                              |
| Pressure test:             | 4.77 (Average permeability of dwellings of that type was used) |

## Main heating system:

|                      |                                                               |
|----------------------|---------------------------------------------------------------|
| Main heating system: | Community heating schemes                                     |
|                      | Heat source: Community heat pump                              |
|                      | heat from electric heat pump, heat fraction 1, efficiency 370 |
|                      | Piping >=1991, pre-insulated, medium temp, variable flow      |
|                      | Fraction of main heat: 1                                      |

## Main heating Control:

|                       |                                                                         |
|-----------------------|-------------------------------------------------------------------------|
| Main heating Control: | Charging system linked to use of community heating, programmer and TRVs |
|                       | Control code: 2306                                                      |

## Secondary Main heating system:

|                                |                                                       |
|--------------------------------|-------------------------------------------------------|
| Secondary Main heating system: | Heat pumps with radiators or underfloor heating       |
|                                | Electric heat pumps                                   |
|                                | Fuel: Electricity                                     |
|                                | Info Source: Boiler Database                          |
|                                | Database: (rev 512, product index 104957, SEDBUK 0%): |
|                                | Band name: KERS Energy Recovery                       |
|                                | Model: KERS MVHR-W160                                 |
|                                | Model qualifier:                                      |
|                                | (provides DHW all year)                               |

## Secondary Main heating Control:

|                                 |                                           |
|---------------------------------|-------------------------------------------|
| Secondary Main heating Control: | Not applicable (boiler provides DHW only) |
|                                 | Control code: 2100                        |

## Secondary heating system:

|                           |      |
|---------------------------|------|
| Secondary heating system: | None |
|---------------------------|------|

## Water heating:

|                |                                    |
|----------------|------------------------------------|
| Water heating: | From main heating system           |
|                | Water code: 901                    |
|                | Fuel :heat from electric heat pump |
|                | No hot water cylinder              |
|                | Solar panel: False                 |

## Others:

|                        |                 |
|------------------------|-----------------|
| Electricity tariff:    | Standard Tariff |
| In Smoke Control Area: | Unknown         |

## SAP Input

|                          |                           |
|--------------------------|---------------------------|
| Conservatory:            | No conservatory           |
| Low energy lights:       | 100%                      |
| Terrain type:            | Low rise urban / suburban |
| EPC language:            | English                   |
| Wind turbine:            | No                        |
| Photovoltaics:           | None                      |
| Assess Zero Carbon Home: | No                        |

# SAP 2012 Overheating Assessment

Calculated by Stroma FSAP 2012 program, produced and printed on 14 May 2025

## Property Details: 111

|                                            |                         |
|--------------------------------------------|-------------------------|
| Dwelling type:                             | Flat                    |
| Located in:                                | England                 |
| Region:                                    | North West England      |
| Cross ventilation possible:                | No                      |
| Number of storeys:                         | 1                       |
| Front of dwelling faces:                   | East                    |
| Overshading:                               | Average or unknown      |
| Overhangs:                                 | None                    |
| Thermal mass parameter:                    | Indicative Value Low    |
| Night ventilation:                         | False                   |
| Blinds, curtains, shutters:                |                         |
| Ventilation rate during hot weather (ach): | 4 ( Windows fully open) |

## Overheating Details:

|                                           |        |      |
|-------------------------------------------|--------|------|
| Summer ventilation heat loss coefficient: | 131.16 | (P1) |
| Transmission heat loss coefficient:       | 14.2   |      |
| Summer heat loss coefficient:             | 145.31 | (P2) |

## Overhangs:

|              |        |              |
|--------------|--------|--------------|
| Orientation: | Ratio: | Z_overhangs: |
| East (East)  | 0      | 1            |

## Solar shading:

|              |           |               |            |           |      |
|--------------|-----------|---------------|------------|-----------|------|
| Orientation: | Z blinds: | Solar access: | Overhangs: | Z summer: |      |
| East (East)  | 1         | 0.9           | 1          | 0.9       | (P8) |

## Solar gains:

| Orientation |       | Area | Flux   | g_   | FF  | Shading      | Gains |         |
|-------------|-------|------|--------|------|-----|--------------|-------|---------|
| East (East) | 0.9 x | 7.4  | 113.64 | 0.63 | 0.7 | 0.9          | 300.4 |         |
|             |       |      |        |      |     | <b>Total</b> | 300.4 | (P3/P4) |

## Internal gains:

|                                                       | June                   | July                   | August                 |      |
|-------------------------------------------------------|------------------------|------------------------|------------------------|------|
| Internal gains                                        | 324.77                 | 313.85                 | 319.55                 |      |
| Total summer gains                                    | 636.7                  | 614.25                 | 569.58                 | (P5) |
| Summer gain/loss ratio                                | 4.38                   | 4.23                   | 3.92                   | (P6) |
| Mean summer external temperature (North West England) | 13.2                   | 14.9                   | 14.8                   |      |
| Thermal mass temperature increment                    | 1.3                    | 1.3                    | 1.3                    |      |
| Threshold temperature                                 | 18.88                  | 20.43                  | 20.02                  | (P7) |
| <b>Likelihood of high internal temperature</b>        | <b>Not significant</b> | <b>Not significant</b> | <b>Not significant</b> |      |

|                                                        |                        |
|--------------------------------------------------------|------------------------|
| Assessment of likelihood of high internal temperature: | <u>Not significant</u> |
|--------------------------------------------------------|------------------------|