

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:20

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 53.94m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 1

Address : Flat 3, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 30.1 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 9.42 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 53.1 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 49.8 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.21 (max. 0.30)	0.21 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	OK
Roof	(no roof)		
Openings	1.24 (max. 2.00)	1.80 (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	3.21	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: North	2.04m ²	
Windows facing: South	2.04m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.2 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Floors U-value	0.12 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:19

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 68.23m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 2

Address : Flat 2, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 27.68 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 10.32 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 50.4 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 49.1 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	OK
Roof	(no roof)		
Openings	1.27 (max. 2.00)	1.80 (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	2.30	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: South	2.04m ²	
Windows facing: South	1.37m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	2.3 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Floors U-value	0.12 W/m ² K
Photovoltaic array	

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Printed on 01 March 2023 at 11:04:19

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 72.78m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 3

Address : Flat 1, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 28.28 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 10.46 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 54.9 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 52.4 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.26 (max. 0.30)	0.29 (max. 0.70)	OK
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	OK
Roof	(no roof)		
Openings	1.11 (max. 2.00)	1.80 (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	2.85	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

6 Controls

Space heating controls	Programmer and room thermostat	OK
Hot water controls:	No cylinder thermostat	
	No cylinder	

Regulations Compliance Report

7 Low energy lights

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

8 Mechanical ventilation

Continuous extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: North	2.04m ²	
Windows facing: North	1.43m ²	
Windows facing: South	2.04m ²	
Windows facing: South	2.72m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	2.9 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Floors U-value	0.12 W/m ² K
Photovoltaic array	

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Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 72.78m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 4

Address : Flat 4, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 28.74 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 11.15 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 56.2 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 56.4 kWh/m²

Fail

Excess energy = 0.24 kg/m² (0.4 %)

2 Fabric U-values

Element	Average	Highest	
External wall	0.26 (max. 0.30)	0.29 (max. 0.70)	OK
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	OK
Roof	(no roof)		
Openings	1.21 (max. 2.00)	1.80 (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	4.85	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: East	2.04m ²	
Windows facing: West	1.43m ²	
Windows facing: East	2.04m ²	
Ventilation rate:	4.00	

10 Key features

Windows U-value	0.8 W/m ² K
Floors U-value	0.12 W/m ² K
Photovoltaic array	

Regulations Compliance Report

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Printed on 01 March 2023 at 11:04:18

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 74.78m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 5

Address : Flat 5, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 27.27 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 9.51 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 52.3 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 47.7 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.21 (max. 0.30)	0.21 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	OK
Roof	(no roof)		
Openings	1.15 (max. 2.00)	1.80 (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	3.60	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: East	2.04m ²	
Windows facing: West	2.04m ²	
Windows facing: East	0.72m ²	
Windows facing: North	0.72m ²	
Windows facing: West	2.04m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.6 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Floors U-value	0.12 W/m ² K
Photovoltaic array	

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Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 56.79m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 6

Address : Flat 6, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 28.68 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 3.46 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 50.2 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 49.1 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.21 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.24 (max. 2.00)	1.80 (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	3.57	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: South	1.43m ²	
Windows facing: North	2.04m ²	
Windows facing: North	1.03m ²	
Windows facing: North	1.03m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.6 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

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Printed on 01 March 2023 at 11:04:18

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 71.05m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 7

Address : Flat 7, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 24.06 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 3.61 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 40.0 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 40.2 kWh/m² **Fail**

Excess energy = 0.15 kg/m² (0.4 %)

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.24 (max. 2.00)	1.80 (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	2.84	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: South	2.04m ²	
Windows facing: South	2.04m ²	
Windows facing: South	1.37m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	2.8 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:17

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 56.54m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 8

Address : Flat 8, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 24.26 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 0.52 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 34.4 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 30.9 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.02 (max. 2.00)	1.80 (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	2.76	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: South	2.72m ²	
Windows facing: South	0m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	2.8 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Doors U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

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Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 78.44m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 9

Address : Flat 9, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 26.24 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 5.44 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 50.8 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 47.5 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.21 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	OK
Roof	(no roof)		
Openings	1.15 (max. 2.00)	1.80 (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	2.55	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: North	2.04m ²	
Windows facing: South	2.04m ²	
Windows facing: South	2.04m ²	
Windows facing: North	0.72m ²	
Windows facing: North	1.03m ²	
Windows facing: North	1.03m ²	
Windows facing: East	0.72m ²	
Windows facing: South	5.9m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	2.6 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Floors U-value	0.12 W/m ² K
Photovoltaic array	

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Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 56.38m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 10

Address : Flat 10, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 26.34 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 2.52 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 41.3 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 41.9 kWh/m² **Fail**

Excess energy = 0.59 kg/m² (01.4 %)

2 Fabric U-values

Element	Average	Highest	
External wall	0.26 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.36 (max. 2.00)	1.80 (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	3.07	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: West	2.04m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.1 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:16

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 73.71m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 11

Address : Flat 11, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 25.86 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 4.68 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 47.3 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 44.8 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.21 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.21 (max. 2.00)	1.80 (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	2.21	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: West	2.04m ²	
Windows facing: West	2.04m ²	
Windows facing: North	2.04m ²	
Windows facing: East	0.72m ²	
Windows facing: North	0.72m ²	
Windows facing: East	1.03m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	2.2 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:16

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 60.96m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 12

Address : Flat 12, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 29.86 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 6.02 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 55.6 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 58.8 kWh/m² **Fail**

Excess energy = 3.20 kg/m² (05.8 %)

2 Fabric U-values

Element	Average	Highest	
External wall	0.21 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	0.18 (max. 0.20)	0.18 (max. 0.35)	OK
Openings	1.36 (max. 2.00)	1.80 (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	4.86	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: North	1.03m ²	
Roof windows facing: South	1.11m ²	
Roof windows facing: North	1.11m ²	
Roof windows facing: North	1.11m ²	
Ventilation rate:	4.00	

10 Key features

Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:16

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 71.05m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 13

Address : Flat 14, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 24.14 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 3.87 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 40.3 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 43.1 kWh/m² **Fail**

Excess energy = 2.78 kg/m² (06.9 %)

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.24 (max. 2.00)	1.80 (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	4.23	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: South	2.04m ²	
Windows facing: South	1.37m ²	
Windows facing: South	2.04m ²	
Ventilation rate:	4.00	

10 Key features

Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:15

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 56.54m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 14

Address : Flat 15, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 24.26 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 1.14 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 34.4 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 35.2 kWh/m² **Fail**

Excess energy = 0.79 kg/m² (02.3 %)

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.32 (max. 2.00)	1.80 (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	3.56	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: South	2.72m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.6 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:15

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 78.44m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 15

Address : Flat 16, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 22.57 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 6.68 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 38.6 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 37.8 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.21 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.15 (max. 2.00)	1.80 (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	3.50	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: North	2.04m ²	
Windows facing: South	2.04m ²	
Windows facing: South	2.04m ²	
Windows facing: North	0.72m ²	
Windows facing: North	1.03m ²	
Windows facing: North	1.03m ²	
Windows facing: East	0.72m ²	
Windows facing: South	5.9m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.5 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:14

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 56.38m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 16

Address : Flat 17, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER)

26.37 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

-1.22 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

41.4 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

42.0 kWh/m²

Fail

Excess energy = 0.60 kg/m² (01.4 %)

2 Fabric U-values

Element

Average

Highest

External wall

0.26 (max. 0.30)

0.29 (max. 0.70)

OK

Party wall

0.00 (max. 0.20)

-

OK

Floor

(no floor)

Roof

(no roof)

Openings

1.36 (max. 2.00)

1.80 (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

3.05

Maximum

10.0

OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system:

None

5 Cylinder insulation

Hot water Storage:

No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: West	2.04m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.1 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:14

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 73.71m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 17

Address : Flat 18, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 25.72 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 1.71 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 46.8 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 45.2 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.21 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.21 (max. 2.00)	1.80 (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	3.11	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: West	2.04m ²	
Windows facing: West	2.04m ²	
Windows facing: East	2.04m ²	
Windows facing: East	0.72m ²	
Windows facing: North	0.72m ²	
Windows facing: East	1.03m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.1 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:14

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 88.27m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 18

Address : Flat 19, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER)

26.69 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

5.62 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

53.0 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

53.1 kWh/m²

Fail

Excess energy = 0.14 kg/m² (0.3 %)

2 Fabric U-values

Element

Average

Highest

External wall

0.24 (max. 0.30)

0.29 (max. 0.70)

OK

Party wall

0.00 (max. 0.20)

-

OK

Floor

(no floor)

Roof

0.15 (max. 0.20)

0.15 (max. 0.35)

OK

Openings

1.42 (max. 2.00)

1.80 (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

3.57

Maximum

10.0

OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system:

None

5 Cylinder insulation

Hot water Storage:

No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Roof windows facing: South	1.11m ²	
Roof windows facing: South	1.11m ²	
Roof windows facing: North	1.11m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.6 m ³ /m ² h
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:13

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 56.54m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 19

Address : Flat 20, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER)

28.26 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

-0.01 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

47.5 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

48.8 kWh/m²

Fail

Excess energy = 1.29 kg/m² (02.7 %)

2 Fabric U-values

Element

Average

Highest

External wall

0.25 (max. 0.30)

0.29 (max. 0.70)

OK

Party wall

0.00 (max. 0.20)

-

OK

Floor

(no floor)

Roof

0.15 (max. 0.20)

0.15 (max. 0.35)

OK

Openings

1.48 (max. 2.00)

1.80 (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

3.67

Maximum

10.0

OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system:

None

5 Cylinder insulation

Hot water Storage:

No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Roof windows facing: South	1.11m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.7 m ³ /m ² h
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:13

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 83.78m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 20

Address : Flat 21, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER)

26.63 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

4.29 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

53.3 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

50.4 kWh/m²

OK

2 Fabric U-values

Element

Average

Highest

External wall

0.21 (max. 0.30)

0.29 (max. 0.70)

OK

Party wall

0.00 (max. 0.20)

-

OK

Floor

(no floor)

Roof

0.15 (max. 0.20)

0.15 (max. 0.35)

OK

Openings

1.33 (max. 2.00)

1.80 (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

3.75

Maximum

10.0

OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system:

None

5 Cylinder insulation

Hot water Storage:

No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: East	0.72m ²	
Roof windows facing: North	1.11m ²	
Roof windows facing: South	1.11m ²	
Roof windows facing: South	1.11m ²	
Roof windows facing: North	1.11m ²	
Roof windows facing: North	1.11m ²	
Roof windows facing: North	1.11m ²	
Roof windows facing: North	1.11m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.8 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:13

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 57.6m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 21

Address : Flat 22, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 29.69 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 1.32 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 52.8 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 54.6 kWh/m² **Fail**

Excess energy = 1.78 kg/m² (03.4 %)

2 Fabric U-values

Element	Average	Highest	
External wall	0.26 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	0.15 (max. 0.20)	0.15 (max. 0.35)	OK
Openings	1.48 (max. 2.00)	1.80 (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	3.47	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Roof windows facing: West	1.11m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.5 m ³ /m ² h
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:04:12

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 77.82m²

Site Reference : 31226 HWM North Street

Plot Reference: B1 Plot 22

Address : Flat 23, 24 Weldale Street, READING, RG1 7BQ

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 26.74 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 2.88 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 51.9 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 49.6 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.21 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	0.15 (max. 0.20)	0.15 (max. 0.35)	OK
Openings	1.34 (max. 2.00)	1.80 (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	3.73	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: North	0.72m ²	
Roof windows facing: West	1.11m ²	
Roof windows facing: East	1.11m ²	
Roof windows facing: East	1.11m ²	
Roof windows facing: East	1.11m ²	
Roof windows facing: East	1.11m ²	
Roof windows facing: West	1.11m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.7 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:54

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 71.32m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 1

Address : Flat 3, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 29.04 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 7.73 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 56.6 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 53.3 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	OK
Roof	(no roof)		
Openings	1.22 (max. 2.00)	1.80 (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	2.21	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: West	2.04m ²	
Windows facing: West	2.04m ²	
Windows facing: South	1.03m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	2.2 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Floors U-value	0.12 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:54

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 51.02m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 2

Address : Flat 2, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 31.13 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 7.41 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 55.1 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 52.3 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.23 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	OK
Roof	(no roof)		
Openings	1.32 (max. 2.00)	1.80 (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	3.38	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: West	2.04m ²	
Windows facing: North	0.72m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.4 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Floors U-value	0.12 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:53

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 51.02m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 3

Address : Flat 1, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 31.63 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 7.82 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 56.6 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 53.8 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.24 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	OK
Roof	(no roof)		
Openings	1.36 (max. 2.00)	1.80 (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	3.03	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: East	1.37m ²	
Windows facing: North	0.72m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.0 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Floors U-value	0.12 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:53

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 71.32m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 4

Address : Flat 4, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 24.33 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 5.01 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 40.9 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 38.9 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.24 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.22 (max. 2.00)	1.80 (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	2.76	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: West	2.04m ²	
Windows facing: West	2.04m ²	
Windows facing: South	1.03m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	2.8 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:53

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 51.02m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 5

Address : Flat 5, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 27.24 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 3.25 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 42.0 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 40.8 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.23 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.32 (max. 2.00)	1.80 (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	3.31	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: West	2.04m ²	
Windows facing: North	0.72m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.3 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:52

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 51.02m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 6

Address : Flat 6, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 28.11 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 4.00 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 44.7 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 44.5 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.24 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.36 (max. 2.00)	1.80 (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	3.28	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: East	1.37m ²	
Windows facing: North	0.72m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.3 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:52

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 69.97m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 7

Address : Flat 7, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER)

30.15 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

8.25 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

60.2 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

57.0 kWh/m²

OK

2 Fabric U-values

Element

Average

Highest

External wall

0.23 (max. 0.30)

0.29 (max. 0.70)

OK

Party wall

0.00 (max. 0.20)

-

OK

Floor

0.12 (max. 0.25)

0.12 (max. 0.70)

OK

Roof

(no roof)

Openings

1.31 (max. 2.00)

1.80 (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

3.40

Maximum

10.0

OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system:

None

5 Cylinder insulation

Hot water Storage:

No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: East	1.37m ²	
Windows facing: East	1.37m ²	
Windows facing: South	0.72m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	3.4 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Floors U-value	0.12 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:52

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 71.32m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 8

Address : Flat 8, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 24.33 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 5.77 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 40.9 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 38.6 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.24 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.22 (max. 2.00)	1.80 (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	2.48	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: West	2.04m ²	
Windows facing: West	2.04m ²	
Windows facing: South	1.03m ²	
Ventilation rate:	4.00	

10 Key features

Air permeability	2.5 m ³ /m ² h
Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:51

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 51.02m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 9

Address : Flat 9, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 27.24 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 3.33 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 42.0 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 42.0 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.23 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.32 (max. 2.00)	1.80 (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	4.28	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: West	2.04m ²	
Windows facing: North	0.72m ²	
Ventilation rate:	4.00	

10 Key features

Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:51

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 51.02m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 10

Address : Flat 10, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER)

28.11 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

4.28 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

44.7 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

46.4 kWh/m²

Fail

Excess energy = 1.66 kg/m² (03.7 %)

2 Fabric U-values

Element

Average

Highest

External wall

0.24 (max. 0.30)

0.29 (max. 0.70)

OK

Party wall

0.00 (max. 0.20)

-

OK

Floor

(no floor)

Roof

(no roof)

Openings

1.36 (max. 2.00)

1.80 (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

4.74

Maximum

10.0

OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system:

None

5 Cylinder insulation

Hot water Storage:

No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: East	1.37m ²	
Windows facing: North	0.72m ²	
Ventilation rate:	4.00	

10 Key features

Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:51

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 69.97m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 11

Address : Flat 11, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 25.25 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 5.80 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 43.6 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 44.2 kWh/m² **Fail**

Excess energy = 0.57 kg/m² (01.3 %)

2 Fabric U-values

Element	Average	Highest	
External wall	0.23 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	(no roof)		
Openings	1.31 (max. 2.00)	1.80 (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	4.15	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: East	1.37m ²	
Windows facing: East	1.37m ²	
Windows facing: South	0.72m ²	
Ventilation rate:	4.00	

10 Key features

Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:50

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 72.83m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 12

Address : Flat 12, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 28.69 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 7.97 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 55.6 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 55.6 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.24 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	0.15 (max. 0.20)	0.15 (max. 0.35)	OK
Openings	1.38 (max. 2.00)	1.80 (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	4.13	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: South	1.03m ²	
Roof windows facing: West	1.11m ²	
Roof windows facing: West	1.11m ²	
Ventilation rate:	4.00	

10 Key features

Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:50

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 52.17m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 13

Address : Flat 14, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER)

32.12 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

7.37 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

58.8 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

61.8 kWh/m²

Fail

Excess energy = 3.01 kg/m² (05.1 %)

2 Fabric U-values

Element

Average

Highest

External wall

0.23 (max. 0.30)

0.29 (max. 0.70)

OK

Party wall

0.00 (max. 0.20)

-

OK

Floor

(no floor)

Roof

0.15 (max. 0.20)

0.15 (max. 0.35)

OK

Openings

1.42 (max. 2.00)

1.80 (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

4.90

Maximum

10.0

OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage:

No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: North	0.72m ²	
Roof windows facing: West	1.11m ²	
Ventilation rate:	4.00	

10 Key features

Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:50

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 52.17m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 14

Address : Flat 15, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 32.92 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 7.75 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 61.5 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 64.1 kWh/m² **Fail**

Excess energy = 2.63 kg/m² (04.3 %)

2 Fabric U-values

Element	Average	Highest	
External wall	0.24 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	0.15 (max. 0.20)	0.15 (max. 0.35)	OK
Openings	1.42 (max. 2.00)	1.80 (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	4.77	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Windows facing: North	0.72m ²	
Roof windows facing: East	1.11m ²	
Ventilation rate:	4.00	

10 Key features

Windows U-value	0.8 W/m ² K
Party Walls U-value	0 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.5.60
Printed on 01 March 2023 at 11:03:49

Project Information:

Assessed By: Matthew Edis (STRO006122)

Building Type: Flat

Dwelling Details:

NEW DWELLING AS BUILT

Total Floor Area: 75.49m²

Site Reference : 31226 HWM North Street

Plot Reference: B2 Plot 15

Address : Flat 16, 9 North Street, READING, RG1 7BY

Client Details:

Name: Tony Wilkinson

Address : HWM Building Services, 13/14 Whiteway Court, Cirencester, GL7 7BA

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

Fuel factor: 1.55 (electricity)

Target Carbon Dioxide Emission Rate (TER) 31.57 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 11.32 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 66.8 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 68.4 kWh/m² **Fail**

Excess energy = 1.57 kg/m² (02.3 %)

2 Fabric U-values

Element	Average	Highest	
External wall	0.23 (max. 0.30)	0.29 (max. 0.70)	OK
Party wall	0.00 (max. 0.20)	-	OK
Floor	(no floor)		
Roof	0.15 (max. 0.20)	0.15 (max. 0.35)	OK
Openings	1.44 (max. 2.00)	1.80 (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	4.89	
Maximum	10.0	OK

4 Heating efficiency

Main Heating system:

Heat pumps with radiators or underfloor heating - electric
NIBE Fighter 470

Secondary heating system: None

5 Cylinder insulation

Hot water Storage: No Separate Cylinder

N/A

Regulations Compliance Report

6 Controls

Space heating controls	Programmer and room thermostat	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 extract system		
Specific fan power:	0.65	
Maximum	0.7	OK

9 Summertime temperature

Overheating risk (South East England):	Not significant	OK
Based on:		
Overshading:	Average or unknown	
Roof windows facing: East	1.11m ²	
Ventilation rate:	4.00	

10 Key features

Party Walls U-value	0 W/m ² K
Photovoltaic array	