

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:57

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 253.9m²

Site Reference : Wellswood Park

Plot Reference: Plot 18

Address : Plot 18, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 13.89 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 11.26 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 55.5 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 48.9 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.30 (max. 0.70)	OK
Floor	0.18 (max. 0.25)	0.21 (max. 0.70)	OK
Roof	0.15 (max. 0.20)	0.19 (max. 0.35)	OK
Openings	1.40 (max. 2.00)	1.60 (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 5.00 (design value)
Maximum 10.0 **OK**

4 Heating efficiency

Main Heating system: Database: (rev 413, product index 015443):
Boiler systems with radiators or underfloor heating - mains gas
Brand name: Glow-worm
Model: Ultracom 30hxi
Model qualifier:
(Regular)
Efficiency 88.7 % SEDBUK2009
Minimum 88.0 % **OK**

Secondary heating system: None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Medium	OK
Based on:		
Overshading:	Very Little	
Windows facing: West	9.2m ²	
Windows facing: North West	0.8m ²	
Windows facing: South West	0.8m ²	
Windows facing: East	21.6m ²	
Windows facing: North	1.95m ²	
Windows facing: South	2.5m ²	
Windows facing: West	0.95m ²	
Roof windows facing: West	0.76m ²	
Roof windows facing: North	0.76m ²	
Roof windows facing: East	0.76m ²	
Roof windows facing: South	0.76m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.025 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:56

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 182.8m²

Site Reference : Wellswood Park

Plot Reference: Plot 19

Address : Plot 19, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 15.18 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 11.67 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 56.7 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 51.0 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.27 (max. 0.30)	0.40 (max. 0.70)	OK
Floor	0.18 (max. 0.25)	0.21 (max. 0.70)	OK
Roof	0.11 (max. 0.20)	0.11 (max. 0.35)	OK
Openings	1.39 (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 5.00 (design value)

Maximum 10.0 **OK**

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 % **OK**

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
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Based on:

Overshading:	Very Little
Windows facing: West	8.65m ²
Windows facing: North	0.95m ²
Windows facing: East	14.95m ²
Windows facing: South	1.6m ²
Ventilation rate:	4.00
Blinds/curtains:	None
	Closed 100% of daylight hours

10 Key features

Thermal bridging	0.031 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:59

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 143m²

Site Reference : Wellswood Park

Plot Reference: Plot 20

Address : Plot 20, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 15.86 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 12.44 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 55.5 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 50.7 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.27 (max. 0.30)	0.40 (max. 0.70)	OK
Floor	0.18 (max. 0.25)	0.21 (max. 0.70)	OK
Roof	0.11 (max. 0.20)	0.11 (max. 0.35)	OK
Openings	1.38 (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 5.50 (design value)

Maximum 10.0 **OK**

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 % **OK**

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: West	6.9m ²	
Windows facing: North West	0.8m ²	
Windows facing: South West	0.8m ²	
Windows facing: East	11.45m ²	
Windows facing: North	0.95m ²	
Windows facing: South	0.95m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.033 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:57

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 253.9m²

Site Reference : Wellswood Park

Plot Reference: Plot 21

Address : Plot 21, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 14.06 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 11.38 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 56.2 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 49.3 kWh/m²

OK

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.30 (max. 0.70)	OK
Floor	0.18 (max. 0.25)	0.21 (max. 0.70)	OK
Roof	0.15 (max. 0.20)	0.19 (max. 0.35)	OK
Openings	1.40 (max. 2.00)	1.60 (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 5.00 (design value)
Maximum 10.0

OK

4 Heating efficiency

Main Heating system: Database: (rev 413, product index 015443):
Boiler systems with radiators or underfloor heating - mains gas
Brand name: Glow-worm
Model: Ultracom 30hxi
Model qualifier:
(Regular)
Efficiency 88.7 % SEDBUK2009
Minimum 88.0 %

OK

Secondary heating system: None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: South West	9.2m ²	
Windows facing: West	0.8m ²	
Windows facing: South	0.8m ²	
Windows facing: North East	21.6m ²	
Windows facing: North West	1.95m ²	
Windows facing: South East	2.5m ²	
Windows facing: South West	0.95m ²	
Roof windows facing: South West	0.76m ²	
Roof windows facing: North West	0.76m ²	
Roof windows facing: North East	0.76m ²	
Roof windows facing: South East	0.76m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.025 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:58

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 143m²

Site Reference : Wellswood Park

Plot Reference: Plot 22

Address : Plot 22, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 15.93 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 12.46 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 55.7 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 50.8 kWh/m²

OK

2 Fabric U-values

Element	Average	Highest	
External wall	0.27 (max. 0.30)	0.40 (max. 0.70)	OK
Floor	0.18 (max. 0.25)	0.21 (max. 0.70)	OK
Roof	0.11 (max. 0.20)	0.11 (max. 0.35)	OK
Openings	1.38 (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 5.50 (design value)

Maximum 10.0

OK

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 %

OK

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: South West	6.9m ²	
Windows facing: West	0.8m ²	
Windows facing: South	0.8m ²	
Windows facing: North East	11.45m ²	
Windows facing: North West	0.95m ²	
Windows facing: South East	0.95m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.033 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:57

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 174.2m²

Site Reference : Wellswood Park

Plot Reference: Plot 23

Address : Plot 23, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 14.64 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 11.70 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 53.0 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 48.1 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.25 (max. 0.70)	OK
Floor	0.17 (max. 0.25)	0.17 (max. 0.70)	OK
Roof	0.11 (max. 0.20)	0.11 (max. 0.35)	OK
Openings	1.39 (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 7.00 (design value)
Maximum 10.0 **OK**

4 Heating efficiency

Main Heating system: Database: (rev 413, product index 015443):
Boiler systems with radiators or underfloor heating - mains gas
Brand name: Glow-worm
Model: Ultracom 30hxi
Model qualifier:
(Regular)
Efficiency 88.7 % SEDBUK2009
Minimum 88.0 % **OK**

Secondary heating system: None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: South	12.75m ²	
Windows facing: North	13.7m ²	
Windows facing: West	0.65m ²	
Windows facing: East	0.95m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.034 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

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Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 174.2m²

Site Reference : Wellswood Park

Plot Reference: Plot 24

Address : Plot 24, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 14.64 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 11.70 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 53.0 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 48.1 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.25 (max. 0.70)	OK
Floor	0.17 (max. 0.25)	0.17 (max. 0.70)	OK
Roof	0.11 (max. 0.20)	0.11 (max. 0.35)	OK
Openings	1.39 (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 7.00 (design value)

Maximum 10.0 **OK**

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 % **OK**

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: South	12.75m ²	
Windows facing: North	13.7m ²	
Windows facing: West	0.65m ²	
Windows facing: East	0.95m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.034 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:58

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 143m²

Site Reference : Wellswood Park

Plot Reference: Plot 25

Address : Plot 25, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER)

15.9 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

12.32 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

55.4 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

50.6 kWh/m²

OK

2 Fabric U-values

Element

Average

Highest

External wall

0.27 (max. 0.30)

0.40 (max. 0.70)

OK

Floor

0.18 (max. 0.25)

0.21 (max. 0.70)

OK

Roof

0.11 (max. 0.20)

0.11 (max. 0.35)

OK

Openings

1.38 (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

5.50 (design value)

Maximum

10.0

OK

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 %

OK

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: South	6.9m ²	
Windows facing: South West	0.8m ²	
Windows facing: South East	0.8m ²	
Windows facing: North	11.45m ²	
Windows facing: West	0.95m ²	
Windows facing: East	0.95m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.033 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:58

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 143m²

Site Reference : Wellswood Park

Plot Reference: Plot 26

Address : Plot 26, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER)

15.9 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

12.32 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

55.4 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

50.6 kWh/m²

OK

2 Fabric U-values

Element

Average

Highest

External wall

0.27 (max. 0.30)

0.40 (max. 0.70)

OK

Floor

0.18 (max. 0.25)

0.21 (max. 0.70)

OK

Roof

0.11 (max. 0.20)

0.11 (max. 0.35)

OK

Openings

1.38 (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

5.50 (design value)

Maximum

10.0

OK

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 %

OK

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: South	6.9m ²	
Windows facing: South West	0.8m ²	
Windows facing: South East	0.8m ²	
Windows facing: North	11.45m ²	
Windows facing: West	0.95m ²	
Windows facing: East	0.95m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.033 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:56

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 182.8m²

Site Reference : Wellswood Park

Plot Reference: Plot 27

Address : Plot 27, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 15.33 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 12.11 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 57.3 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 52.3 kWh/m²

OK

2 Fabric U-values

Element	Average	Highest	
External wall	0.27 (max. 0.30)	0.40 (max. 0.70)	OK
Floor	0.18 (max. 0.25)	0.21 (max. 0.70)	OK
Roof	0.11 (max. 0.20)	0.11 (max. 0.35)	OK
Openings	1.39 (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 6.50 (design value)

Maximum 10.0

OK

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 %

OK

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: South	8.65m ²	
Windows facing: West	0.95m ²	
Windows facing: North	14.95m ²	
Windows facing: East	1.6m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.031 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:06:12

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 110m²

Site Reference : Wellswood Park

Plot Reference: Plot 28

Address : Plot 28, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 17.17 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 13.40 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 53.6 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 48.0 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.25 (max. 0.70)	OK
Floor	0.17 (max. 0.25)	0.17 (max. 0.70)	OK
Roof	0.11 (max. 0.20)	0.11 (max. 0.35)	OK
Openings	1.39 (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 5.00 (design value)
Maximum 10.0 **OK**

4 Heating efficiency

Main Heating system: Database: (rev 413, product index 016327):
Boiler systems with radiators or underfloor heating - mains gas
Brand name: Glow-worm
Model: Ultracom 2 30cxi
Model qualifier:
(Combi)
Efficiency 89.3 % SEDBUK2009
Minimum 88.0 % **OK**

Secondary heating system: None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage: No cylinder

6 Controls

Space heating controls TTZC by plumbing and electrical services **OK**
 Hot water controls: No cylinder

No cylinder
 Boiler interlock: Yes **OK**

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley): Slight **OK**

Based on:

Overshading: Very Little
 Windows facing: North 7.25m²
 Windows facing: East 1m²
 Windows facing: South 8.4m²
 Ventilation rate: 4.00
 Blinds/curtains: None
 Closed 100% of daylight hours

10 Key features

Thermal bridging 0.034 W/m²K
 Roofs U-value 0.11 W/m²K
 Photovoltaic array

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:57

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 110m²

Site Reference : Wellswood Park

Plot Reference: Plot 29

Address : Plot 29, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 17.17 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 13.74 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 53.6 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 49.8 kWh/m²

OK

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.25 (max. 0.70)	OK
Floor	0.17 (max. 0.25)	0.17 (max. 0.70)	OK
Roof	0.11 (max. 0.20)	0.11 (max. 0.35)	OK
Openings	1.39 (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 7.00 (design value)

Maximum 10.0 OK

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 016327):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 2 30cxi

Model qualifier:

(Combi)

Efficiency 89.3 % SEDBUK2009

Minimum 88.0 %

OK

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage: No cylinder

6 Controls

Space heating controls TTZC by plumbing and electrical services **OK**
Hot water controls: No cylinder

No cylinder

Boiler interlock: Yes **OK**

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley): Slight **OK**

Based on:

Overshading: Very Little
Windows facing: North 7.25m²
Windows facing: East 1m²
Windows facing: South 8.4m²
Ventilation rate: 4.00
Blinds/curtains: None
Closed 100% of daylight hours

10 Key features

Thermal bridging 0.034 W/m²K
Roofs U-value 0.11 W/m²K
Photovoltaic array

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:58

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 143m²

Site Reference : Wellswood Park

Plot Reference: Plot 30

Address : Plot 30, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER)

15.54 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

12.06 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

53.6 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

49.4 kWh/m²

OK

2 Fabric U-values

Element

Average

Highest

External wall

0.27 (max. 0.30)

0.40 (max. 0.70)

OK

Floor

0.18 (max. 0.25)

0.21 (max. 0.70)

OK

Roof

0.11 (max. 0.20)

0.11 (max. 0.35)

OK

Openings

1.38 (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

5.50 (design value)

Maximum

10.0

OK

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 %

OK

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: North	6.9m ²	
Windows facing: North East	0.8m ²	
Windows facing: North West	0.8m ²	
Windows facing: South	11.45m ²	
Windows facing: East	0.95m ²	
Windows facing: West	0.95m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.033 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:58

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 155.7m²

Site Reference : Wellswood Park

Plot Reference: Plot 31

Address : Plot 31, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 15.65 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 12.07 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 56.2 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 53.2 kWh/m²

OK

2 Fabric U-values

Element	Average	Highest	
External wall	0.27 (max. 0.30)	0.40 (max. 0.70)	OK
Floor	0.18 (max. 0.25)	0.21 (max. 0.70)	OK
Roof	0.11 (max. 0.20)	0.11 (max. 0.35)	OK
Openings	1.39 (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 7.00 (design value)

Maximum 10.0 OK

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 %

OK

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: North	9.3m ²	
Windows facing: South	14.25m ²	
Windows facing: East	1.3m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.033 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:58

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 143m²

Site Reference : Wellswood Park

Plot Reference: Plot 32

Address : Plot 32, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 15.54 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 12.02 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 53.6 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 49.4 kWh/m² **OK**

2 Fabric U-values

Element	Average	Highest	
External wall	0.27 (max. 0.30)	0.40 (max. 0.70)	OK
Floor	0.18 (max. 0.25)	0.21 (max. 0.70)	OK
Roof	0.11 (max. 0.20)	0.11 (max. 0.35)	OK
Openings	1.38 (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 5.50 (design value)

Maximum 10.0 **OK**

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 % **OK**

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: North	6.9m ²	
Windows facing: North East	0.8m ²	
Windows facing: North West	0.8m ²	
Windows facing: South	11.45m ²	
Windows facing: East	0.95m ²	
Windows facing: West	0.95m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.033 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:58

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 143m²

Site Reference : Wellswood Park

Plot Reference: Plot 33

Address : Plot 33, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 15.48 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 11.98 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 53.7 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE) 49.7 kWh/m²

OK

2 Fabric U-values

Element	Average	Highest	
External wall	0.27 (max. 0.30)	0.40 (max. 0.70)	OK
Floor	0.18 (max. 0.25)	0.21 (max. 0.70)	OK
Roof	0.11 (max. 0.20)	0.11 (max. 0.35)	OK
Openings	1.39 (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 5.50 (design value)

Maximum 10.0

OK

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 %

OK

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: North	7.7m ²	
Windows facing: North East	0.8m ²	
Windows facing: South East	0.8m ²	
Windows facing: South	11.45m ²	
Windows facing: East	3.55m ²	
Windows facing: West	0.95m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.033 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, 1.0.2.0

Printed on 16 June 2017 at 14:04:57

Project Information:

Assessed By: Gerard Mcguigan (STRO011196)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 253.9m²

Site Reference : Wellswood Park

Plot Reference: Plot 34

Address : Plot 34, Wellswood Park, Wells Road, Reading

Client Details:

Name: Charles Church

Address : Persimmon House, Knoll Road, Camberley, GU15 3TQ

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: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER) 13.92 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER) 11.09 kg/m² **OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE) 55.6 kWh/m²

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

2 Fabric U-values

Element	Average	Highest	
External wall	0.25 (max. 0.30)	0.30 (max. 0.70)	OK
Floor	0.18 (max. 0.25)	0.21 (max. 0.70)	OK
Roof	0.15 (max. 0.20)	0.19 (max. 0.35)	OK
Openings	1.40 (max. 2.00)	1.60 (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 5.00 (design value)

Maximum 10.0 **OK**

4 Heating efficiency

Main Heating system:

Database: (rev 413, product index 015443):

Boiler systems with radiators or underfloor heating - mains gas

Brand name: Glow-worm

Model: Ultracom 30hxi

Model qualifier:

(Regular)

Efficiency 88.7 % SEDBUK2009

Minimum 88.0 % **OK**

Secondary heating system:

None

Regulations Compliance Report

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.53 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	OK
Primary pipework insulated:	Yes	OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

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

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Thames valley):	Slight	OK
Based on:		
Overshading:	Very Little	
Windows facing: East	9.2m ²	
Windows facing: South East	0.8m ²	
Windows facing: North East	0.8m ²	
Windows facing: West	21.6m ²	
Windows facing: South	1.95m ²	
Windows facing: North	2.5m ²	
Windows facing: East	0.95m ²	
Roof windows facing: East	0.76m ²	
Roof windows facing: South	0.76m ²	
Roof windows facing: West	0.76m ²	
Roof windows facing: North	0.76m ²	
Ventilation rate:	4.00	
Blinds/curtains:	None	
	Closed 100% of daylight hours	

10 Key features

Thermal bridging	0.025 W/m ² K
Roofs U-value	0.11 W/m ² K
Photovoltaic array	