

This As Built submission has been carried out by an Authorised SAP Assessor. The Assessor has confirmed any changes from the Design Submission with the builder.

Assessor Name Mr Andrew J Ball **Assessor Number** 3474
Client Andy Ball
Date Last Modified 03/02/2009
Address 4 Kings Orchard, Upper Churchfields, Cradley, MALVERN, Worcestershire, WR13 5LJ

Property type: House
 Built form: Detached
 Flat type: N/A
 Year built: 1979
 Region: Midlands
 Number of sheltered sides: 0
 Terrain: Rural

Storeys:

Name	Basement	Area	Height
Lowest floor	No	82.13 m ²	2.40 m
+1	No	73.13 m ²	2.60 m
Living room area =		40.00 m ²	Area Fraction = 0.26

Floors:

Name	Type	Construction	Sealed	Area	Zone 1	U-value
Solid U=0.61	Ground	Solid ground floor	N/A	82.13 m ²	40.00 m ²	0.61 W/m ² K

Walls:

Name	Construction	Basement	Area	U-value
Br cav U=0.40	Cavity	No basement present	188.40 m ²	0.40 W/m ² K

Roofs:

Name	Construction	Area	Zone1 Area	U-value
300 quilt U=0.15	Pitched (joists)	82.13 m ²	-1.00 m ²	0.15 W/m ² K

Opening Ref:

1						
Type	Window	Master:	Yes			
From source:	From manufacturer	Linked to:	0			
Description:	Cloaks	Location name:	Br cav U=0.40			
Frame:	u-PVC	Width:	0.85 m	Transmittance:	0.76	
Thermal break:	N/A	Height:	1.20 m	Fraction glazed:	0.70	
Draught proofing:	Good seal	Area:	1.02 m ²	U-value:	3.10 W/m ² K	
Metal lintel:	Yes					
Glazing Type:	Double					
Argon Filled:	No					
Gap:	12mm					
Orientation:	North					
Overshading:	Average / Unknown					



FS 25719

Submission Reference Number:
NB-NES-00003474-09020314160500


URN: HOME V: 6

Plan Assessor V: 4.2.28

SAP Worksheet (Version - 9.81)

Date Last Modified 03/02/2009

Assessor Name Mr Andrew J Ball

Assessor Number 3474

Opening Ref: 2
Type: Window **Master:** No
From source: From manufacturer **Linked to:** 1
Description: Util **Location name:** Br cav U=0.40

Frame: u-PVC **Width:** 1.20 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 0.90 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 1.08 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 12mm
Orientation: North
Overshading: Average / Unknown

Opening Ref: 3
Type: Window **Master:** No
From source: From manufacturer **Linked to:** 1
Description: Study **Location name:** Br cav U=0.40

Frame: u-PVC **Width:** 1.20 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 1.20 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 1.44 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 12mm
Orientation: North
Overshading: Average / Unknown

Opening Ref: 4
Type: Window **Master:** No
From source: From manufacturer **Linked to:** 1
Description: Bed 1 **Location name:** Br cav U=0.40

Frame: u-PVC **Width:** 2.35 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 1.05 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 2.47 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 12mm
Orientation: North
Overshading: Average / Unknown



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Opening Ref: 5
Type: Window **Master:** No
From source: From manufacturer **Linked to:** 1
Description: Lounge **Location name:** Br cav U=0.40
Frame: u-PVC **Width:** 2.35 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 1.35 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 3.17 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 12mm
Orientation: West
Overshading: Average / Unknown

Opening Ref: 6
Type: Window **Master:** Yes
From source: From manufacturer **Linked to:** 0
Description: Front door **Location name:** Br cav U=0.40
Frame: Wood **Width:** 1.80 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 2.10 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 3.78 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 6mm
Orientation: West
Overshading: None / Very little (Average assumed for DER calculation)

Opening Ref: 7
Type: Window **Master:** No
From source: From manufacturer **Linked to:** 1
Description: Study **Location name:** Br cav U=0.40
Frame: u-PVC **Width:** 1.20 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 1.20 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 1.44 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 12mm
Orientation: West
Overshading: Average / Unknown



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Date Last Modified 03/02/2009

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Assessor Number 3474

Opening Ref: 8
Type: Window **Master:** No
From source: From manufacturer **Linked to:** 1
Description: Bed 2 **Location name:** Br cav U=0.40
Frame: u-PVC **Width:** 2.35 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 1.20 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 2.82 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 12mm
Orientation: West
Overshading: Average / Unknown

Opening Ref: 9
Type: Window **Master:** Yes
From source: From manufacturer **Linked to:** 0
Description: Sun room ent **Location name:** Br cav U=0.40
Frame: Wood **Width:** 0.90 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 2.10 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 1.89 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 6mm
Orientation: South
Overshading: None / Very little (Average assumed for DER calculation)

Opening Ref: 10
Type: Window **Master:** No
From source: From manufacturer **Linked to:** 1
Description: Patio doors **Location name:** Br cav U=0.40
Frame: u-PVC **Width:** 1.85 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 2.10 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 3.89 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 12mm
Orientation: East
Overshading: Average / Unknown



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Opening Ref: 11
Type: Window **Master:** No
From source: From manufacturer **Linked to:** 1
Description: Dining room **Location name:** Br cav U=0.40
Frame: u-PVC **Width:** 1.80 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 1.50 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 2.70 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 12mm
Orientation: East
Overshading: Average / Unknown

Opening Ref: 12
Type: Window **Master:** No
From source: From manufacturer **Linked to:** 1
Description: Kitchen **Location name:** Br cav U=0.40
Frame: u-PVC **Width:** 1.80 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 1.20 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 2.16 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 12mm
Orientation: East
Overshading: Average / Unknown

Opening Ref: 13
Type: Window **Master:** No
From source: From manufacturer **Linked to:** 1
Description: Ensuite **Location name:** Br cav U=0.40
Frame: u-PVC **Width:** 1.80 m **Transmittance:** 0.76
Thermal break: N/A **Height:** 1.05 m **Fraction glazed:** 0.70
Draught proofing: Good seal **Area:** 1.89 m² **U-value:** 3.10 W/m²K
Metal lintel: Yes
Glazing Type: Double
Argon Filled: No
Gap: 12mm
Orientation: East
Overshading: Average / Unknown



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Opening Ref: 14

Type	Window	Master:	No
From source:	From manufacturer	Linked to:	1
Description:	Bathroom	Location name:	Br cav U=0.40
Frame:	u-PVC	Width:	1.80 m
Thermal break:	N/A	Height:	1.05 m
Draught proofing:	Good seal	Area:	1.89 m ²
Metal lintel:	Yes	Transmittance:	0.76
Glazing Type:	Double	Fraction glazed:	0.70
Argon Filled:	No	U-value:	3.10 W/m ² K
Gap:	12mm		
Orientation:	East		
Overshading:	Average / Unknown		

Opening Ref: 15

Type	Window	Master:	No
From source:	From manufacturer	Linked to:	1
Description:	Bedroom 3	Location name:	Br cav U=0.40
Frame:	u-PVC	Width:	1.80 m
Thermal break:	N/A	Height:	1.05 m
Draught proofing:	Good seal	Area:	1.89 m ²
Metal lintel:	Yes	Transmittance:	0.76
Glazing Type:	Double	Fraction glazed:	0.70
Argon Filled:	No	U-value:	3.10 W/m ² K
Gap:	12mm		
Orientation:	East		
Overshading:	Average / Unknown		

Opening Ref: 16

Type	Door	Master:	Yes
From source:	From manufacturer	Linked to:	0
Description:	Utility door	Location name:	Br cav U=0.40
Frame:	u-PVC	Width:	0.90 m
Thermal break:	N/A	Height:	2.10 m
Draught proofing:	Good seal	Area:	1.89 m ²
Metal lintel:	Yes	Transmittance:	0.76
Glazing Type:	Double	Fraction glazed:	0.50
Argon Filled:	No	U-value:	2.90 W/m ² K
Gap:	12mm		
Orientation:	North		
Overshading:	Average / Unknown		

Thermal bridging:

Detailed thermal bridges calculation:	No
'y' value type:	0.15 default 'y' value used
User defined 'y' value:	N/A
'y' value calculation method:	N/A



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Air permeability:

Air permeability entered:	No
Draught lobby:	No
Mechanical ventilation:	Not present (natural)
Number of fireplaces:	0
Number of flues:	0
Number of flueless gas fires:	0
Number of fans and vents:	0
Air Conditioning present?:	No

Main heating:

Electricity Tariff:	Standard
Main heating type:	Boiler
Efficiency from:	Boiler efficiency database
Boiler Efficiency Database details:	
Index:	000284
Manufacturer:	Caradon Ideal
Model:	Mexico Super
Boiler type:	Standard
Fuel:	Mains gas
Fan flue:	No
Main heating system:	1979 - 1997 - Floor mounted
Controls:	Programmer, room thermostat and TRV's
Emitter:	Radiators
Boiler Interlock:	Yes
Compensator:	N/A
Pump in heated space:	Yes
Main heating efficiency:	65.00 %

Community heating CHP:

Is there CHP:	N/A
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Secondary heating system:

Secondary heating present:	No
Open flue or chimney present:	No

A secondary heating system is defaulted by the software for calculating the DER, in accordance with the building regulations.

Water heating:

Water heating type:	From main
Cylinder within dwelling:	N/A
Water heating fuel:	Mains gas
Water heating separately timed:	Yes



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Cylinder details:

Manufacturer's loss factor :	No
Declared factor :	N/A
Cylinder volume:	140.00 (in litres)
Cylinder insulation:	Spray Foam
Cylinder thickness:	25.00
Thermostat:	Yes
In heated space:	Yes
Primary pipework insulation:	No
Pumped primary system:	Yes
Cylinderstat:	Yes
Boiler interlock:	Yes

Solar water heating:

Solar water heating:	No
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Photovoltaics (PV):

Photovoltaics:	No
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Wind turbines:

Wind turbines:	No
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Additional allowable generation:

Is there additional Electricity generation:	No
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Low energy lighting:

Low energy lights:	89.66 % of fixed lighting outlets (30% assumed for DER calculation)
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External lighting:

Assess external lighting:	Yes
Fittings only accept > 40 lumens per circuit watt:	No
Lamps not > 150W, off in day and at night when not needed:	Yes

Summer overheating:

Summer overheating included:	No
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Separated heated conservatory:

Heated conservatory present:	No
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Special features:

Special features included:	No
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