

## SBEM Data Reflection Report — Actual Building

**Date:** Thu Dec 10 15:09:48 2020

**Project name:** Case study 5 **Building type:** Residential spaces **Building area [m2]:** 120.75

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General	
Building address	Linnet Grove  Kendal LA9 7RP
Building area [m2]	120.75
Weather	MAN
Building rotation [degrees]	0
Special conservation status	YES
Project complexity	Level 3

Certifier/Energy assessor	
Name	Joe Bloggs
Telephone number	9999999999
Address	123 Any Street Any City AB1 2CD
Assessor number	ABCD000000
Qualification	NOS5
Accreditation scheme	Quidos
Employer name	<insert Employer/Trading Name>
Employer address	<insert Employer/Trading Address>

Analysis	
Compliance checked with	None
Asset rating	EPC England
Stage	As built
Shell & core building	NO

Software	
SBEM version	v5.6.b.0
Interface to SBEM	iSBEM
Interface version	v5.6.b

Envelope/Door constructions				
Name	U-value [W/m2K]	Adjusted U-value	Km [kJ/m2K]	Metal clad
External wall	1.2	NO	135	NO
Kitchen External wall	1.4	NO	135	NO
Partition wall	0.48	NO	11.7	NO
Main roof	0.29	NO	12	NO
Kitchen roof	1.7	NO	12	NO
Intermediate floor	1.4	NO	12	NO
Sitting/dining room floor	2.3	NO	22.5	NO
Living room floor	0.45	NO	36	NO
Solid floors	0.58	NO	36	NO
Door	3	NO	11.25	NO

Window/Rooflight constructions			
Name	U-value [W/m2K]	Solar transmittance	Light transmittance
Secondary glazed sashes	1.8	0.76	0.8
Single glazed sashes	1.8	0.76	0.8

Summary of objects		
Object type	Total number	Total related area [m2]
Envelope/Door constructions	10	-
Window/Rooflight constructions	2	-
HW systems	1	-
SE systems	0	0
PV systems	0	0
Wind generators	0	-
CHP generators	0	-
HVAC systems	3	-
Zones	12	120.93
Envelopes	69	595.63
Doors	2	4.6
Windows/Rooflights	13	20.45

Project building services	
Electric power factor	<0.9
Submetering and M&T for lighting systems	NO
Emission factor for district heating [kgCO <sub>2</sub> /kWh]	0.293
Primary energy factor for district heating [kWh/kWh]	1.2

Notes

Hot water systems	
Name	Default HWS
Generator Type	Using Central Heating boiler
Fuel type	Natural Gas
Seasonal efficiency	0.893
Uses CHP	NO
Storage system	NO
Storage volume [litres]	-
Insulation thickness [mm]	-
Secondary circulation	-
Circulation losses [W/m]	-
Pump power [kW]	-
Loop length [m]	-

Notes

Heating, ventilation, and air conditioning systems			
Name	Combi gas boiler	Sitting room, boiler + gas heater	Living room boiler + woodburner
Type	Central heating using water: radiators	Central heating using water: radiators	Central heating using water: radiators
Heat source	LTHW boiler	LTHW boiler	LTHW boiler
Heating fuel type	Natural Gas	Natural Gas	Natural Gas
Heating seasonal efficiency	0.893	0.861934	0.752366
Uses CHP	NO	NO	NO
Variable speed pumping type	-	-	-
Generator radiant efficiency	-	-	-
Cooling generator type	-	-	-
Cooling fuel type	-	-	-
Cooling seasonal energy efficiency ratio	-	-	-
Cooling nominal energy efficiency ratio	-	-	-
Mixed-mode cooling operation	-	-	-
Heat recovery system	-	-	-
Heat recovery seasonal efficiency	-	-	-
Variable heat recovery efficiency	-	-	-
Specific fan power [W/(l/s)]	-	-	-
Submetering and M&T for this system	NO	NO	NO
Heating - Central time control	YES	YES	YES
Heating - Optimum stop/start control	NO	NO	NO
Heating - Local time control	NO	NO	NO
Heating - Local temperature control	NO	NO	NO
Heating - Weather compensation control	NO	NO	NO

Notes

<b>Zone name:</b> Dining room	<b>Activity:</b> Domestic Dining room	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 8.28	<b>Height [m]:</b> 2.7	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Combi gas boiler
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes					
(Multiplier) Name	(1) Dining room/s	(1) Dining room/n	(1) Dining room/w	(1) Dining room/cu	(1) Dining room/fe
Type	Wall	Wall	Wall	Floor or Ceiling	Floor or Ceiling
Area [m2]	8.53	8.53	7.07	8.28	8.28
Orientation	South	North	West	Horizontal	Horizontal
Adjacent space	Same	Exterior	Same	Underground	Same
Construction name	Partition wall	External wall	Partition wall	Sitting/dining room floor	Intermediate floor

Windows & rooflights	
(Multiplier) Name	(2) Dining room/n/window
In envelope	Dining room/n
Area [m2]	0.98
Glazing name	Secondary glazed sashes
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.2 / 0.8

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes

<b>Zone name:</b> Hall	<b>Activity:</b> Domestic Circulation	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 6.26	<b>Height [m]:</b> 2.71	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Combi gas boiler
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes						
(Multiplier) Name	(1) Hall/s	(1) Hall/e	(1) Hall/n	(1) Hall/w	(1) Hall/ce	(1) Hall/f
Type	Wall	Wall	Wall	Wall	Floor or Ceiling	Floor or Ceiling
Area [m2]	8.89	5.18	8.89	5.18	6.26	6.26
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Exterior	Same	Same	Same	Same	Underground
Construction name	External wall	Partition wall	Partition wall	Partition wall	Intermediate floor	Solid floors

Windows & rooflights	
(Multiplier) Name	(1) Hall/s/window
In envelope	Hall/s
Area [m2]	0.83
Glazing name	Single glazed sashes
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.2 / 0.8

Doors	
(Multiplier) Name	(1) Front door
In envelope	Hall/s
Area [m2]	2.64
Type	Personnel
Construction name	Door

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes

<b>Zone name:</b> Kitchen 1	<b>Activity:</b> Domestic Kitchen	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 8.01	<b>Height [m]:</b> 2.39	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Combi gas boiler
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes					
(Multiplier) Name	(1) Kitchen 1/e	(1) Kitchen 1/n	(1) Kitchen 1/w	(1) Kitchen 1/c	(1) Kitchen 1/f
Type	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	4.52	10.13	4.52	8.01	8.01
Orientation	East	North	West	Horizontal	Horizontal
Adjacent space	Exterior	Same	Exterior	Exterior	Underground
Construction name	Kitchen External wall	Partition wall	Kitchen External wall	Kitchen roof	Solid floors

Windows & rooflights	
(Multiplier) Name	(1) Kitchen 1/w/window
In envelope	Kitchen 1/w
Area [m2]	0.86
Glazing name	Single glazed sashes
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.1 / 0.7

Doors	
(Multiplier) Name	(1) Kitchen door
In envelope	Kitchen 1/e
Area [m2]	1.96
Type	Personnel
Construction name	Door

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	LED
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes

<b>Zone name:</b> Kitchen 2	<b>Activity:</b> Domestic Kitchen	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 4.62	<b>Height [m]:</b> 1.92	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Combi gas boiler
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes					
(Multiplier) Name	(1) Kitchen 2/s	(1) Kitchen 2/e	(1) Kitchen 2/w	(1) Kitchen 2/c	(1) Kitchen 2/f
Type	Wall	Wall	Wall	Pitched roof	Floor or Ceiling
Area [m2]	8.18	2.35	2.35	4.49	4.62
Orientation	South	East	West	Horizontal	Horizontal
Adjacent space	Exterior	Exterior	Exterior	Exterior	Underground
Construction name	Kitchen External wall	Kitchen External wall	Kitchen External wall	Kitchen roof	Solid floors

Windows & rooflights	
(Multiplier) Name	(1) Kitchen 2/c/rooflight
In envelope	Kitchen 2/c
Area [m2]	0.64
Glazing name	Single glazed sashes
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.1 / 0.7

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	LED
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes

<b>Zone name:</b> Bathroom	<b>Activity:</b> Domestic Bathroom	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 4.63	<b>Height [m]:</b> 2.55	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Combi gas boiler
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes						
(Multiplier) Name	(1) Bathroom/s	(1) Bathroom/e	(1) Bathroom/n	(1) Bathroom/w	(1) Bathroom/c	(1) Bathroom/fe
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	6.78	4.44	6.78	4.44	4.63	4.63
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Exterior	Exterior	Same	Same	Exterior	Same
Construction name	External wall	External wall	Partition wall	Partition wall	Main roof	Intermediate floor

Windows & rooflights	
(Multiplier) Name	(1) Bathroom/s/window
In envelope	Bathroom/s
Area [m2]	1.38
Glazing name	Single glazed sashes
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.2 / 0.8

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	LED
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes



<b>Zone name:</b> Landing	<b>Activity:</b> Domestic Circulation	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 10.62	<b>Height [m]:</b> 2.53	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Combi gas boiler
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes						
(Multiplier) Name	(1) Landing/s	(1) Landing/e	(1) Landing/n	(1) Landing/w	(1) Landing/c	(1) Landing/fe
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	15.18	4.48	5.18	4.48	10.62	10.62
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Exterior	Same	Same	Same	Exterior	Same
Construction name	External wall	Partition wall	Partition wall	Partition wall	Main roof	Intermediate floor

Windows & rooflights	
(Multiplier) Name	(1) Landing/s/window
In envelope	Landing/s
Area [m2]	1.06
Glazing name	Secondary glazed sashes
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.2 / 0.8

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	LED
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes

<b>Zone name:</b> Office	<b>Activity:</b> Office and consulting areas	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 7.35	<b>Height [m]:</b> 2.58	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Combi gas boiler
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes						
(Multiplier) Name	(1) Office/s	(1) Office/e	(1) Office/n	(1) Office/w	(1) Office/c	(1) Office/fe
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	8.2	6	8.2	6	7.35	7.35
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Exterior	Same	Same	Exterior	Exterior	Same
Construction name	External wall	Partition wall	Partition wall	External wall	Main roof	Intermediate floor

Windows & rooflights	
(Multiplier) Name	(1) Office/s/window
In envelope	Office/s
Area [m2]	1.38
Glazing name	Single glazed sashes
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.2 / 0.6

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes

<b>Zone name:</b> West bedroom	<b>Activity:</b> Domestic Bedroom	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 9.68	<b>Height [m]:</b> 2.57	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Combi gas boiler
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes						
(Multiplier) Name	(1) West bedroom/s	(1) West bedroom/e	(1) West bedroom/n	(1) West bedroom/w	(1) West bedroom/c	(1) West bedroom/fe
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	10.82	5.91	10.82	5.91	9.68	9.68
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Same	Same	Exterior	Exterior	Exterior	Same
Construction name	Partition wall	Partition wall	External wall	External wall	Main roof	Intermediate floor

Windows & rooflights	
(Multiplier) Name	(1) West bedroom/n/window
In envelope	West bedroom/n
Area [m2]	1.34
Glazing name	Single glazed sashes
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.2 / 0.7

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	LED
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes

<b>Zone name:</b> Middle bedroom	<b>Activity:</b> Domestic Bedroom	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 10.66	<b>Height [m]:</b> 2.56	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Combi gas boiler
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes						
(Multiplier) Name	(1) Middle bedroom/s	(1) Middle bedroom/e	(1) Middle bedroom/n	(1) Middle bedroom/w	(1) Middle bedroom/c	(1) Middle bedroom/fe
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	9.86	7.09	9.86	7.09	10.66	10.66
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Same	Same	Exterior	Same	Exterior	Same
Construction name	Partition wall	Partition wall	External wall	Partition wall	Main roof	Intermediate floor

Windows & rooflights	
(Multiplier) Name	(1) Middle bedroom/n/window
In envelope	Middle bedroom/n
Area [m2]	1.33
Glazing name	Single glazed sashes
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.2 / 0.7

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes

<b>Zone name:</b> Guest bedroom	<b>Activity:</b> Domestic Bedroom	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 10.95	<b>Height [m]:</b> 2.56	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Combi gas boiler
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes						
(Multiplier) Name	(1) Guest bedroom/s	(1) Guest bedroom/e	(1) Guest bedroom/n	(1) Guest bedroom/w	(1) Guest bedroom/c	(1) Guest bedroom/fe
Type	Wall	Wall	Wall	Wall	Flat roof	Floor or Ceiling
Area [m2]	9.91	7.24	9.91	7.24	10.95	10.95
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Same	Exterior	Exterior	Same	Exterior	Same
Construction name	Partition wall	External wall	External wall	Partition wall	Main roof	Intermediate floor

Windows & rooflights	
(Multiplier) Name	(1) Guest bedroom/n/window
In envelope	Guest bedroom/n
Area [m2]	1.39
Glazing name	Single glazed sashes
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.2 / 0.7

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes

<b>Zone name:</b> Sitting room	<b>Activity:</b> Domestic Lounge	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 16.3	<b>Height [m]:</b> 2.7	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Sitting room, boiler + gas heater
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes						
(Multiplier) Name	(1) Sitting room/s	(1) Sitting room/e	(1) Sitting room/n	(1) Sitting room/w	(1) Sitting room/ce	(1) Sitting room/f
Type	Wall	Wall	Wall	Wall	Floor or Ceiling	Floor or Ceiling
Area [m2]	9.96	12.12	9.8	5	16.3	16.3
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Exterior	Exterior	Exterior	Same	Same	Underground
Construction name	External wall	External wall	External wall	Partition wall	Intermediate floor	Sitting/dining room floor

Windows & rooflights		
(Multiplier) Name	(1) Sitting room/s/window	(1) Sitting room/n/window
In envelope	Sitting room/s	Sitting room/n
Area [m2]	1.67	1.69
Glazing name	Single glazed sashes	Secondary glazed sashes
Shading position	None (no shading)	None (no shading)
Shading colour	-	-
Shading translucency	-	-
Transmission factor	1	1
Frame / Aspect ratios	0.2 / 0.7	0.2 / 0.7

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	Fluorescent - compact
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes

<b>Zone name:</b> Living room	<b>Activity:</b> Domestic Lounge	<b>Multiplier:</b> 1
<b>Area [m2]:</b> 23.57	<b>Height [m]:</b> 2.62	<b>Air permeability @ 50pa [m3/hm2]:</b> 12

HVAC system, ventilation, and exhaust	
Name	Living room boiler + woodburner
Destratification fans	NO
Ventilation type	Natural
SFP for local mechanical supply & extract [W/(l/s)]	-
Heat Recovery system	-
Heat recovery seasonal efficiency	-
Variable heat recovery efficiency	-
Local mechanical exhaust	NO
Exhaust air flow rate [l/s.m2]	-
SFP for mechanical exhaust [W/(l/s)]	-
Exhaust fans location	-
SFP for system terminal units [W/(l/s)]	-
Demand-controlled ventilation	None
Flow regulation type for ventilation control	-
Night cooling maximum hours [hours/month]	-
Night cooling maximum air flow rate [l/s.m2]	-
SFP for night cooling [W/(l/s)]	-

Envelopes						
(Multiplier) Name	(1) Living room/s	(1) Living room/e	(1) Living room/n	(1) Living room/w	(1) Living room/ce	(1) Living room/f
Type	Wall	Wall	Wall	Wall	Floor or Ceiling	Floor or Ceiling
Area [m2]	12.79	12.65	12.79	12.65	23.57	23.57
Orientation	South	East	North	West	Horizontal	Horizontal
Adjacent space	Same	Same	Exterior	Exterior	Same	Underground
Construction name	Partition wall	Partition wall	External wall	External wall	Intermediate floor	Living room floor

Windows & rooflights	
(Multiplier) Name	(3) Living room/n/window
In envelope	Living room/n
Area [m2]	1.64
Glazing name	Secondary glazed sashes
Shading position	None (no shading)
Shading colour	-
Shading translucency	-
Transmission factor	1
Frame / Aspect ratios	0.2 / 0.7

General Lighting and controls	
Total wattage [W]	-
Design illuminance [Lux]	-
Lamp and ballast efficacy [Lumens/W]	-
Light output ratio	-
Lamp type	LED
Air-extracting luminaires	NO
Controls	MANUAL
Type of photoelectric control	-
Different sensor for back of zone	-
Photoelectric control parasitic power [W/m2]	-
Automatic zoning for daylight	YES
Occupancy sensing	NONE
Occupancy sensing parasitic power [W/m2]	-

Hot water system	
Name	Default HWS
Dead leg length in this zone [m]	0

Display lighting	
Efficient lamps	NO
Lumens per circuit wattage	-
Time switching	NO

Thermal bridges Psi values [W/mK]		
Junction type	Metal clad	Not metal clad
Roof-wall	0.42	0.12
Wall-ground floor	1.725	0.16
Wall-wall (corner)	0.375	0.09
Wall-not ground floor	0.04	0.07
Lintel (window/door)	1.905	0.3
Sill (window)	1.905	0.04
Jamb (window/door)	1.905	0.05

Shell & core	
Shell area for fit-out	-

Notes