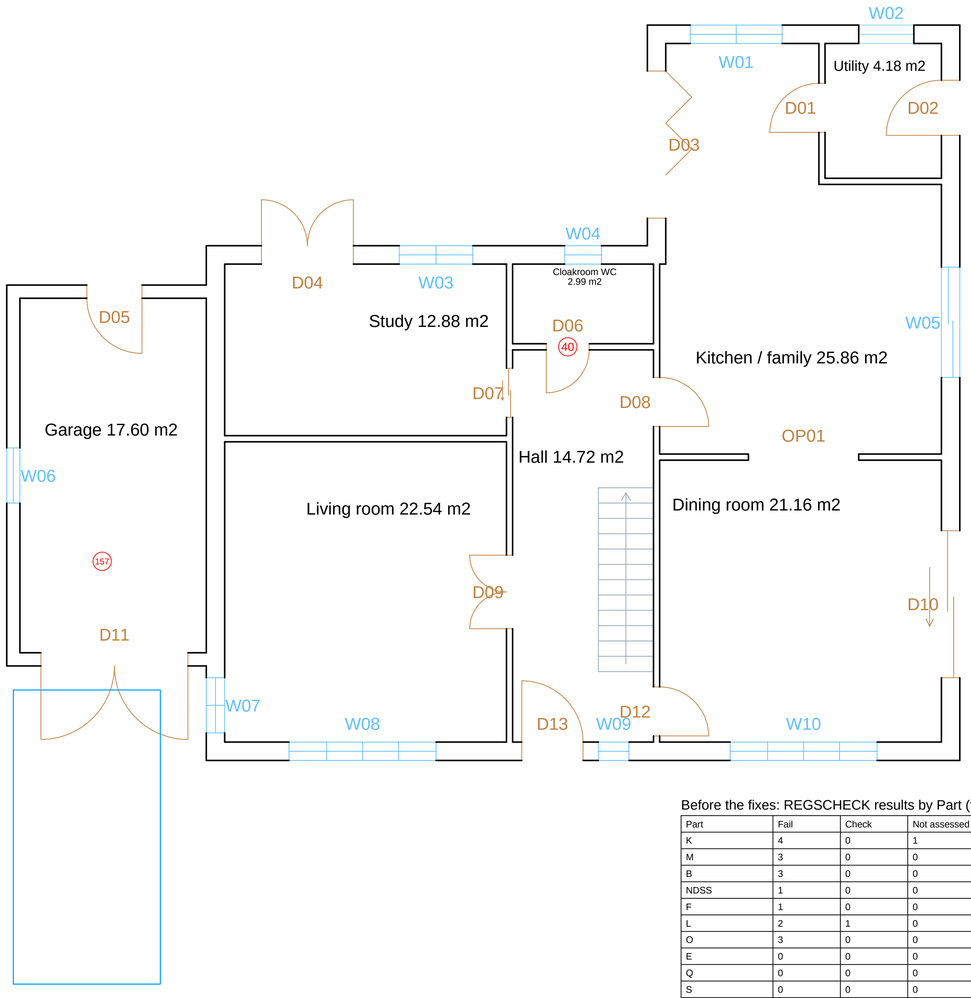
GROUND FLOOR PLAN, MARKED UP BY REGSMARKUP 1:50

6 Rowan Close as first specified, checked by REGSCHECK (Approved Documents, England)



Findings to act on: Building Regulations 2010 (England): dwellings

No.	Result	Part	Check	Item	Measured	Needs
40	Fail	M	Door and corridor widths (M4(1))	Door 20 to Hall	door 700 mm, corridor 6400 mm	door at least 750 mm
60	Fail	NDSS	Built-in storage (space standard)	6 Rowan Close	built-in storage 1.10 m²	at least 3.00 m²
93	Fail	L	Limiting U-values (new dwelling)	6 Rowan Close: Roofs (9)	area-weighted U 0.206 W/m²K over 103.68 m²	at most 0.16 W/m²K
94	Fail	L	Limiting U-values (new dwelling)	6 Rowan Close: External walls (11)	area-weighted U 0.261 W/m²K over 199.72 m²	at most 0.26 W/m²K
98	Check	L	Fabric heat loss against the notional dwelling	6 Rowan Close	fabric heat loss 159.3 W/K; openings 49.96 m² (24.0% of ...	at most 117.6 W/K (the notional dwelling's fabric on the ...
99	Fail	O	Glazing area (overheating, simplified method)	6 Rowan Close	glazing 32.95 m², 15.8% of 208.01 m²	at most 15% (moderate risk, cross-ventilated, largest gla...
101	Fail	O	Free area for removing excess heat	6 Rowan Close	free area 8.51 m²	at least 18.72 m² (the greater of 9% of the floor and 55...
141	Fail	B	Smoke alarms on every storey	6 Rowan Close, Storey at 0.00 m	no smoke alarm in a hall or landing	a smoke alarm in each storey's circulation space
155	Fail	PD-E	Outbuilding height (Class E)	Garden office	2.80 m high, 0.50 m from the boundary	at most 2.50 m within 2.00 m of the boundary
157	Fail	PD-A	Verandas, balconies and raised platforms (Class A)	Garage roof balcony	floor 2.60 m above the ground	no veranda, balcony or platform more than 0.30 m high

Design aid only: not building control approval, a planning decision or professional advice.
Numbers as in the Building Regs check and Planning panels when marked up; check again after changes.

Before the fixes: REGSCHECK results by Part (findings 2 CSV)

Part	Fail	Check	Not assessed	Pass
K	4	0	1	27
M	3	0	0	15
B	3	0	0	11
NDSS	1	0	0	6
F	1	0	0	26
L	2	1	0	3
O	3	0	0	4
E	0	0	0	15
Q	0	0	0	15
S	0	0	0	1
All	17	1	1	123

Key: red ring = fail, orange ring = to check; number = finding number. Findings with no place on the plan are in the table only.

NOTES

1. Design aid only, not building control approval. Stratal's reading of the Approved Documents (England), applied to what the drawing holds.
2. Numbered rings: red a failure, orange an item to check, numbered as in the Building Regs check panel when marked up (REGSMARKUP); the table is the plugin's own.
3. First specification, before the design changes; sheet 3 lists what changed and the result after.

DESIGN AID ONLY, NOT BUILDING CONTROL APPROVAL.

Stratal CAD
cad.stratal.co.uk

TITLE
6 Rowan Close: Building Regs check
Ground floor: findings before the fixes

PROJECT	DRAWN
6 Rowan Close, Ashby Green (fictional)	Stratal CAD demo

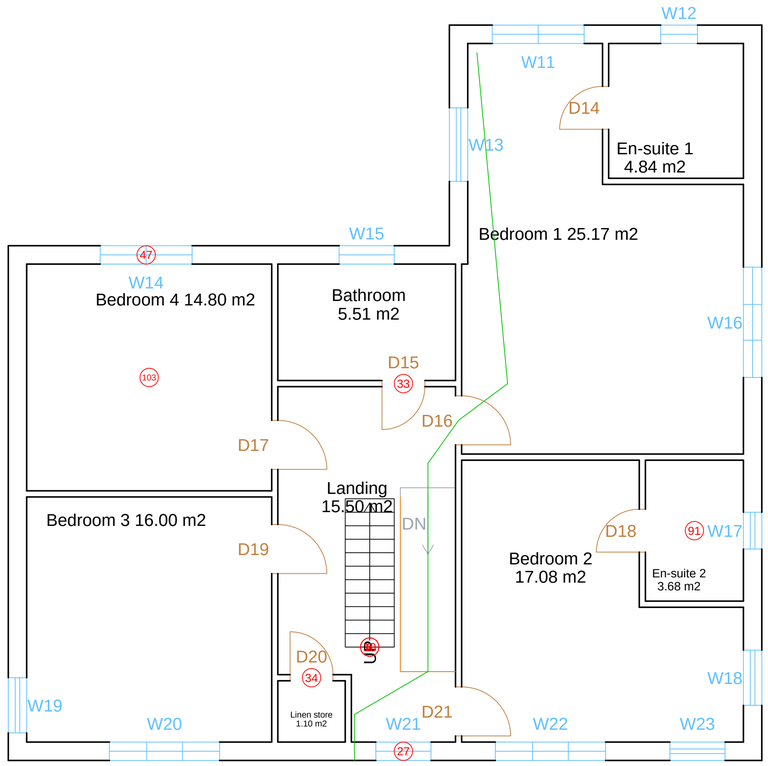
DRAWING NO.	SHEET	SCALE	SIZE
STR-REGS-001	1 of 6	1:50	A1

SOFTWARE	DATE
Stratal CAD 0.1.8, UK Building Regs 0.5.0	12 Nov 2026

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE

FIRST FLOOR PLAN, MARKED UP BY REGSMARKUP 1:50

6 Rowan Close as first specified, checked by REGSCHECK (Approved Documents, England)



Findings to act on: Building Regulations 2010 (England): dwellings

No.	Result	Part	Check	Item	Measured	Needs
2	Fail	K	Stair rise (private stair)	Stair 2 (private)	rise 221 mm	150 mm to 220 mm
6	Fail	K	Stair pitch (private stair)	Stair 2 (private)	pitch 45.1°	at most 42.0°
10	Fail	K	Headroom over the stair	Stair 2 (loft conversion)	headroom 1850 mm	at least 1900 mm
27	Fail	K	Low windows above the ground floor	Window 15	sill 300 mm	sill at least 800 mm, or guarding
33	Fail	M	Door and corridor widths (M4(1))	Door 10 to Landing	door 700 mm, corridor 5800 mm	door at least 750 mm
34	Fail	M	Door and corridor widths (M4(1))	Door 13 to Landing	door 700 mm, corridor 4700 mm	door at least 750 mm
47	Fail	B	Emergency escape windows	Window 6 (escape)	430 mm x 900 mm, 0.39 m², sill 900 mm	at least 0.33 m² and 450 mm each way, sill at most 1100 mm
91	Fail	F	Extract rates (intermittent fans, or continuous MEV or MVHR)	En-suite 2	8 l/s	at least 15 l/s (intermittent)
103	Fail	O	Free area for removing excess heat	Bedroom 4	free area 0.54 m²	at least 0.59 m² (4% of 14.80 m²)
142	Fail	B	Smoke alarms on every storey	6 Rowan Close, Storey at 2.70 m	no smoke alarm in a hall or landing	a smoke alarm in each storey's circulation space

Design aid only: not building control approval, a planning decision or professional advice.
Numbers as in the Building Regs check and Planning panels when marked up; check again after changes.

Stair, guarding and routes as first drawn

Object	As drawn and tagged	Plugin says
Loft stair (REGSSTAIR, proposed)	rise 221, going 220, 12 risers, 800 wide, headroom 1850	pitch 45.1 deg, 2R+G 662 mm
Stair void guarding (REGSGUARD)	landing, 900 high, largest gap 99 mm	Pass (K)
Escape route, Bedroom 1 (REGSROUTE)	first floor to the front door	12.82 m, no limit for a house
Approach route (REGSROUTE)	parking bay to the front door, rise 150 mm	8.90 m long
Main stair (ROOMSTAIR, REGSTAG Stair)	landings 1000 / 900, headroom 2050, 1 handrail 900	13 risers of 207.7, going 250

NOTES

1. Design aid only, not building control approval. Stratal's reading of the Approved Documents (England), applied to what the drawing holds.
2. Numbered rings: red a failure, orange an item to check, numbered as in the Building Regs check panel when marked up (REGSMARKUP); the table is the plugin's own.
3. First specification, before the design changes; sheet 3 lists what changed and the result after.

DESIGN AID ONLY, NOT BUILDING CONTROL APPROVAL.

Stratal CAD
cad.stratal.co.uk

TITLE
6 Rowan Close: Building Regs check
First floor: findings before the fixes

PROJECT	DRAWN
6 Rowan Close, Ashby Green (fictional)	Stratal CAD demo

DRAWING NO.	SHEET	SCALE	SIZE
STR-REGS-002	2 of 6	1:50	A1

SOFTWARE	DATE
Stratal CAD 0.1.8, UK Building Regs 0.5.0	12 Nov 2026

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE

FINDINGS BEFORE THE DESIGN CHANGES AND THE RESULT AFTER THEM

REGSCHECK on the first specification (findings 2 CSV) and after the changes (findings 4 CSV), matched by rule and item.

Every failure, item to check and item not assessed before the changes

No.	Part	Check	Item	Before: measured	After	After: item if renamed, measured
2	K	Stair rise (private stair)	Stair 2 (private)	rise 221 mm	Pass	rise 220 mm
6	K	Stair pitch (private stair)	Stair 2 (private)	pitch 45.1°	Pass	pitch 41.3°
10	K	Headroom over the stair	Stair 2 (loft conversion)	headroom 1850 mm	Pass	headroom 2000 mm
27	K	Low windows above the ground floor	Window 15	sill 300 mm	Pass	Window 21: sill 800 mm
33	M	Door and corridor widths (M4(1))	Door 10 to Landing	door 700 mm, corridor 5800 mm	Pass	Door 19 to Landing: door 800 mm, corridor 5800 mm (not head-on)
34	M	Door and corridor widths (M4(1))	Door 13 to Landing	door 700 mm, corridor 4700 mm	Pass	Door 18 to Landing: door 800 mm, corridor 4700 mm (not head-on)
40	M	Door and corridor widths (M4(1))	Door 20 to Hall	door 700 mm, corridor 6400 mm	Pass	Door 17 to Hall: door 800 mm, corridor 6400 mm (not head-on)
47	B	Emergency escape windows	Window 6 (escape)	430 mm x 900 mm, 0.39 m², sill 900 mm	Pass	500 mm x 1000 mm, 0.50 m², sill 900 mm
60	NDSS	Built-in storage (space standard)	6 Rowan Close	built-in storage 1.10 m²	Pass	built-in storage 3.60 m²
91	F	Extract rates (intermittent fans, or continuous MEV or MVHR)	En-suite 2	8 l/s	Pass	15 l/s
93	L	Limiting U-values (new dwelling)	6 Rowan Close: Roofs (9)	area-weighted U 0.206 W/m²K over 103.68 m²	Pass	area-weighted U 0.101 W/m²K over 103.68 m²
94	L	Limiting U-values (new dwelling)	6 Rowan Close: External walls (11)	area-weighted U 0.261 W/m²K over 199.72 m²	Pass	area-weighted U 0.207 W/m²K over 201.61 m²
98	L	Fabric heat loss against the notional dwelling	6 Rowan Close	fabric heat loss 159.3 W/K; openings 49.96 m² (24.0% of 208.01 m²)	Pass	fabric heat loss 112.6 W/K; openings 48.07 m² (23.1% of 208.01 m²)
99	O	Glazing area (overheating, simplified method)	6 Rowan Close	glazing 32.95 m², 15.8% of 208.01 m²	Pass	glazing 31.06 m², 14.9% of 208.01 m²
101	O	Free area for removing excess heat	6 Rowan Close	free area 8.51 m²	Pass	free area 20.02 m²
103	O	Free area for removing excess heat	Bedroom 4	free area 0.54 m²	Pass	free area 1.53 m²
138	K	Landings at the top and foot of a flight	Stair 2	landings not given	Pass	top 900 mm, foot 900 mm
141	B	Smoke alarms on every storey	6 Rowan Close, Storey at 0.00 m	no smoke alarm in a hall or landing	Pass	smoke alarm in a hall or landing
142	B	Smoke alarms on every storey	6 Rowan Close, Storey at 2.70 m	no smoke alarm in a hall or landing	Pass	smoke alarm in a hall or landing

REGSCHECK and PLANPD results by Part, before and after

Part	Fail before	Fail after	Check before	Check after	N/A before	N/A after	Pass before	Pass after
K	4	0	0	0	1	0	27	32
M	3	0	0	0	0	0	15	18
B	3	0	0	0	0	0	11	14
NDSS	1	0	0	0	0	0	6	7
F	1	0	0	0	0	0	26	27
L	2	0	1	0	0	0	3	6
O	3	0	0	0	0	0	4	7
E	0	0	0	0	0	0	15	15
Q	0	0	0	0	0	0	15	15
S	0	0	0	0	0	0	1	1
PD-A	0	0	0	0	0	0	0	5
PD-B	0	0	0	0	0	0	0	4
PD-E	0	0	0	0	0	0	0	5
PD-C	0	0	0	0	0	0	0	1
PD-D	0	0	0	0	0	0	0	1
PD-F	0	0	0	0	0	0	0	1
All	17	0	1	0	1	0	123	159

REGSMARKUP after the changes (the plugin's reply):

Nothing to mark up: no failures or items to check (REGSCHECK, PLANPD).

Final REGSCHECK: 0 fail, 0 to check, 0 not assessed, 142 pass. PLANPD: 0 fail, 17 pass.

Design changes made in answer to the findings

Finding	Design change (the demo's own inputs)
K loft stair (proposed)	REGSSTAIR on the selected stair: rise 221 -> 220, going 220 -> 250, headroom 1850 -> 2000 mm; landings 900 / 900 tagged (REGSTAG Stair)
K low window (W21)	landing window 900 x 1800 at sill 300 -> 900 x 1300 at sill 800 (ROOMPROPS)
M door widths	D06, D14, D15, D18 and D20: 700 -> 800 mm leaves (ROOMPROPS rebuilt the walls)
B escape window (W14)	Bedroom 4 casement: clear opening 430 x 900 -> 500 x 1000 mm, 0.50 m2
B smoke alarms	smoke alarms in the hall and on the landing (REGSTAG Fire)
NDSS storage	under-stair cupboard 1.30 m2 and wardrobes 2 x 0.60 m2 added: 3.60 m2 (REGSTAG Dwelling)
F extract	En-suite 2 fan 8 -> 15 l/s (REGSTAG Space)
L walls	Cavity wall 75 PIR (dense block) -> Cavity wall 85 PIR aircrete, corrections kept
L roof, floor	Ceiling 200 MW -> Ceiling 400 MW and VCL; slab 100 PIR -> 150 PIR
L openings	windows U 1.4 -> 1.0 (triple glazed); doors U 1.4 -> 1.0
O glazing	living and dining south windows 2400 -> 1800 wide; landing window shorter
O free area	restrictors dropped: side-hung casements open 90 deg (0.85 of the window), sash and sliding 0.45, fixed none (REGSTAG Energy, a value for each window)
PD Class E	garden office 2.80 -> 2.50 m high (0.50 m from the boundary)
PD Class A	garage roof balcony dropped from the scheme

What REGSCHECK said after the changes (changes since the last check):

Since the last check: 0 new failure(s), 0 new item(s) to check, 18 resolved, 0 still failing.
resolved: K Stair rise (private stair), Stair 2 (private)
resolved: K Stair pitch (private stair), Stair 2 (private)
resolved: K Headroom over the stair, Stair 2 (loft conversion)
resolved: K Low windows above the ground floor, Window 15
resolved: M Door and corridor widths (M4(1)), Door 10 to Landing

NOTES

1. Design aid only, not building control approval. The tables are the plugin's CSV files and panel rows, laid out by the demo script.
2. Values typed in for the design (constructions, fans, opening sizes, free areas, settings) are the demo's own inputs, listed in the README.

Stratal CAD
cad.stratal.co.uk

TITLE
6 Rowan Close: Building Regs check
Design changes: before and after

PROJECT	DRAWN		
6 Rowan Close, Ashby Green (fictional)	Stratal CAD demo		
DRAWING NO.	SHEET	SCALE	SIZE
STR-REGS-003	3 of 6	NTS (tables)	A1
SOFTWARE		DATE	
Stratal CAD 0.1.8, UK Building Regs 0.5.0		12 Nov 2026	

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE

FABRIC, U-VALUES, CONDENSATION SCREENING AND ROOM-BY-ROOM HEAT LOSS

REGSFABRIC (BS EN ISO 6946 / 13370, Glaser screening to BS EN ISO 13788) and REGSHEAT: a heating design estimate, not SAP or the Home Energy Model.

Constructions kept in the drawing (REGSFABRIC List)

Construction	Element	Spec	Layers, outside to inside: name, mm, W/mK [, bridged %, W/mK], vapour	U W/m2K
Cavity wall 75 PIR	Wall	before	Facing brick, 102.5, 0.77 mu 10; Residual cavity, R=0.18 mu 1; PIR board, 75, 0.022 mu 60; Dense block, 100, 1.13 mu 10; Plaster, 13, 0.57 mu 10	0.261
Cavity wall 85 PIR aircrete	Wall	after	Facing brick, 102.5, 0.77 mu 10; Residual cavity, R=0.18 mu 1; PIR board, 85, 0.022 mu 60; Aircrete block, 100, 0.15 mu 6; Plaster, 12.5, 0.57 mu 10	0.207
Ceiling 200 MW	Roof	before	Mineral wool over joists, 100, 0.040 mu 1; Mineral wool between joists, 100, 0.040, 10, 0.13 mu 1; Plasterboard, 12.5, 0.21 mu 8	0.206
Ceiling 400 MW and VCL	Roof	after	Mineral wool over joists, 300, 0.040 mu 1; Mineral wool between joists, 100, 0.040, 10, 0.13 mu 1; Polythene vapour control layer, R=0 sd 50; Plasterboard, 12.5, 0.21 mu 8	0.101
Ground floor slab 100 PIR	Floor	both	Concrete slab, 150, 1.35 mu 100; PIR board, 100, 0.022 mu 60; Sand cement screed, 65, 1.15 mu 20	0.157
Ground floor slab 150 PIR	Floor	after	Concrete slab, 150, 1.35 mu 100; PIR board, 150, 0.022 mu 60; Sand cement screed, 65, 1.15 mu 20	0.116

Heat loss elements by kind (REGSFABRIC Csv, before and after)

Element	Count	Area before m2	Area after m2	U before	UA before W/K	U after	UA after W/K
wall	11	199.72	201.61	0.261	52.2	0.207	41.8
window	22	32.95	31.06	1.400	46.1	1.000	31.1
door	5	17.01	17.01	1.000, 1.400	23.1	1.000	17.0
floor	8	105.43	105.43	0.157	16.5	0.116	12.2
roof	9	103.68	103.68	0.206	21.4	0.101	10.5
Total	55	458.79	458.79		159.2		112.6

Condensation screening: Cavity wall 85 PIR aircrete	
Cavity wall 85 PIR aircrete: condensation	1 plane(s) with condensation
Condensation between Facing brick and Residual cavity	0.01 g/m2 per day
outside surface	0.2 C; vapour 549 Pa of 618 Pa saturated; sd 0 m
between Facing brick and Residual cavity	0.7 C; vapour 642 Pa of 642 Pa saturated; sd 1.025 m
between Residual cavity and PIR board	1.4 C; vapour 642 Pa of 676 Pa saturated; sd 1.025 m
between PIR board and Aircrete block	16.7 C; vapour 1103 Pa of 1906 Pa saturated; sd 6.125 m
between Aircrete block and Plaster	19.4 C; vapour 1157 Pa of 2251 Pa saturated; sd 6.725 m
inside surface	19.5 C; vapour 1168 Pa of 2263 Pa saturated; sd 6.85 m
Inside surface	fRsi 0.948, 19 C, humidity 53%: under the 80% mould criterion
Method	Steady-state Glaser screening at one set of conditions (inside 20.0 C 50%, outside 0.0 C 90%), saturation pressures of BS EN ISO 13788; not its monthly assessment. Bridged layers...

Condensation screening: Ceiling 400 MW and VCL	
Ceiling 400 MW and VCL: condensation	no interstitial condensation at these conditions
outside surface	0.1 C; vapour 549 Pa of 614 Pa saturated; sd 0 m
between Mineral wool over joists and Mineral wool between joists	14.8 C; vapour 553 Pa of 1681 Pa saturated; sd 0.3 m
between Mineral wool between joists and Polythene vapour control layer	19.7 C; vapour 554 Pa of 2292 Pa saturated; sd 0.4 m
between Polythene vapour control layer and Plasterboard	19.7 C; vapour 1167 Pa of 2292 Pa saturated; sd 50.4 m
inside surface	19.8 C; vapour 1168 Pa of 2309 Pa saturated; sd 50.5 m
Inside surface	fRsi 0.975, 19.5 C, humidity 52%: under the 80% mould criterion
Method	Steady-state Glaser screening at one set of conditions (inside 20.0 C 50%, outside 0.0 C 90%), saturation pressures of BS EN ISO 13788; not its monthly assessment. Bridged layers...

Heat loss by room after the changes (REGSHEAT Csv), W

Room	C	m2	ach	Fabric	Vent.	Bridge	Total W	Before	W/m2
Living room	21.0	22.54	1.50	241	625	55	922	1020	40.9
Study	21.0	12.88	1.50	213	357	38	608	682	47.2
Hall	18.0	14.72	1.50	103	355	21	479	502	32.5
Cloakroom WC	18.0	2.99	3.00	40	144	9	194	206	64.8
Dining room	21.0	21.16	1.50	306	587	53	946	1073	44.7
Kitchen / family	21.0	25.86	2.00	365	956	63	1384	1514	53.5
Utility	18.0	4.18	2.00	103	134	15	252	288	60.4
Bedroom 3	18.0	16.00	1.00	170	257	37	464	543	29.0
Bedroom 4	18.0	14.80	1.00	142	238	35	414	479	28.0
Landing	18.0	15.50	1.50	68	374	20	462	518	29.8
Linen store	18.0	1.10	1.00	17	18	5	39	46	35.8
Bathroom	22.0	5.51	3.00	68	319	16	403	434	73.1
Bedroom 2	18.0	17.08	1.00	176	275	35	486	571	28.4
En-suite 2	22.0	3.68	3.00	50	213	12	275	297	74.7
Bedroom 1	18.0	25.17	1.00	231	405	48	684	799	27.2
En-suite 1	22.0	4.84	3.00	55	280	13	348	374	71.9
Dwelling 1		208.01					8361	9343	

Dwelling 1: heat transfer coefficient 384.33 W/K, heat loss parameter 1.848 W/m2K after (before: 430.00 W/K, 2.067 W/m2K).

A heating design estimate: not a SAP or Home Energy Model calculation, and not evidence of Part L compliance.
External design temperature -2.0 C (set in the drawing).
Room temperatures and air change rates are the drawing's settings; values not set are Stratal's starting values, not a standard's: check them against your heating design guide.
Ground floors lose heat to the external design temperature through their ground U-value (no ground temperature is modelled), which overstates their loss.
Heat flow between rooms at different temperatures is not counted; a garage counts as outside.
Thermal bridging: 0.050 W/m2K on each room's exposed area.

NOTES

1. Design aid only, not building control approval. The tables are the plugin's CSV files and panel rows, laid out by the demo script.
2. Values typed in for the design (constructions, fans, opening sizes, free areas, settings) are the demo's own inputs, listed in the README.

Stratal CAD
cad.stratal.co.uk

TITLE
6 Rowan Close: Building Regs check
Fabric, condensation and heat loss

PROJECT	DRAWN		
6 Rowan Close, Ashby Green (fictional)	Stratal CAD demo		
DRAWING NO.	SHEET	SCALE	SIZE
STR-REGS-004	4 of 6	NTS (tables)	A1
SOFTWARE		DATE	
Stratal CAD 0.1.8, UK Building Regs 0.5.0		12 Nov 2026	

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE

HOME ENERGY MODEL (INDICATIVE) AND THE ROOM, DOOR AND WINDOW SCHEDULES

REGSHEM runs the UK Home Energy Model engine built into the plugin; REGSSCHEDULE writes the values the checks read.

Home Energy Model results for 6 Rowan Close: INDICATIVE ONLY, not a SAP or HEM compliance result

Home Energy Model (REGSHEM Run)	Result or assumption
Indicative only	Indicative only: Home Energy Model engine dd71726ab372, not a SAP or HEM compliance result
Engine	Home Energy Model 1.0.0a7 (UK government engine, Crown Copyright, MIT; incomplete upstream)
Dwelling 1	16 heated rooms, 208.0 m2, 499.2 m3, 8 occupant(s), 55 heat loss elements
Space heating demand	48453 kWh a year (232.9 kWh/m2 over 208.0 m2)
Heat transfer coefficient	240.0 W/K; heat loss parameter 1.15 W/m2K
Heating by month (kWh)	Jan 10457, Feb 9032, Mar 5028, Apr 2490, May 1370, Jun 0, Jul 0, Aug 23, Sep 128, Oct 3200, Nov 6341, Dec 10385
Hot water	6496 kWh a year at the hot water source
Delivered: total	14346 kWh a year (lights and appliances 15, Boiler_auxiliary: boiler 240, boiler_water_heating 7962, boiler_space_heating: main 6129)
Delivered: _energy_from_environment	0 kWh a year
Delivered: mains elec	255 kWh a year (lights and appliances 15, Boiler_auxiliary: boiler 240)
Delivered: mains gas	14092 kWh a year (boiler_water_heating 7962, boiler_space_heating: main 6129)
Generated: mains elec	3659 kWh a year; exported -3554 kWh
Assumption	Ground floor: one ground-bearing slab without edge insulation, the floor construction taking half of the resistance its U-value leaves after the ground (the U-value is kept).
Assumption	Occupants: 8, the dwelling's bedspaces (its design occupancy), not SAP's or the Home Energy Model's assumed occupancy.
Assumption	Each occupant: 60 W of metabolic gain all day; one 6 minute shower at 41 C (8 l/min) at 07:00 and two 1 minute hot taps (6 l/min) at 08:00 and 19:00 every day. Lights, appliances and cooking: 350 W all day. St...
Assumption	Thermal bridging: 0.050 W/m2K over 458.8 m2 of heat loss elements (22.9 W/K).
Assumption	Heating 21.0 C from 6:00 to 9:00 and from 16:00 to 23:00 every day, one zone for the whole dwelling.
Assumption	Gas combi boiler 24.0 kW, efficiency 0.890 full load and 0.960 part load, its other figures from the engine's own combi boiler example; radiators sized by Stratal to 6.54 kW at a 50 K excess temperature (fabric...
Assumption	Mains cold water at 10.0 C all year.
Assumption	Air permeability 5.0 m3/(h m2) at 50 Pa; 22 background ventilator(s) from the windows' tags; normal shielding, suburban terrain, sea level.
Assumption	Intermittent extract fans are not modelled (no fan energy, no extra air change).
Assumption	Photovoltaics 3.20 kWp at 40 degrees facing 180 degrees from north, unshaded, moderately ventilated, string inverter.
Assumption	Weather: the user's file London_weather_EnergyPlus_format.epw (the folder is left off this sheet); Stratal ships no weather data.
Not a compliance result	The Home Energy Model is not in force; statutory SAP or HEM results come only from the government's approved service.

Room schedule (REGSSCHEDULE Rooms)

Room	Use	Level	m2	Ceiling	Glaz %	Purge	Vents mm2	Extract	Beds	Alarm
Living room	living	0	22.54	2400	14.4		16000			
Study	study	0	12.88	2400	11.2		8000			
Hall	hall	0	14.72	2400	6.1		8000			smoke
Cloakroom WC	wc	0	2.99	2400	16.1		4000	6.0		
Dining room	dining	0	21.16	2400	10.2		8000			
Kitchen / family	kitchen-diner	0	25.86	2400	14.4		8000	30.0		
Utility	utility	0	4.18	2400	25.8		4000	30.0		
Garage	garage	0	17.60	2300	4.6					
Bedroom 3	bedroom	2700	16.00	2400	20.2		16000		2	
Bedroom 4	bedroom	2700	14.80	2400	12.2	1.350	8000		2	
Landing	landing	2700	15.50	2400	7.5		8000			smoke
Linen store	store	2700	1.10	2400	0.0					
Bathroom	bathroom	2700	5.51	2400	16.3		4000	15.0		
Bedroom 2	bedroom	2700	17.08	2400	25.3		24000		2	
En-suite 2	shower	2700	3.68	2400	16.3		4000	15.0		
Bedroom 1	bedroom	2700	25.17	2400	21.5		24000		2	
En-suite 1	shower	2700	4.84	2400	12.4		4000	15.0		

Door and window schedule (REGSSCHEDULE Openings)

Opening	Rooms	W	H	Sill	m2	U	Faces	Esc.	Sec.	Vent
Door 1	Dining room / outside	2400	2100	0	5.04	1.000	E		yes	
Door 2	Utility / outside	900	2100	0	1.89	1.000	E		yes	
Door 3	Kitchen / family / outside	2400	2100	0	5.04	1.000	W		yes	
Door 4	Garage / outside	900	2100	0	1.89					
Door 5	Garage / outside	2400	2100	0	5.04					
Door 6	Kitchen / family / Dining room	1800	2100	0	3.78					
Door 7	Kitchen / family / Utility	800	2100	0	1.68					
Door 8	Bedroom 3 / Landing	800	2100	0	1.68					
Door 9	Bedroom 4 / Landing	800	2100	0	1.68					
Door 10	Study / outside	1500	2100	0	3.15	1.000	N		yes	
Door 11	Living room / Hall	1200	2100	0	2.52					
Door 12	Study / Hall	800	2100	0	1.68					
Door 13	Hall / Dining room	800	2100	0	1.68					
Door 14	Hall / Kitchen / family	800	2100	0	1.68					
Door 15	Landing / Bedroom 2	800	2100	0	1.68					
Door 16	Landing / Bedroom 1	800	2100	0	1.68					
Door 17	Cloakroom WC / Hall	800	2100	0	1.68					
Door 18	Landing / Linen store	800	2100	0	1.68					
Door 19	Bathroom / Landing	800	2100	0	1.68					
Door 20	Bedroom 2 / En-suite 2	800	2100	0	1.68					
Door 21	Bedroom 1 / En-suite 1	800	2100	0	1.68					
Door 22	Hall / outside	900	2100	0	1.89	1.000	S		yes	
Window 1	Kitchen / family / outside	1800	1200	900	2.16	1.000	E		yes	4000
Window 2	Living room / outside	900	1200	900	1.08	1.000	W		yes	8000
Window 3	Bedroom 1 / outside	1200	1200	900	1.44	1.000	W			8000
Window 4	Bedroom 3 / outside	900	1200	900	1.08	1.000	W			8000
Window 5	Bathroom / outside	900	1000	1100	0.90	1.000	N			4000
Window 6	Bedroom 4 / outside	1500	1200	900	1.80	1.000	N	yes		8000
Window 7	Study / outside	1200	1200	900	1.44	1.000	N		yes	8000
Window 8	Cloakroom WC / outside	600	800	1300	0.48	1.000	N		yes	4000
Window 9	En-suite 1 / outside	600	1000	1100	0.60	1.000	N			4000
Window 10	Bedroom 1 / outside	1500	1200	900	1.80	1.000	N			8000
Window 11	Bedroom 2 / outside	900	1200	900	1.08	1.000	E			8000
Window 12	En-suite 2 / outside	600	1000	1100	0.60	1.000	E			4000
Window 13	Bedroom 1 / outside	1800	1200	900	2.16	1.000	E			8000
Window 14	Kitchen / family / outside	1500	1050	1050	1.57	1.000	N		yes	4000
Window 15	Utility / outside	900	1200	900	1.08	1.000	N		yes	4000
Window 16	Garage / outside	900	900	1200	0.81					
Window 17	Living room / outside	1800	1200	900	2.16	1.000	S		yes	8000
Window 18	Hall / outside	500	1800	300	0.90	1.000	S		yes	8000
Window 19	Dining room / outside	1800	1200	900	2.16	1.000	S		yes	8000
Window 20	Bedroom 3 / outside	1800	1200	900	2.16	1.000	S			8000
Window 21	Landing / outside	900	1300	800	1.17	1.000	S			8000
Window 22	Bedroom 2 / outside	1800	1200	900	2.16	1.000	S			8000
Window 23	Bedroom 2 / outside	900	1200	900	1.08	1.000	S			8000

NOTES

1. Design aid only, not building control approval. The tables are the plugin's CSV files and panel rows, laid out by the demo script.
2. Values typed in for the design (constructions, fans, opening sizes, free areas, settings) are the demo's own inputs, listed in the README.
3. The Home Energy Model result is indicative only, not a SAP or HEM compliance result; the weather file is the engine's own London example (EPW).

Stratal CAD

cad.stratal.co.uk

TITLE
6 Rowan Close: Building Regs check
Home Energy Model and schedules

PROJECT	DRAWN
6 Rowan Close, Ashby Green (fictional)	Stratal CAD demo

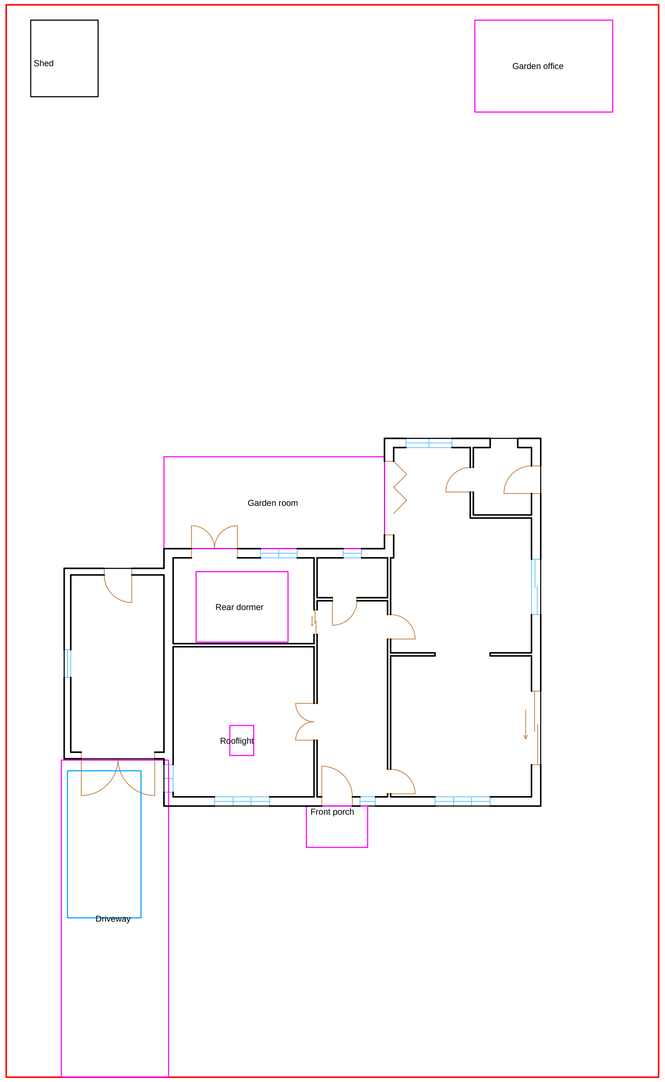
DRAWING NO.	SHEET	SCALE	SIZE
STR-REGS-005	5 of 6	NTS (tables)	A1

SOFTWARE	DATE
Stratal CAD 0.1.8, UK Building Regs 0.5.0	12 Nov 2026

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE

SITE PLAN WITH THE PROPOSALS AND THE PERMITTED DEVELOPMENT CHECK 1:100

PLANSITE, PLANPROPOSAL and PLANPD (Classes A to G, England); areas from PLANAREAS.



ROWAN CLOSE (HIGHWAY) TO THE SOUTH

Permitted development: PLANPD before and after the changes

Rule	Check	Measured and limit (PLANPD)	Before	After
PD-A	Ground covered by buildings (Class A): Curtilage	43.30 m² covered, 7.2%; needs at most 50% of the curtilage (less the original house)	Pass	Pass
PD-A	Extension height (Class A): Garden room	height 3.40 m; needs not above the existing roof (8.82 m)	Pass	Pass
PD-A	Extension eaves height (Class A): Garden room	eaves 2.70 m; needs not above the existing eaves (5.30 m)	Pass	Pass
PD-A	Extension beyond the principal elevation (Class A): Garden room	behind the principal elevation; needs not beyond the principal elevation	Pass	Pass
PD-A	Single-storey rear extension (Class A): Garden room	3.00 m beyond the rear wall, 3.40 m high; needs at most 4.00 m deep (detached) and 4.00 m high	Pass	Pass
PD-B	Roof addition volume (Class B): Roof additions	42.0 m³ (with earlier additions); needs at most 50 m³ (detached)	Pass	Pass
PD-B	Roof addition height (Class B): Rear dormer	height 8.50 m; needs not above the existing roof (8.82 m)	Pass	Pass
PD-B	Roof addition on the principal elevation (Class B): Rear dormer	behind the front roof slope; needs not beyond the plane of the roof slope of the principal elevation	Pass	Pass
PD-B	Set back from the eaves (Class B condition): Rear dormer	300 mm from the eaves; needs at least 200 mm	Pass	Pass
PD-E	Ground covered by buildings (Class E): Curtilage	43.30 m² covered, 7.2%; needs at most 50% of the curtilage (less the original house)	Pass	Pass
PD-E	Outbuilding forward of the principal elevation (Class E): Garden office	behind the principal elevation; needs not forward of the principal elevation	Pass	Pass
PD-E	Outbuilding storeys (Class E): Garden office	1 storey; needs one storey	Pass	Pass
PD-E	Outbuilding height (Class E): Garden office	2.50 m high, 0.50 m from the boundary; needs at most 2.50 m within 2.00 m of the boundary	Fail	Pass
PD-E	Outbuilding eaves height (Class E): Garden office	eaves 2.30 m; needs at most 2.50 m	Pass	Pass
PD-C	Rooflights and other roof alterations (Class C): Front rooflight	120 mm proud, below the ridge; needs at most 150 mm proud of the slope and not above the highest part of the roof	Pass	Pass
PD-D	Porches (Class D): Front porch	2.70 m², 2.90 m high, 7.50 m from the highway boundary; needs at most 3.00 m² and 3.00 m high, at least 2.00 m from a boundary with a hi...	Pass	Pass
PD-F	Hard surfaces in front of the house (Class F): Driveway	36.23 m², porous or draining to the garden; needs over 5.00 m² in front of the house: porous, or draining to a permeable area	Pass	Pass
PD-A	Verandas, balconies and raised platforms (Class A): Garage roof balcony	dropped from the scheme	Fail	-

Area schedule (PLANAREAS CSV), m2

Dwelling	Level (m)	NIA (m2)	GIA (m2)	GEA (m2)	Notes
1	0.000	121.93	107.46	121.68	
1	2.700	103.68	107.46	121.68	
Total		225.61	214.92	243.36	

Proposals as tagged (the demo's own inputs)

Proposal	PLANPROPOSAL kind	Values typed in (m, m3, mm)	Change
Garden room	Extension	height 3.4, eaves 2.7, storeys 1	
Rear dormer	Roof	height 8.5, eaves 5.3, volume 42, setback 300	
Garden office	Outbuilding	height 2.8, eaves 2.4, storeys 1	2.50 m high after
Front porch	Porch	height 2.9	
Driveway	HardSurface	porous Yes	
Garage roof balcony	Platform	platform 2.6	dropped
Front rooflight	Rooflight	height 7.0, protrusion 120	

NOTES

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3. Permitted development: not a Lawful Development Certificate or a planning decision.

Stratal CAD

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TITLE
6 Rowan Close: Building Regs check
Site plan and permitted development

PROJECT	DRAWN
6 Rowan Close, Ashby Green (fictional)	Stratal CAD demo

DRAWING NO.	SHEET	SCALE	SIZE
STR-REGS-006	6 of 6	1:100	A1

SOFTWARE	DATE
Stratal CAD 0.1.8, UK Building Regs 0.5.0	12 Nov 2026

STATUS
DEMONSTRATION DRAWING - NOT FOR MANUFACTURE