



Agar Grove Phase 1B SAP Report

April 2017

L1A 2013 Building Regs

27% improvement for Code 4 and Planning Condition

DOCUMENT CONTROL SHEET:

<u>Rev.</u>	<u>Issue Purpose</u>	<u>Name</u>	<u>Author</u>	<u>Checked</u>	<u>Date</u>	<u>Job Number</u>
B	Updated to latest drawings PV added for Energy Statement	Neil Rothern		ST	14/03/2018	C1052

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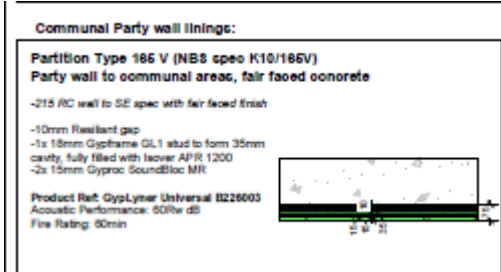
All SAP information within the Report is variable information input specifically to alter the TER/DER in order to achieve compliance. There are further standard and default inputs in SAP that are not contained within this report. A full SAP Data Input sheet is available upon request.

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Elements	U Value	Further Information / Comment
Ground Floor	0.9-0.11 W/m ² k	Calculated individually for each plot using perimeter/area ratio 200mm EPS Plustherm 150 (thermal conductivity of 0.030 W/mk as per E20/200A)
Exposed Soffits (Block F)	0.20 W/m ² k	150mm Dritherm Slab 34 (thermal conductivity 0.034 W/mk) U-value calculated from Drawing DD-203
Exposed Soffits (Block G)	0.15 W/m ² k	250mm Mineral Wool U-value calculated from Drawing DD-183
External Walls	0.15 W/m ² k	200mm full fill Dri-therm 34 (thermal conductivity 0.034 W/mk) As per F30/150A
Mansard Walls (Block F)	0.11 W/m ² k	200mm Dritherm 34 (thermal conductivity 0.034 W/mk) between joists, As per F30/150A 75mm Kingspan K107 over joists, As per P10/149A U-value calculated from Drawing DD-155
Dormer Cheeks (Block F)	0.11 W/m ² k	As Mansard Walls
Sheltered Walls – Flats to unheated Communal Corridor Cavity Wall Fully Filled Block F	0.13 W/m ² k	As indicated on floor plans Key As external walls but to unheated spaces

<p>Sheltered Walls Flats to unheated Communal Areas Concrete Lined Block G</p>	<p>0.51 W/m²k</p>	<p>35mm Isover APR1200 between Gyproc Studs As per Floor Plan Wall Key U-Value/insulation to be uplifted to pass part Criterion 2 of the SAP calcs for worst permitted average weighted u-value. Currently showing a fail for plots adjoining this wall</p> <div data-bbox="1262 610 1759 880" data-label="Image">  <p>Communal Party wall linings: Partition Type 185 V (NBS spec K10/185V) Party wall to communal areas, fair faced concrete -215 RC wall to SE spec with fair faced finish -10mm Resilient gap -1x 10mm Gyproc GL1 stud to form 35mm cavity, fully filled with Isover APR 1200 -2x 15mm Gyproc SoundBloc MK Product Ref: GypLiner Universal 8226003 Acoustic Performance: 60Rw dB Fire Rating: 60min</p> </div> <p>NOTE; FOR THE PURPOSES OF THE PV CALCULATOR I HAVE ASSUMED THIS WALL WILL BE IMPROVED TO 0.30 W/M²K</p>
<p>Sheltered Wall Flat to Lift shaft</p>	<p>0.42 W/m²k</p>	<p>50mm Isover APR1200 to RC Wall As per Wall Key on floor plan drawings</p>
<p>Sheltered Wall Flats to Communal Areas</p>	<p>0.20 W/m²k</p>	<p>100mm Full Fill Cavity Wall with Dritherm-34 Apartment side lined with 25mm Isover APR1200</p>

Block H		As per Wall Type Key on Floor Plans
Party walls between dwellings	0.00 W/m ² k	Party Walls between Flats to be fully filled and sealed. As per party wall key on Floor Plan Drawings
Main Roof	0.13 W/m ² k	170mm Bauder Insulation (Thermal Conductivity 0.022 W/mk) Based on minimum thickness areas As per Q37/130A
Windows (inc front door opening)	0.93 W/m ² k	Average U-value for Ideal Combi A/S U-Value as supplied by Ann-Marie of Archiype via e-mail 03/03/2017
Air Permeability	5.0 m ³ /hm ² @50Pa	All plots to be air tested Air test assumed based on results received for Block A
Ventilation (General)	Individual MVHR Zehnder ComfortAir 350	As per e-mail from Fei Wang of Robinson Associates 24/02/2017
Ventilation Block G Ground Floor Flats Only	Individual MVHR Zehnder ComfortAir 200	As per e-mail from Fei Wang of Robinson Associates 24/02/2017
Community Boiler	Broag Remeha Quinta Pro	As per e-mail from Fei Wang of Robinson Associates 24/02/2017

Emitters	Radiators	As indicated on Heating and Water Services Layout Drawings
Controls	Charging system linked to use Programmer and Multiple Thermostats	As indicated on Heating and Water Services Layout Drawings
Water Heating	Individual HIU SAV Series 5	As per e-mail from Fei Wang of Robinson Associates 09/03/2018
Thermal Bridging	Psi Values Calculated from the supplied Detailed Drawings	<ol style="list-style-type: none"> 1. Sill/Lintel 2. Jamb 3. Ground Floor 4. Intermediate Floors 5. Corner (main wall) 6. Corners (party wall) 7. Flat Roofs <p><i>See Appendix 1 for Worksheets</i></p> <p>All other junctions have assumed SAP default.</p> <p>We will need evidence that these junctions have been followed on site</p>
Low Energy Lighting	100%	Assumed
PV for 27% improvement (Based on air test of 5.0)	28.37KWP Total (Distribution per block T.B.A)	Landlords Supply South East Facing 15-30 degrees

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