



Kenavon Drive, Reading

Middle Block SAP Report – As Designed

On behalf of **Berkeley Homes**

Berkeley
Designed for life

Project Ref: 37454 | Rev: T2 | Date: December 2020

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For and on behalf of Stantec UK Limited				

Revision	Date	Description	Prepared	Reviewed	Approved
T1	11.09.2020	SAP Report – As Designed	AP	DS	SMcD
T2	08.12.2020	SAP Report – As Designed SAP Reports separated	AP	DS	SMcD

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1 As Designed – SAP calculations

1.1 Introduction

- 1.1.1 This report summaries the results of the As Designed SAP calculations to demonstrate compliance with Part L1A Building Regulations 2013 (with 2016 amendments) for Kenavon Drive, Reading.
- 1.1.2 The SAPs have been updated to the Architectural information that was provided by PRP dated **4th August 2020** and we understand this incorporate all the Berkeley Homes Oxford and Chiltern (BHOC) changes to date.
- 1.1.3 Appendix A details the Input data for the As Designed SAP calculations for Kenavon Drive.

1.2 Middle Block SAP Result Summary

- 1.2.1 Table 1 below shows the floor area weighted average Target Emissions Rate (TER), Dwellings Emissions Rate (DER), Target Fabric Energy Efficiency Rate (TFEE) and Dwellings Fabric Energy Efficiency (DFEE) for the Middle Block at Kenavon Drive.

Table 1: Area weighted TER/ DER and TFEE/ DFEE results for Middle Block

Stage	Weighted Average Results
Average TER	18.12
Average DER	12.81
Average TFEE	46.96
Average DFEE	43.53
Compliance	PASS
% Improvement DER / TER	29.3
% Improvement DFEE / TFEE	7.3

- 1.2.2 The results show that the Middle Block dwellings comply with Part L1A Building Regulations 2013 (with 2016 amendments) Criterion 1, 2 and 3.
- 1.2.3 Appendix C contains confirmation of the Thermal Bridging Psi Values applied to the scheme.

Appendix A SAP Input Data

A.1.1 Table 2 details the input data for the As Designed SAP calculations for Kenavon Drive.

Table 2: Input data for Middle Block, Kenavon SAPs

Element or system	SAP Inputs
Drawings	Floor Plans
	 O446-AA5990C-M-00-A-4225-GA Site Plan-M-L00
	 O446-AA5990C-M-01-A-4226-GA Site Plan-M-L01
	 O446-AA5990C-M-02-A-4227-GA Site Plan-M-L02
	 O446-AA5990C-M-03-A-4228-GA Site Plan-M-L03
	 O446-AA5990C-M-04-A-4229-GA Site Plan-M-L04
	 O446-AA5990C-M-05-A-4230-GA Site Plan-M-L05
	 O446-AA5990C-M-06-A-4231-GA Site Plan-M-L06
	 O446-AA5990C-M-07-A-4232-GA Site Plan-M-L07
	 O446-AA5990C-M-08-A-4233-GA Site Plan-M-L08
	 O446-AA5990C-M-09-A-4234-GA Site Plan-M-L09
	 O446-AA5990C-M-10-A-4235-GA Site Plan-M-L10
	 O446-AA5990C-M-11-A-4236-GA Site Plan-M-L11
	Elevations
	 O446-AA5990C-M1-ZZ-A-4320-GA Elevation-M1-South and North Elevation
	 O446-AA5990C-M1-ZZ-A-4321-GA Elevation-M1-West Elevation
	 O446-AA5990C-M1-ZZ-A-4322-GA Elevation-M1-East Elevation
	 O446-AA5990C-M2-ZZ-A-4323-GA Elevation-M2-South and North Elevation
	 O446-AA5990C-M2-ZZ-A-4324-GA Elevation-M2-West Elevation
	 O446-AA5990C-M2-ZZ-A-4325-GA Elevation-M2-East Elevation
	 O446-AA5990C-M3-ZZ-A-4326-GA Elevation-M3-North Elevation 1
	 O446-AA5990C-M3-ZZ-A-4327-GA Elevation-M3-North Elevation 2
	 O446-AA5990C-M3-ZZ-A-4328-GA Elevation-M3-South Elevation 1
	 O446-AA5990C-M3-ZZ-A-4329-GA Elevation-M3-South Elevation 2
	 O446-AA5990C-M3-ZZ-A-4330-GA Elevation-M3-West and East Elevation
	 O446-AA5990C-M4-ZZ-A-4331-GA Elevation-M4-South and North Elevation
	 O446-AA5990C-M4-ZZ-A-4332-GA Elevation-M4-West Elevation
	 O446-AA5990C-M4-ZZ-A-4333-GA Elevation-M4-East Elevation
	 O446-AA5990C-M5-ZZ-A-4334-GA Elevation-M5-South and North Elevation
	 O446-AA5990C-M5-ZZ-A-4335-GA Elevation-M5-West Elevation
	 O446-AA5990C-M5-ZZ-A-4336-GA Elevation-M5-East Elevation
	Sections
	 O446-AA5990C-M1-ZZ-A-4425-GA Height Rod-M1-Sh1
	 O446-AA5990C-M1-ZZ-A-4426-GA Height Rod-M1-Sh2
	 O446-AA5990C-M1-ZZ-A-4427-GA Height Rod-M1-Sh3
	 O446-AA5990C-M2-ZZ-A-4551-GA Core M2-Sections
	 O446-AA5990C-M3-ZZ-A-4435-GA Height Rod-M3-Sh1
	 O446-AA5990C-M3-ZZ-A-4436-GA Height Rod-M3-Sh2
	 O446-AA5990C-M4-ZZ-A-4440-GA Height Rod-M4-Sh1
	 O446-AA5990C-M4-ZZ-A-4441-GA Height Rod-M4-Sh2
	 O446-AA5990C-M5-ZZ-A-4451-GA Height Rod-M5-Sh1
	 O446-AA5990C-M5-ZZ-A-4452-GA Height Rod-M5-Sh2
	 O446-AA5990C-M5-ZZ-A-4453-GA Height Rod-M5-Sh3

Element or system	SAP Inputs	
Building Fabric	External walls	0.20 W/m ² k
	Internal walls adjacent to unheated spaces (e.g. corridor)	0.20 W/m ² k (0.18 with SAP factor applied)
	Party walls fully filled with effective edge sealing	0.00 W/m ² k
	Ground floors	0.12 W/m ² k
	Exposed floors	0.12 W/m ² k
	Internal floors or ceilings adjacent to unheated spaces (e.g. corridor)	0.12 W/m ² k (assumed)
	Pitched roof (insulation between rafters)	0.12 W/m ² k
	Pitched roof (insulation between and above joists)	0.12 W/m ² k
	Flat roof	0.12 W/m ² k
	Window & Door	U-Value – 1.30 g – Value – 0.45 Frame Factor 0.73
	Solid flat entrance door	U-Value – 1.3
	Air permeability at 50pa (m ³ /hr-m ²)	4.00
	Accredited construction details	Calculated Psi values taken from BHOC (Douglas Fearon) dated 17.07.2020. Also default Psi values used for junctions where accredited construction details unavailable.
Building Services	Communal CHP system	Heating Efficiency - 50% Elec Efficiency - 35% Proportion of heat provided by CHP – 60%
	Communal heating system	Efficiency – 88.6%
	Heating controls	Charging system linked to use of community heating, programmer, TRVs
	DHW from Communal heating system	Storage cylinder – No Thermal Storage losses – N/A
	Ventilation - MEV	Manufacture – Nuaire Model – MEVDC Approved installation scheme – No Ductwork insulation type N/A
	Lighting	100% low energy lighting

Appendix B SAP - Block Compliance Worksheet

This appendix contains the SAP – Block Compliance worksheet for Middle Block, Kenavon Reading.

Block Compliance WorkSheet: Middle Block

User Details

Assessor Name: Jon West
Software Name: Stroma FSAP

Stroma Number: STRO005224
Software Version: Version: 1.0.4.17

Calculation Details

Dwelling	DER	TER	DFEE	TFEE	TFA
M1-06-01	13.09	18.08	48.6	53.3	83.2
M1-00-02	12.07	16.45	41.7	44.9	83.2
M1-00-03	11.96	16.27	41.1	44.1	83.2
M1-00-04	11.85	16.49	40.2	45	83.2
M1-00-05	13.39	19.38	54.6	65.2	97
M1-00-06	13.39	19.38	54.6	65.2	97
M1-01-01	15.92	24.14	59.4	70.2	47.7
M1-01-02	15.14	21.97	57.4	63.8	55.1
M1-02-01	14.59	20.62	50.5	52.2	47.7
M1-02-02	14.45	19.43	51.1	47.9	50.2
M1-02-03	11.56	16.01	35.9	37.8	67.7
M1-02-04	11.14	15.15	32.5	32.8	67.4
M1-02-05	11.78	16.32	36.8	38.8	67.4
M1-02-06	12.16	16.6	40.6	41.3	68.8
M1-02-07	12.23	17.29	42.6	45.9	71.9
M1-03-01	14.59	20.62	50.5	52.2	47.7
M1-03-02	14.45	19.43	51.1	47.9	50.2
M1-03-03	11.6	15.88	36.5	37.5	67.7
M1-03-04	11.14	15.15	32.5	32.8	67.4
M1-03-05	11.14	15.15	32.5	32.8	67.4
M1-03-06	10.88	14.65	32	31.3	68.8
M1-03-07	11.15	15.58	35.4	37.1	71.9
M1-04-01	14.59	20.62	50.5	52.2	47.7
M1-04-02	14.45	19.43	51.1	47.9	50.2
M1-04-03	11.6	15.88	36.5	37.5	67.7
M1-04-04	11.14	15.15	32.5	32.8	67.4

Block Compliance WorkSheet: Middle BlockCont...

Dwelling	DER	TER	DFEE	TFEE	TFA
M1-04-05	11.14	15.15	32.5	32.8	67.4
M1-04-06	10.88	14.65	32	31.3	68.8
M1-04-07	11.15	15.58	35.4	37.1	71.9
M1-05-01	14.59	20.62	50.5	52.2	47.7
M1-05-02	14.45	19.43	51.1	47.9	50.2
M1-05-03	11.47	16.25	35.7	39.7	67.7
M1-05-04	11.01	15.55	32	35.3	67.4
M1-05-05	10.76	14.83	30.3	31.5	67.4
M1-05-06	10.77	15.08	31.4	33.7	68.8
M1-05-07	11.02	15.87	34.6	38.8	71.9
M1-06-02	18.24	26.43	74.8	84.5	50.4
M1-06-03	15.93	23.64	62.8	75.9	63.1
M1-06-04	15.15	22.15	57.1	67.4	61.4
M1-06-05	15.93	23.59	57.6	67.4	48.4
M1-06-06	14.42	21.3	56.9	68.2	77
M1-06-07	14.91	21.82	59.3	69.9	71.5
M2-00-01	12.06	16.8	42.1	47.2	83.6
M2-00-02	12.06	16.43	42.1	45.3	83.2
M2-00-03	12.18	16.57	42.8	46	83.2
M2-00-04	13.34	18.3	50.6	54.8	83.2
M2-01-01	13.34	19.12	56.8	64.7	103.9
M2-01-02	14.56	21.04	50.6	54.5	48.3
M2-01-03	14.1	20.21	47.4	50.9	49.1
M2-01-04	13.75	19.73	46.8	51.3	54.9
M2-01-05	14.12	20.66	53.3	61.5	65.3
M2-01-06	13.02	19.34	45	54.3	67.7
M2-01-07	16.52	25.82	57.8	70.7	38.5
M2-01-09	14.94	22.02	57.3	66.8	60.4
M2-01-10	12.49	17.81	46.8	52.8	83.2
M2-01-11	12.64	18.45	47.8	56.1	83.2

Block Compliance WorkSheet: Middle BlockCont...

Dwelling	DER	TER	DFEE	TFEE	TFA
M2-02-01	12.31	16.89	50.4	53.3	103.9
M2-02-02	13.66	18.85	44.6	43.2	48.3
M2-02-03	13.22	17.81	41.4	38.4	49.1
M2-02-04	12.63	16.92	39.3	36.8	54.9
M2-02-05	12.22	16.79	34.8	33.7	52.3
M2-02-06	12.19	16.88	35.7	35.3	51.6
M2-02-07	11.89	16.39	37.8	39.2	64.3
M2-02-08	12.63	17.18	43.3	43.6	65.3
M2-02-11	11.57	16.22	35.3	38.2	67.7
M2-02-12	15.05	22.08	48	51.5	38.5
M2-03-01	12.31	16.89	50.4	53.3	103.9
M2-03-02	13.66	18.85	44.6	43.2	48.3
M2-03-03	13.22	17.81	41.4	38.4	49.1
M2-03-04	12.63	16.92	39.3	36.8	54.9
M2-03-05	12.22	16.79	34.8	33.7	52.3
M2-03-06	12.16	16.76	35.5	34.6	51.6
M2-03-07	11.86	16.16	37.6	38	64.3
M2-03-09	12.63	17.18	43.3	43.6	65.3
M2-03-11	11.57	16.22	35.3	38.2	67.7
M2-03-12	15.05	22.08	48	51.5	38.5
M2-04-01	12.31	16.89	50.4	53.3	103.9
M2-04-02	13.66	18.85	44.6	43.2	48.3
M2-04-03	13.22	17.81	41.4	38.4	49.1
M2-04-04	12.63	16.92	39.3	36.8	54.9
M2-04-05	12.22	16.79	34.8	33.7	52.3
M2-04-06	12.16	16.76	35.5	34.6	51.6
M2-04-07	11.86	16.16	37.6	38	64.3
M2-04-09	12.63	17.18	43.3	43.6	65.3
M2-04-11	11.57	16.22	35.3	38.2	67.7
M2-04-12	15.05	22.08	48	51.5	38.5

Block Compliance WorkSheet: Middle BlockCont...

Dwelling	DER	TER	DFEE	TFEE	TFA
M2-05-01	12.31	16.89	50.4	53.3	103.9
M2-05-02	13.66	18.85	44.6	43.2	48.3
M2-05-03	13.22	17.81	41.4	38.4	49.1
M2-05-04	12.63	16.92	39.3	36.8	54.9
M2-05-05	12.22	16.79	34.8	33.7	52.3
M2-05-06	12.16	16.76	35.5	34.6	51.6
M2-05-07	11.86	16.16	37.6	38	64.3
M2-05-09	12.63	17.18	43.3	43.6	65.3
M2-05-11	11.57	16.22	35.3	38.2	67.7
M2-05-12	15.05	22.08	48	51.5	38.5
M2-06-01	12.31	16.89	50.4	53.3	103.9
M2-06-02	13.66	18.85	44.6	43.2	48.3
M2-06-03	13.22	17.81	41.4	38.4	49.1
M2-06-04	13.03	18.49	42	44.9	54.9
M2-06-05	13.5	19.9	43.4	50	52.3
M2-06-06	13.44	19.6	44.1	49.4	51.6
M2-06-08	13.23	19.53	46.8	55.3	64.3
M2-06-09	13.97	20.58	52.3	61.1	65.3
M2-06-11	12.93	19.11	44.4	53.2	67.7
M2-06-12	16.46	25.33	57.4	68.2	38.5
M2-07-01	14.11	20.15	48.8	50.6	49
M2-07-02	11.92	15.79	41.3	39.6	76.4
M2-07-03	12.27	16.53	41.6	40.7	66.3
M2-07-04	14.73	20.98	49.9	51.4	45.1
M2-08-01	14.11	20.15	48.8	50.6	49
M2-08-02	11.92	15.79	41.3	39.6	76.4
M2-08-03	12.3	16.28	41.8	39.4	66.3
M2-08-04	14.73	20.98	49.9	51.4	45.1
M2-09-01	14.49	21.81	51.3	59.1	49
M2-09-02	12.39	17.44	44.4	48	76.4

Block Compliance WorkSheet: Middle BlockCont...

Dwelling	DER	TER	DFEE	TFEE	TFA
M2-09-03	12.41	17.33	42.5	44.8	66.3
M2-09-04	14.87	21.33	50.9	53.2	45.1
M2-10-01	13.64	20.37	51.3	60.8	67.6
M2-10-02	13.02	19.05	50.5	57.6	76.7
M2-10-03	14.4	21.9	55.9	68.8	69.9
M3-00-01	14.13	21.19	55.1	65.3	71.2
M3-00-02	14.89	22.53	53.1	62.9	50.3
M3-00-03	16.02	23.97	63.6	74.1	56.1
M3-01-01	13.97	20.38	47.7	52.6	51.3
M3-01-02	11.45	16.2	38.4	41.7	78.7
M3-01-03	11.98	17.23	43.4	49.9	82.4
M3-01-04	13.79	20.71	44.6	52.6	49
M3-01-05	14.18	21.4	46.9	55.9	49
M3-01-06	12.41	18.16	44.2	51.7	73.5
M3-01-07	12.45	17.85	45.8	51.8	80.6
M3-01-08	15.74	22.95	58	63	45.8
M3-01-09	13.64	19.79	49.2	55.3	61.9
M3-02-01	13.61	19.62	45.2	48.7	51.3
M3-02-02	10.85	15.5	34.4	38.1	78.7
M3-02-03	10.68	14.41	34.6	35.4	82.4
M3-02-04	11.59	16.06	35.2	36.9	67.1
M3-02-05	12.21	17.06	33.4	33	49
M3-02-06	11.07	15.13	35.2	36	73.5
M3-02-07	10.82	14.86	35	36.7	80.6
M3-02-08	14.09	19.77	47	46.7	45.8
M3-02-09	12.99	18.47	44.8	48.5	61.9
M3-03-01	13.61	19.62	45.2	48.7	51.3
M3-03-02	11.57	16.34	40.1	43.7	78.7
M3-03-03	10.68	14.41	34.6	35.4	82.4
M3-03-04	10.82	14.73	29.9	29.9	67.1

Block Compliance WorkSheet: Middle BlockCont...

Dwelling	DER	TER	DFEE	TFEE	TFA
M3-03-05	11.9	16.62	31.3	30.7	49
M3-03-06	11.07	15.13	35.2	36	73.5
M3-03-07	10.82	14.86	35	36.7	80.6
M3-03-08	14.09	19.77	47	46.7	45.8
M3-03-09	12.99	18.47	44.8	48.5	61.9
M3-04-01	13.61	19.62	45.2	48.7	51.3
M3-04-02	11.57	16.19	40.1	42.9	78.7
M3-04-03	10.68	14.41	34.6	35.4	82.4
M3-04-04	10.82	14.73	29.9	29.9	67.1
M3-04-05	11.9	16.62	31.3	30.7	49
M3-04-06	11.07	15.13	35.2	36	73.5
M3-04-07	10.82	14.86	35	36.7	80.6
M3-04-08	14.09	19.77	47	46.7	45.8
M3-04-09	12.99	18.47	44.8	48.5	61.9
M3-05-01	13.74	20.7	46.3	54.4	51.3
M3-05-02	11.68	16.92	40.9	46.7	78.7
M3-05-03	10.68	14.41	34.6	35.4	82.4
M3-05-04	10.82	14.73	29.9	29.9	67.1
M3-05-05	11.9	16.62	31.3	30.7	49
M3-05-06	11.13	15.37	35.6	37.3	73.5
M3-05-07	12.29	18.82	44.7	56.7	80.6
M3-05-08	14.23	20.36	47.9	49.7	45.8
M3-05-09	13.13	19.38	45.8	53.3	61.9
M3-06-01	15.76	24.04	57.8	68.4	45.5
M3-06-02	13.4	20.41	51.2	62.7	72
M3-06-03	12.11	18	44.3	53.9	82.4
M3-06-04	12.12	17.51	38.8	44.5	67.1
M3-06-05	13.22	19.48	40.3	45.8	49
M3-06-06	12.49	18.52	44.8	53.6	73.5
M3-06-07	15.7	24.34	57.8	70.4	45.8

Block Compliance WorkSheet: Middle BlockCont...

Dwelling	DER	TER	DFEE	TFEE	TFA
M3-06-08	15.73	24.06	61.5	74.4	55.4
M4-00-01	15.41	23.12	60.1	70.7	57.9
M4-00-02	13.21	18.02	50.6	54.1	82.8
M4-00-03	12.01	16.31	42.5	45.4	82.8
M4-00-04	11.93	16.44	41.3	45.5	83.2
M4-01-01	14.58	22.64	50.1	62.8	48.4
M4-01-02	14.16	21.22	51.3	59.8	55.4
M4-01-03	13.95	19.5	49.8	50.8	54
M4-01-04	14.83	22.27	53.4	62.4	50.7
M4-02-01	13.07	19.27	40	45.3	48.4
M4-02-02	12.92	17.87	41	40.7	51.9
M4-02-03	12.55	17.42	38.5	38.3	51.9
M4-02-04	12.19	17.09	33.9	33.9	48.4
M4-02-05	13.46	19.3	42.6	45.5	48.4
M4-02-06	13.27	18.34	45	44.6	54
M4-03-01	13.07	19.27	40	45.3	48.4
M4-03-02	12.92	17.87	41	40.7	51.9
M4-03-03	12.54	17.1	38.5	36.7	51.9
M4-03-04	12.19	17.09	33.9	33.9	48.4
M4-03-05	12.28	17.22	34.6	34.6	48.4
M4-03-06	13.29	18.39	45.1	44.8	54
M4-03-07	13.22	19.03	42.7	45.8	50.7
M4-04-01	13.07	19.27	40	45.3	48.4
M4-04-02	12.92	17.87	41	40.7	51.9
M4-04-03	12.54	17.1	38.5	36.7	51.9
M4-04-04	12.19	17.09	33.9	33.9	48.4
M4-04-05	12.28	17.22	34.6	34.6	48.4
M4-04-06	13.07	18.05	43.6	43.1	54
M4-04-07	13.22	19.03	42.7	45.8	50.7
M4-05-01	13.07	19.27	40	45.3	48.4

Block Compliance WorkSheet: Middle BlockCont...

Dwelling	DER	TER	DFEE	TFEE	TFA
M4-05-02	12.92	17.87	41	40.7	51.9
M4-05-03	12.54	17.1	38.5	36.7	51.9
M4-05-04	12.19	17.09	33.9	33.9	48.4
M4-05-05	12.28	17.22	34.6	34.6	48.4
M4-05-06	13.07	18.05	43.6	43.1	54
M4-05-07	13.33	19.5	43.4	48.3	50.7
M4-06-01	13.07	19.27	40	45.3	48.4
M4-06-02	12.92	17.87	41	40.7	51.9
M4-06-03	12.37	16.85	37.4	35.5	51.9
M4-06-04	11.96	16.73	32.6	32.3	48.4
M4-06-05	12.05	16.85	33.2	32.9	48.4
M4-06-06	13.07	18.05	43.6	43.1	54
M4-06-07	14.2	20.69	49.3	54.4	50.7
M4-07-01	14.21	21.76	48.2	58.2	48.4
M4-07-02	14.3	21.54	50.2	59.7	51.9
M4-07-03	13.89	20.75	47.6	55.5	51.9
M4-07-04	13.44	19.9	42.4	48.6	48.4
M4-07-05	13.59	20.15	43.4	49.9	48.4
M4-07-06	14.47	21.72	53.1	62.2	54
M4-07-07	15.02	23.33	55.8	68.6	50.7
M5-00-01	13.09	18.08	48.6	53.3	83.2
M5-00-02	12.07	16.45	41.7	44.9	83.2
M5-00-03	11.96	16.27	41.1	44.1	83.2
M5-00-04	12.62	17.98	45.3	52.6	83.2
M5-00-05	13.39	19.38	54.6	65.2	97
M5-00-06	13.39	19.38	54.6	65.2	97
M5-01-04	15.14	21.97	57.4	63.8	55.1
M5-01-05	15.92	24.14	59.4	70.2	47.7
M5-02-01	12.23	17.29	42.6	45.9	71.9
M5-02-02	12.16	16.6	40.6	41.3	68.8

Block Compliance WorkSheet: Middle BlockCont...

Dwelling	DER	TER	DFEE	TFEE	TFA
M5-02-03	11.78	16.32	36.8	38.8	67.4
M5-02-04	11.14	15.15	32.5	32.8	67.4
M5-02-05	11.56	16.01	35.9	37.8	67.7
M5-02-06	14.45	19.43	51.1	47.9	50.2
M5-02-07	14.59	20.62	50.5	52.2	47.7
M5-03-01	11.16	15.6	35.5	37.2	71.9
M5-03-02	10.88	14.65	32	31.3	68.8
M5-03-03	11.78	16.32	36.8	38.8	67.4
M5-03-04	11.14	15.15	32.5	32.8	67.4
M5-03-05	11.6	15.88	36.5	37.5	67.7
M5-03-06	14.45	19.43	51.1	47.9	50.2
M5-03-07	14.59	20.62	50.5	52.2	47.7
M5-04-01	11.16	15.6	35.5	37.2	71.9
M5-04-02	10.88	14.65	32	31.3	68.8
M5-04-03	11.78	16.32	36.8	38.8	67.4
M5-04-04	11.14	15.15	32.5	32.8	67.4
M5-04-05	11.6	15.88	36.5	37.5	67.7
M5-04-06	14.45	19.43	51.1	47.9	50.2
M5-04-07	14.59	20.62	50.5	52.2	47.7
M5-05-01	11.02	15.87	34.6	38.8	71.9
M5-05-02	10.77	15.08	31.4	33.7	68.8
M5-05-03	10.76	14.83	30.3	31.5	67.4
M5-05-04	11.01	15.55	32	35.3	67.4
M5-05-05	11.47	16.25	35.7	39.7	67.7
M5-05-06	14.45	19.43	51.1	47.9	50.2
M5-05-07	14.59	20.62	50.5	52.2	47.7
M5-06-01	14.91	21.82	59.3	69.9	71.5
M5-06-02	14.42	21.3	56.9	68.2	77
M5-06-03	15.93	23.59	57.6	67.4	48.4
M5-06-04	15.15	22.15	57.1	67.4	61.4

Block Compliance WorkSheet: Middle BlockCont...

Dwelling	DER	TER	DFEE	TFEE	TFA
M5-06-05	15.93	23.64	62.8	75.9	63.1
M5-06-06	18.24	26.43	74.8	84.5	50.4
M5-06-07	18.63	27.32	75.6	86.7	47.7

Calculation Summary

Total Floor Area	16659.52
Average TER	18.12
Average DER	12.81
Average DFEE	43.53
Average TFEE	46.96
Compliance	Pass
% Improvement DER TER	29.3
% Improvement DFEE TFEE	7.3

Appendix C Thermal Bridging Psi values

The email attached from BHOC confirms the Psi values to be applied to the scheme.

Sahans, Darveer

From: Douglas Fearon <Douglas.Fearon@berkeleygroup.co.uk>
Sent: 17 July 2019 16:35
To: Sahans, Darveer
Cc: Nicholas Bliss; Craig McNeil Aitken; Bruce Lawton
Subject: Kenavon Dr. - PSI Values

Darveer,

Following our meeting, please see below for the list of PSI values being used on our Horlicks development for reference.

SAP Reference	Junction detail	Houses	Flats
		Ψ (W/m ² ·K)	
E1	Steel lintel with perforated steel base plate		
E2	Other lintels (including other steel lintels)	0.11	0.33
E3	Sill	0.04	0.03
E4	Jamb	0.04	0.03
E5	Ground floor (normal)	0.02	0.05
E19	Ground floor (inverted)		
E20	Exposed floor (normal)		0.11
E21	Exposed floor (inverted)		
E22	Basement floor		
E6	Intermediate floor within a dwelling	0.00	
E7	Party floor between dwellings (in blocks of flats)		0.05
E8	Balcony within a dwelling, wall insulation continuous		
E9	Balcony between dwellings, wall insulation continuous		
E23	Balcony within or between dwellings, balcony support penetrates wall insulation		0.33
E10	Eaves (insulation at ceiling level)	0.03	
E24	Eaves (insulation at ceiling level - inverted)		0.08
E11	Eaves (insulation at rafter level)	0.01	
E12	Gable (insulation at ceiling level)	0.07	
E13	Gable (insulation at rafter level)	0.04	
E14	Flat roof		
E15	Flat roof with parapet		0.19
E16	Corner (normal)	0.04	0.06
E17	Corner (inverted - internal area greater than external area)	-0.07	
E18	Party wall between dwellings	0.04	0.04
E25	Staggered party wall between dwellings		0.04
P1	Ground floor	0.04	0.05
P6	Ground floor (inverted)		
P2	Intermediate floor within a dwelling	0.00	
P3	Intermediate floor between dwellings (in block of flats)		0.00
P7	Exposed floor (normal)		0.16

P8	Exposed floor (inverted)		
P4	Roof (insulation at ceiling level)		0.08
P5	Roof (insulation at rafter level)	0.08	
R1	Head		
R2	Sill		
R3	Jamb		
R4	Ridge (vaulted ceiling)		
R5	Ridge (inverted)		
R6	Flat ceiling		
R7	Flat ceiling (inverted)		
R8	Roof wall (rafter)		
R9	Roof wall (flat ceiling)		

Many thanks

Douglas Fearon Bsc (Hons) ACIOB
Senior Technical Manager



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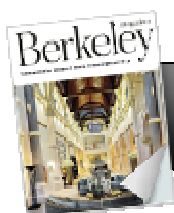
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