Bellway Homes

7819 Duckmoor, Billinghurst

Part O Overheating assessment summary

AES Sustainability Consultants Ltd

Rev 00

January 2025



Part 1 – Building Details and Declarations

1.1 Building and site details	
Residential building name/number	Plots covered 50-59
Street	Wooddale Lane
Town	Duckmoor, Billinghurst
County	West Sussex
Postcode	RH14 9DZ
Proposed building use/type of building	Residential
Are there any security, noise or pollution Issues?	Yes - security & noise issues
1.2 Designers details	
Designer's name	Soorya Tamilarasan
Company	AES Sustainability Consultants
Address line 1	4b Tiverton Way
Address line 2	Tiverton
Postcode	EX16 6TG
Telephone number	01884 242050
Email address	info@aessc.co.uk

Revision	Author	Date	Comment
Rev 00	Soorya Tamilarasan	30.01.2025	Initial issue of Noise constraint Plots
Rev 01			
Rev 02			
Rev 03			

Overheating results summary

Plot-by-plot schedule
Revision: 00
Date: 30.01.2025

Legend - overheating testing method	
	Dynamic assessment by AES
	Simplified assessment by AES
	Group house type approval applies

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							Enhanced ventilation is in addition to Approved Document F minimum rates.									All g-glazing figures noted are to BS EN-410 (glass only)									
																Window specification 1		Window specification 2		French door specification					
Plot Number	House Type Name	Standard/Bespoke/Altered	Acoustic issue	Background ventilation system	Enhanced Mechanical ventilation for overheating (Yes/No)	Testing method	Combined Kitchen/Living ventilation rate (L/s)	Kitchen ventilation rate (L/s)	Living room ventilation rate (L/s)	Bed 1 ventilation rate (L/s)	Bed 2 ventilation rate (L/s)	Bed 3 ventilation rate (L/s)	Bed 4 ventilation rate (L/s)	Bed 5 ventilation rate (L/s)	Study ventilation rate (L/s)	Window 1 U-value (whole window)	Window 1 g-glazing	Window 2 U-value (whole window)	Window 2 g-glazing	French door U-value (whole window)	French door g-glazing	g-glazing applicability (Whole unit/room)	Increase Free Area (Yes/No)	SAP checks complete	Notes
50	The Souter	Standard	Yes	DMEV	Yes	Dynamic assessment by AES				60						1.3	0.71			1.3	0.71	Whole unit	No	✓	Ground Floor Bedroom window closed at night
51	The Glover	Standard	Yes	DMEV	No	Dynamic assessment by AES										1.3	0.71			1.3	0.71	Whole unit	No	✓	
52	The Cartographer	Standard	Yes	DMEV	Yes	Dynamic assessment by AES				50		25				1.3	0.71	1.3	0.6	1.3	0.71	Whole unit	No	✓	Only Kitchen has a reduced G glazing
53	The Cartographer	Standard	Yes	DMEV	Yes	Dynamic assessment by AES				50		25				1.3	0.71	1.3	0.6	1.3	0.71	Whole unit	No	✓	Only Kitchen has a reduced G glazing
54	The Ploughwright	Standard	Yes	DMEV	Yes	Dynamic assessment by AES				55						1.3	0.71			1.3	0.71	Whole unit	No	✓	
55	The Ploughwright	Standard	Yes	DMEV	Yes	Dynamic assessment by AES				55		55				1.3	0.71			1.3	0.71	Whole unit	No	✓	
56	The Baker	Standard	Yes	DMEV	Yes	Dynamic assessment by AES				50						1.3	0.71			1.3	0.71	Whole unit	No	✓	
57	The Cartographer	Standard	Yes	DMEV	Yes	Dynamic assessment by AES				50		25				1.3	0.71	1.3	0.6	1.3	0.71	Whole unit	No	✓	Only Kitchen has a reduced G glazing
58	The Baker	Standard	Yes	DMEV	Yes	Dynamic assessment by AES				50						1.3	0.71			1.3	0.71	Whole unit	No	✓	
59	The Tillman	Standard	Yes	DMEV	Yes	Dynamic assessment by AES				55						1.3	0.71			1.3	0.71	Whole unit	No	✓	

Overheating assessment notes

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Mechanical ventilation
AES have modelled mechanical ventilation as a system which draws air from an external source and provides the ventilation rates noted in the schedule of results.
This does not refer to a specific fan type or system but is a performance requirement to be met by the system designer/ engineer.
"Enhanced mechanical ventilation" refers to ventilation specifically to mitigate overheating risk and is in addition to part F minimum (trickle) ventilation rates.
g-glazing values
All g-glazing figures noted are for the glass only, using the BS EN-410 methodology.
Frame factor
Where g-glazing figures are quoted, this is based on a window frame factor of 30%.
Natural ventilation openings
"Increase free area" in the context of these results refers to making fixed panes openable to increase natural ventilation.
CIBSE TM59 sample size
The Part O dynamic thermal modelling method allows that a sample of homes be assessed instead of testing every single home in a scheme. The final sample of homes is to be approved with the Building Control Body (BCB). It is recommended that this should be agreed early on with the BCB, to avoid late requests for additional modelling and potential design changes.
Cooling systems
No cooling systems modelled.
Tempered air systems
No tempered air systems modelled.
National house type orientation
N/A
M&E system design
N/A
Protection from falling strategy
Guarding is to be introduced to all windows not meeting the minimum requirements for protection from falling.
Accessible windows (Canopies and oriel bay roofs)
Windows above canopies and oriel bay roofs are easily accessible.
Weather file
The assessment uses weather file: London_GTW_DSY1_2020High50
Acoustic assessment
Acoustic constraints apply to the site. The overheating mitigation strategy takes account of the likelihood that windows will be closed during sleeping hours (11pm to 7am).
Other caveats

If construction deviates from the specification above in any way whatsoever, please check with AES Sustainability Consultants immediately to ensure compliance is still achieved. AES Sustainability Consultants cannot be held responsible for non compliance if the specification that the calculation is based upon is not followed.