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BELLWAY HOMES LIMITED (NORTH WEST) AND ANWYL HOMES

LAND OFF GRESFORD ROAD, LLAY, WREXHAM

NOISE ASSESSMENT REPORT

JUNE 2018

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Wardell Armstrong

2 The Avenue, Leigh, Greater Manchester, WN7 1ES, United Kingdom

Telephone: +44 (0)1942 260101 Facsimile: +44 (0)1942 261754 www.wardell-armstrong.com



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NOISE ASSESSMENT REPORT

JUNE 2018

PREPARED BY:

T C Dalton

Environmental Scientist

A handwritten signature in blue ink, appearing to read 'T C Dalton', positioned above a horizontal line.

R Calvert

Principal Acoustic
Consultant (MIOA)

A handwritten signature in blue ink, appearing to read 'R Calvert', positioned above a horizontal line.

APPROVED BY:

Handwritten initials 'MP' in blue ink.

M Walton

Technical Director
(AMIOA)

A handwritten signature in blue ink, appearing to read 'M Walton', positioned above a horizontal line.

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DRAWING

LE14078-001	Noise Monitoring Locations
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LE14078-003	Daytime Ground Floor Facade Map, L_{Aeq}
LE14078-004	Night-time 1st Floor Facade Map, L_{Aeq}
LE14078-005	Night-time 1st Floor Facade Map, $L_{Af,Max}$

1 INTRODUCTION

- 1.1.1 By instruction dated 4th June 2018 from Mr Dean Tomlinson of behalf of Bellway Homes and Anwyl Homes, Wardell Armstrong LLP have prepared a noise assessment report to discharge a planning condition for a residential development on a site on the northern side of Gresford Road, Llay, Wrexham.
- 1.1.2 The proposed development site is located in eastern part of Llay, adjacent to Home Farm and will comprise 362 dwellings, access from Gresford Road and associated infrastructure.
- 1.1.3 To the north, the site is bound by Straight Mile (B5102). To the east, the site is bound by open agricultural land. To the south, the site is bound by Gresford Road (B5373) with existing residential houses. To the west the site is bound by The Crown Restaurant, off the junction connecting Gresford Road (B5373), Straight Mile, Chapel Lane and Rackery Lane with Llay industrial estate beyond. The site is currently open agricultural land.
- 1.1.4 Outline planning permission was granted following appeal (Ref No: APP/H6955/A/16/3147116) and ultimately determined by the First Minister for Wales; the decision notice was issued on 26 June 2017. Condition 18 of the Decision Notice states:
- 18. No development shall commence in any phase with a boundary bordering the Straight Mile until a scheme of noise mitigation for the dwellings in that phase has been submitted to and approved in writing by the local Planning Authority. No dwellings shall be occupied until the approved noise mitigation scheme has been implemented.*
- 1.1.5 This noise assessment report uses the provided planning layout (Ref PLA 03 Rev J) and includes predictions of internal noise levels within proposed habitable rooms, together with external noise levels within proposed outdoor living areas, and provides a subsequent glazing, ventilation and mitigation scheme in order to satisfy Condition 18.
- 1.1.6 This report details the results of the noise survey, assesses the results and includes recommendations for noise mitigation to comply with Condition 18.

2 ASSESSMENT METHODOLOGY

2.1 Noise Survey:

2.1.1 As part of this assessment, Wardell Armstrong LLP has carried out an attended noise survey to assess the current ambient noise levels at specific receptor locations. The methodology of the noise survey is set out in more detail in Section 3 of this report.

2.2 Assessment Methodology Adopted:

2.2.1 To demonstrate compliance with the planning condition, noise from road traffic on Straight Mile will be assessed in accordance with current guidance including:

- The World Health Organisation Guidelines for Community Noise, 1999 (WHO);
- British Standard 8233: 2014 Guidance on sound insulation and noise reduction for buildings (BS8233); and,
- Department of Transport's memorandum, "Calculation of Road Traffic Noise" (CRTN), 1998

2.3 Noise Modelling

2.3.1 Noise modelling using the software SoundPLAN Version 8.0 has been undertaken to accurately determine the propagation of sound across the site, and at building facades.

2.4 Guidance

2.4.1 The WHO Guidelines for Community Noise 1999 suggest guideline values for internal noise exposure which take into consideration the identified health effects and are set, based on the lowest effect levels for general populations. Guideline values for annoyance which relate to external noise exposure are set at 50 or 55 dB(A), representing day time levels below which a majority of the adult population will be protected from becoming moderately or seriously annoyed respectively.

2.4.2 The following guideline values are suggested by WHO:

- 35 dB L_{Aeq} (16 hour) during the day time in noise sensitive rooms
- 30 dB L_{Aeq} (8 hour) during the night time in bedrooms
- 45 dB L_{Amax} (fast) during the night time in bedrooms
- 55 dB L_{Aeq} (16 hour) to protect majority of population from becoming seriously annoyed

- 2.4.3 British Standard 8233 “Guidance on sound insulation and noise reduction for buildings” 2014 bases its advice on the WHO Guidelines. In addition, for internal noise levels it recommends a guideline value of 40dB $L_{Aeq, (16 \text{ hour})}$ for dining areas and also states;

“Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved.”

- 2.4.4 Furthermore, with regard to external noise, the Standard states;

“For traditional external areas that are used for amenity space such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,t}$ with an upper guidance value of 55 dB $L_{Aeq,t}$ which would be acceptable in noisier environments. However, it is also recognised that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.

Guidance on Assessment of Road Traffic Noise

- 2.4.5 The Department of Transport’s memorandum, “Calculation of Road Traffic Noise” (CRTN), 1998 defines a shortened measurement procedure which is used to calculate the $L_{A10,18\text{Hour}}$ noise level from a measured 3-hour period. The method requires the measurement of noise over 3 consecutive hours between 1000 and 1700 hours.
- 2.4.6 From the 3 measured 1 hour periods, the arithmetic average of the three $L_{A10,1\text{Hour}}$ measurements is taken. The $L_{A10,18\text{Hour}}$ noise level is then determined using the following calculation method;
- $L_{A10,18\text{Hour}} = L_{A10,3\text{Hour}} - 1$

2.4.7 The document “Converting the UK traffic noise index $L_{A10,18\text{hour}}$ to EU noise indices for noise mapping” by P G Abbott and P M Nelson (The TRL Method) provides a calculation method to convert the calculated $L_{A10,18\text{Hour}}$ into a daytime 16 hour L_{Aeq} as described below.

- $L_{\text{day}} = 0.95 \times L_{A10,18\text{Hour}} + 1.44\text{dB}$

3 NOISE SURVEY

3.1.1 On Wednesday 19th and Thursday 20th July 2017 Wardell Armstrong LLP carried out a noise survey at two monitoring locations (MLs) (as shown on drawing LE14078-001), which are locations considered representative of the noise sensitive receptors.

3.1.2 The monitoring locations (MLs) are as follows:

- Monitoring Location 1: On the northern boundary of the site, 3m from Straight Mile and 200m from the Junction north west of the site which connects Straight Mile to Gresford Road to the west. This location was selected to best monitor potential noise from road traffic from Straight Mile.
- Monitoring Location 2: On the northern boundary of the site, 3m from Straight Mile and 100m east along the northern boundary from ML1. This location was selected to best monitor potential noise from road traffic at higher speeds on Straight Mile.

3.1.3 Noise monitoring was carried out between;

- 2325 hours on the 19th July and 1300 hours on the 20th July 2017 at Monitoring Location 1;
- 1535 hours on the 19th July and 1301 hours on the 20th July 2017 at Monitoring Location 2; and,
- Attended noise monitoring was carried out at between 2325 hours and 0000 hours on the 19th July and between 0800 hours and 1300 hours on the 20th July 2017.

3.1.4 Noise measurements were made using two Class 1, integrating sound level meters. The meters were mounted vertically on tripods 1.2m above the ground and more than 3.5 metres from any other reflecting surfaces. The sound level meters were calibrated to a reference level of 94dB at 1kHz both before, and on completion of, the noise survey. No drift in calibration over 0.6dB was measured during the survey.

3.1.5 For the purpose of this assessment daytime hours are taken to be 0700 to 2300 hours and night-time hours to be 2300 to 0700 hours.

3.1.6 A-weighted¹ L_{eq}^2 L_{90}^3 noise levels were measured to comply with the requirements of WHO and BS8233. A-weighted and L_{10}^4 noise levels, together with the maximum and minimum sound pressure levels, were also measured to provide additional information. The measured noise levels are set out in full in Appendix A.

3.1.7 Attended noise monitoring allows observations and detailed notes to be made of the significant noise sources which contribute to each of the measured levels. The observations identified the following:

- **Road Traffic Noise:** Road traffic noise from Straight Mile was dominant at all areas of the site with a direct line of sight to the road.
- **Other Sources:** Noise from bird song, livestock and distant aircraft noise was observed to be audible.
- **Noise from commercial premises:** No noise was observed to be dominant from any of the commercial premises.

3.2 Existing Noise Levels

3.2.1 The measured noise levels for monitoring locations 1 and 2 have been divided into daytime (0700-2300 hours) and night-time (2300-0700 hours) categories. The individual levels have been arithmetically averaged to give a single daytime and night-time level for each location at both facades of the building.

3.2.2 The results for each of the monitoring locations are presented in Table 2.

Table 2: Average Daytime and Night-time Noise Levels		
Monitoring Location	Time Period	Average Measured Noise Level (Figures in dB L _{Aeq})
1	Daytime (0700-2300)	68
	Night-time (2300-0700)	62
2	Daytime (0700-2300)	71
	Night-time (2300-0700)	65

3.2.3 The maximum noise levels, measured during each night-time period of the survey, at each of the monitoring locations, are summarised in Table 3.

¹ A' Weighting An electronic filter in a sound level meter which mimics the human ear's response to sounds at different frequencies under defined conditions

² L_{eqs} Equivalent continuous noise level; the steady sound pressure which contains an equivalent quantity of sound energy as the time-varying sound pressure levels.

³ L₉₀ The noise level which is exceeded for 90% of the measurement period.

⁴ L₁₀ The noise level which is exceeded for 10% of the measurement period.

Table 3: Summary of the Maximum Night-time Noise Levels (Figures in dB L _{Amax})	
Monitoring Location	Maximum Measured Noise Level
1	84
2	87

- 3.2.4 Based on the results obtained, a robust assessment can be made of the noise levels at the proposed site, and of the mitigation necessary to achieve acceptable internal and external noise levels for the proposed development to comply with the planning condition.

3.3 Noise at the Location of the Proposed Receptors

- 3.3.1 The measured noise levels at ML2 were found to be higher than measured levels at ML1. ML1 noise levels are likely to be lower, due to vehicles travelling at lower speeds as the monitoring location is closest to the Junction. For the purpose of this assessment, the higher noise levels from Straight Mile measured at ML2 have been used to assess the impact of road traffic noise from Straight Mile on proposed receptors at the site.
- 3.3.2 The proposed roundabout on Straight Mile which will be used for site access is likely to have an impact of the road traffic noise on proposed receptors. The reduction of speed and the close proximity of cars travelling west has been considered within the calculations.

Calculation of Road Traffic Noise

- 3.3.3 As detailed in paragraph 2.4.5 of this report, CRTN defines a method to calculate L_{A10,18Hour} from three consecutive one hour measurements, taken between 1000 and 1700 hours. The assessment is shown below in Table 4;

Table 4: Measured Noise Levels (Figures in dB(A))	
Time	Measured L _{A10}
	ML2
1000 – 1100	69.9
1100 – 1200	69.6
1200 - 1300	69.9
Average L _{A10,3Hour}	69.8
L _{A10,18Hour}	68.8
L _{Aeq,16Hour} Daytime (Calculated in accordance with TRL)	66.8

- 3.3.4 To ensure a robust assessment, the higher measured noise levels of 70.9 dB(A) at ML2 which includes peak traffic times, has been used for the assessment of road traffic noise at proposed receptors closest to Straight Mile.

4 DETAILS OF NOISE MODELLING

- 4.1.1 Noise prediction calculations have been carried out to determine the existing levels of road traffic noise across the development site.
- 4.1.2 Road traffic on the Straight Mile is the dominant source of noise affecting the site. SoundPLAN noise modelling software has been used to calculate the noise levels at the proposed residential areas across the site to determine any necessary mitigation measures.
- 4.1.3 The noise modelling has been checked for accuracy against the measured noise levels. This has been carried out by co-locating a receptor location into the model with the monitoring location. A comparison between the measured noise level, and the modelled level at the monitoring location (ML2) is detailed in Table 5.

Table 5: Comparison of the Modelled and Monitored Noise Levels at Location 1 - (Figures in dB)			
Monitoring Period & Parameter	Monitored Noise Level	Modelled Noise Level	Difference in Noise Level
Daytime LAeq	71	70	-1
Night-time LAeq	65	65	0
Night-time LAf,Max	87	87	0

- 4.1.4 The results of the model calibration in Table 4 generally agree with the measured noise levels. Therefore, the results of the model can be used to accurately inform the noise impact assessment.
- 4.1.5 The proposed layout has been included into the noise modelling software, with calculations undertaken showing the noise levels at each façade of each dwelling, and the propagation of noise across the site, including proposed garden areas.
- 4.1.6 The results of the model are shown in Figures 1 to 4 attached to this report.

5 NOISE IMPACT ASSESSMENT

5.1 Assessment of Daytime Noise Levels in Outdoor Living Areas

- 5.1.1 The model shows that the noise levels in the northern part of the site are greater than the guideline noise level for outdoor living areas at both monitoring locations during the daytime. Therefore, some form of mitigation measures is required for garden areas closest to Straight Mile.

5.2 Assessment of Daytime Noise Levels in Living Rooms and Bedrooms

- 5.2.1 The calculated façade noise levels, shown on Drawing LE14078-003, have been used to determine the mitigation measures which are required for the proposed dwellings, exposed to noise from Straight Mile during the daytime period.

5.3 Assessment of Night-time Noise Levels in Bedrooms

- 5.3.1 The calculated façade noise levels, shown on Drawings LE14078-004, and 005, have been used to determine the mitigation measures which are required for the proposed dwellings, exposed to noise from Straight Mile during the night-time period.

6 NOISE ATTENUATION SCHEME

6.1 Outdoor Living Areas

6.1.1 The housing layout has been designed such that garden areas in the northern part of the site, closest to Straight Mile, are located on the screened side of buildings. The provision of a 1.8m high barrier linking houses and garages will ensure that any garden areas which do have a direct line of sight to Straight Mile will achieve the 55dB $L_{Aeq,16Hour}$ recommended noise guideline level for external garden areas.

6.1.2 Drawing LE14078-002 shows that the calculated noise level in garden areas of all dwellings is 55dB(A) or less, and therefore meets the guideline noise level in BS8233 for external amenity areas.

6.2 Living Room and Bedroom Areas

6.2.1 The internal noise guideline values set out in BS8233 are:

- Living room and bedroom areas during the daytime is 35dB L_{Aeq} ;
- Dining areas during the daytime is 40dB L_{Aeq} ;
- Bedrooms at night is 30 dB L_{Aeq} , and 45dB $L_{Af,Max}$

6.2.2 The noise levels likely at each facade of each property in the vicinity of Straight Mile have been determined, during the daytime and night time periods, as detailed in Sections 3 and 4 of this report. Detailed break in calculations have been undertaken for all noise sensitive rooms for each plot type. The glazing and ventilation required to achieve required guideline values are detailed in Appendix B.

6.2.3 The sound reduction data of the glazing and ventilation specified is detailed in Appendix C.

6.2.4 As an alternative to passive trickle ventilators, Positive Input Ventilation (PIV) can be installed in dwellings where ventilation is required. PIV is a mechanical ventilation system which allows for whole house ventilation by continuously introducing fresh air in to the dwelling via a fan located within the loft space; details are shown in Appendix C.

7 CONCLUSIONS

- 7.1.1 Wardell Armstrong has carried out a noise assessment to accompany an application to discharge Condition 18 of the outline planning permission for residential development on the Land off Gresford Road, Llay, Wrexham. This report demonstrates compliance with Condition 18.
- 7.1.2 A noise survey has been undertaken on the site adjacent to the Straight Mile. This baseline monitoring has been used to prepare a noise model, which has been used to predict the noise at proposed building facades during the daytime and at night-time, and in garden areas during the daytime. This information has been used to design a mitigation scheme for dwellings, to comply with Condition 18
- 7.1.3 The garden areas will be situated on the screened side of dwellings, away from Straight Mile. The noise model shows that together with a 1.8m high close boarded fence linking between dwellings, where necessary noise guideline levels in gardens will be met across the development.
- 7.1.4 Recommended mitigation, comprising specific glazing and ventilation provision for the noise sensitive rooms of each dwelling, is detailed in Appendix B. The mitigation will ensure that noise guideline levels will be met in all sensitive rooms across the development.
- 7.1.5 This report comprises a noise mitigation scheme has been provided to achieve external and internal guideline noise levels, to demonstrate compliance with Condition 18.
- 7.1.6 The mitigation measures must be considered in the context of the wider environmental, economic and social benefits of the proposed development, as are detailed in the Planning Statement that accompanies the planning application.

Appendix A
Noise Monitoring Results

Appendix A

Noise Monitoring Results

ML1– Road Traffic Noise (Unattended) – Approx. 5m from Straight Mile (B5102) and 200m from junction						
Time	L _{Aeq} (dB)	L _A min (dB)	L _A max (dB)	L _{A90} (dB)	L _{A10} (dB)	Comments
19/07/2017 – 20/07/2017 – Night time						
23:30 - 23:45	54.4	34.1	77.8	35.4	52.8	Dominant road traffic noise from Straight Mile (B5102), distant audible noise coming from industrial complex to the west, however not dominant. Aircraft and birdsong occasionally audible.
23:45 - 00:00	56.3	31.6	78.2	33.3	50.8	
00:00 - 00:15	57.9	30.4	80.6	31.8	50.1	
00:15 - 00:30	59.2	31.4	79.4	32.4	52.7	
00:30 - 00:45	51.6	31.2	77.3	32.1	41.7	
00:45 - 01:00	54	31.3	79.9	32.8	43.2	
01:00 - 01:15	48.8	31	74.4	32.3	38.5	
01:15 - 01:30	56.9	31.2	79.8	32.4	44.2	
01:30 - 01:45	48.4	32.6	73.2	34.2	48.5	
01:45 - 02:00	52.8	34.5	78.4	37.3	51.1	
02:00 - 02:15	48.6	34.2	72.8	36.3	46	
02:15 - 02:30	53.5	34.8	75.1	36.4	46.2	
02:30 - 02:45	51	33.9	77.3	36.2	45.3	
02:45 - 03:00	54.3	34.9	80	36.7	48.2	
03:00 - 03:15	57.7	33.5	81	36.1	50.1	
03:15 - 03:30	54.7	33.4	79.5	34.7	41.6	
03:30 - 03:45	49.4	34.3	74	36	46.8	
03:45 - 04:00	54.8	33.3	76.6	35.2	46.2	
04:00 - 04:15	56.1	33.2	79.1	35.5	50.3	
04:15 - 04:30	57.5	33	82.4	35.8	48.4	
04:30 - 04:45	58.6	35.5	81.8	37.1	52	
04:45 - 05:00	60.2	37.3	84	39.8	57.9	
05:00 - 05:15	57.7	36.2	78.1	38.9	55.3	
05:15 - 05:30	62.5	36.3	84.1	39.9	60.3	
05:30 - 05:45	64.1	38.6	82.4	41.3	66.5	
05:45 - 06:00	66.2	37.6	82.4	42	70.1	
06:00 - 06:15	67.4	36.2	82.4	41.5	71.6	
06:15 - 06:30	67.1	39.1	84.4	42.2	71.4	
06:30 - 06:45	69	41.3	83.8	45	74	
06:45 - 07:00	68.7	42.3	82.9	45.9	73.7	
Overall	61.6	30.4	84.4	34	58	

ML1– Road Traffic Noise (Attended) – Approx. 5m from Straight Mile and 200m from junction						
Time	L _{Aeq} (dB)	L _A min (dB)	L _A max (dB)	L _{A90} (dB)	L _{A10} (dB)	Comments
20/07/2017 – Daytime						
07:00-08:00	69.1	41.1	84.6	48.5	74.3	Dominant road traffic noise from Straight Mile (B5102), distant audible noise coming from industrial
08:00-09:00	69.1	43.1	84.2	49.6	74.2	
09:00-10:00	68	39.3	84.7	46.4	72.8	

10:00-11:00	66.7	38.8	82.4	44.1	71.6	complex to the west, however not dominant. Aircraft and birdsong occasionally audible.
11:00-12:00	66.6	39.7	85.3	46.2	71.4	
12:00-13:00	67.2	40.5	83.7	47.7	71.6	
Overall	67.9	38.8	85.3	46.9	72.7	

ML2– Road Traffic Noise (Unattended) – Approx. 5m from Straight Mile and 100m from ML1						
Time	L _{Aeq} (dB)	L _A min (dB)	L _A max (dB)	L _{A90} (dB)	L _{A10} (dB)	Comments
19/07/2017 – 20/07/2017 – Night time						
23:45 - 00:00	59.5	31.4	82.2	33.1	46.5	Dominant road traffic noise from Straight Mile (B5102), distant audible noise coming from industrial complex to the west, however not dominant. Aircraft and birdsong occasionally audible.
00:00 - 00:15	61.1	29.7	83.7	31.2	50.6	
00:15 - 00:30	61.9	30.4	83.5	31.7	53.6	
00:30 - 00:45	55.1	29.3	80.6	30.7	36.2	
00:45 - 01:00	57.6	29.6	83.7	31.5	40.3	
01:00 - 01:15	52.3	30.3	78.7	31.7	37.4	
01:15 - 01:30	60.7	30.3	84.7	32	44.6	
01:30 - 01:45	49.4	31.6	78.1	32.8	39.7	
01:45 - 02:00	54.4	33.5	82.4	35.1	40	
02:00 - 02:15	37.1	32.3	53.8	34.4	38.6	
02:15 - 02:30	55.6	32.8	80.7	34.4	39.6	
02:30 - 02:45	52.8	33.1	80.4	34.5	38.8	
02:45 - 03:00	57.3	34	84.4	35.4	39.5	
03:00 - 03:15	60	33.2	83.1	34.9	46.6	
03:15 - 03:30	58.8	32.1	84.1	33.7	38.8	
03:30 - 03:45	50.7	33	77.4	34.6	38.8	
03:45 - 04:00	58.1	32.6	80.4	33.9	46.8	
04:00 - 04:15	58.9	31.8	82.7	34.4	49.6	
04:15 - 04:30	60.6	32.8	86.1	34.2	48.4	
04:30 - 04:45	61.4	33.5	86.2	35.5	43.6	
04:45 - 05:00	62.4	36.2	86.6	37.9	54.3	
05:00 - 05:15	62	35.3	84.5	37.7	55	
05:15 - 05:30	65.5	36.8	86.7	39	60.6	
05:30 - 05:45	67.6	38.7	86.3	40.5	71.4	
05:45 - 06:00	69	37.2	87.4	40.5	72.1	
06:00 - 06:15	70.6	36.4	85.2	39.5	76.7	
06:15 - 06:30	69.6	38.3	86.4	40.5	74.8	
06:30 - 06:45	71	40.2	86.6	43.6	76.6	
06:45 - 07:00	71.7	41	86.9	44.7	77	
Overall	64.5	29.3	87.4	33.2	58.5	

ML2– Road Traffic Noise (Attended) – Approx. 5m from Straight Mile and 100m from ML1						
Time	L_{Aeq} (dB)	L_A min (dB)	L_A max (dB)	L_{A90} (dB)	L_{A10} (dB)	Comments
20/07/2017 – Daytime						
07:00-08:00	72.1	42.3	87.2	48.6	77.5	Dominant road traffic noise from Straight Mile (B5102), distant audible noise coming from industrial complex to the west, however not dominant. Aircraft and birdsong occasionally audible.
08:00-09:00	71.9	42.9	87.8	48.9	77.1	
09:00-10:00	71	39.7	87.9	45.8	76.1	
10:00-11:00	69.9	37	87.7	42.8	75.1	
11:00-12:00	69.6	39.7	86.8	44.5	74.8	
12:00-13:00	69.9	39.3	87.8	45.2	75.0	
Overall	70.9	37.0	86.1	45.6	76.1	

Appendix B
Glazing and Ventilation Requirements

Plot Number	House Type	Room	Glazing and Ventilation Requirements (PIV may be used in place of passive window frame vents)
1	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	10/12/6 PIV None 10/12/6 PIV 10/12/6 PIV 4/12/4 & PIV 4/12/4 & PIV
2	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None 4/12/4 & PIV 4/12/4 & PIV 10/12/6 PIV 10/12/6 PIV 4/12/4 & PIV 4/12/4 & PIV
3	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV 10/12/6 PIV 4/12/4 & PIV 4/12/4 & PIV
4	LEWIS	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4 Bedroom 5	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
5	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
6	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
7	OAKWOOD	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
8	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
9	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & PIV None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
10	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & PIV None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV

		Bedroom 4	4/12/4 & PIV
11	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
12	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & PIV None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
13	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	10.8/16/6 & PIV 4/12/4 & PIV 10/12/6 PIV 10.8/16/6 & PIV 10.8/16/6 & PIV
14	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10/12/6 PIV 10/12/6 PIV
15	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10/12/6 PIV 10/12/6 PIV
16	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV
17	SHELLEY	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
18	STUDLEY	Kitchen/Dining Lounge Bedroom 1 Bedroom 2	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
19	STUDLEY	Kitchen/Dining Lounge Bedroom 1 Bedroom 2	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
20	STUDLEY	Kitchen/Dining Lounge Bedroom 1 Bedroom 2	None 4/12/4 & PIV 10/12/6 PIV 4/12/4 & PIV
21	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10/12/6 PIV 10.8/16/6 & PIV
22	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10/12/6 PIV 10/12/6 PIV

23	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10/12/6 PIV 10/12/6 PIV
24	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10/12/6 PIV 10/12/6 PIV
25	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10.8/16/6 & PIV 10/12/6 PIV 10/12/6 PIV
26	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & PIV 10/12/6 PIV 10.8/16/6 & PIV 10/12/6 PIV 10.8/16/6 & PIV
27	STUDLEY	Kitchen/Dining Lounge Bedroom 1 Bedroom 2	None 10/12/6 PIV 10/12/6 PIV 4/12/4 & PIV
28	SHELLEY	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 10/12/6 PIV 4/12/4 & PIV 10/12/6 PIV 10/12/6 PIV
29	SHELLEY	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 10/12/6 PIV 10/12/6 PIV 10/12/6 PIV 10/12/6 PIV
30	STUDLEY	Kitchen/Dining Lounge Bedroom 1 Bedroom 2	None 10/12/6 PIV 10/12/6 PIV 4/12/4 & PIV
31	STUDLEY	Kitchen/Dining Lounge Bedroom 1 Bedroom 2	None 10/12/6 PIV 10/12/6 PIV 4/12/4 & PIV
32	STUDLEY	Kitchen/Dining Lounge Bedroom 1 Bedroom 2	None 10/12/6 PIV 10/12/6 PIV 4/12/4 & PIV
33	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV 10/12/6 PIV 4/12/4 & PIV 4/12/4 & PIV
34	OAKWOOD	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None 4/12/4 & PIV 10/12/6 PIV 10/12/6 PIV 4/12/4 & PIV 4/12/4 & PIV
35	OAKWOOD	Kitchen/Dining Lounge	None 4/12/4 & PIV

		Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
36	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV None None
37	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
38	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
39	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & XS13 4400 4/12/4 & XS13 4400 None None
40	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
41	WISTASTON	Lounge/Kitchen Bedroom 1	4/12/4 & XS13 4400 None
42	WISTASTON	Lounge/Kitchen Bedroom 1	4/12/4 & XS13 4400 None
43	WISTASTON	Lounge/Kitchen Bedroom 1	4/12/4 & XS13 4400 None
44	WISTASTON	Lounge/Kitchen Bedroom 1	4/12/4 & XS13 4400 None
45	CHATSWORTH	Lounge Kitchen Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & PIV None None 4/12/4 & PIV 4/12/4 & PIV
46	HAMPTON	Kitchen Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None 4/12/4 & XS13 4400 None None
47	GREENWICH	Kitchen/Dining Lounge Bedroom 1 Bedroom 2	None 4/12/4 & XS13 4400 None 4/12/4 & XS13 4400
48	CHATSWORTH	Lounge Kitchen Bedroom 1 Bedroom 2 Bedroom 3	None None None 4/12/4 & XS13 4400 4/12/4 & XS13 4400
49	CHATSWORTH	Lounge Kitchen Bedroom 1 Bedroom 2 Bedroom 3	None None None 4/12/4 & XS13 4400 4/12/4 & XS13 4400

50	CHATSWORTH	Lounge Kitchen Bedroom 1 Bedroom 2 Bedroom 3	None None None 4/12/4 & XS13 4400 4/12/4 & XS13 4400
51	CHATSWORTH	Lounge Kitchen Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
52	GREENWICH	Kitchen/Dining Lounge Bedroom 1 Bedroom 2	None None None None
53	HAMPTON	Kitchen Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
54	CHATSWORTH	Lounge Kitchen Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
55	WISTASTON	Lounge/Kitchen Bedroom 1	None None
56	WISTASTON	Lounge/Kitchen Bedroom 1	None None
57	WISTASTON	Lounge/Kitchen Bedroom 1	None None
58	WISTASTON	Lounge/Kitchen Bedroom 1	None None
59	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
60	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
61	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
62	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
63	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
64	LANSDOWN	Lounge Kitchen/Dining	None None

		Bedroom 1 Bedroom 2 Bedroom 3	None None None
65	LANSDOWN	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
66	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
67	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
68	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
69	SHELLEY	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & XS13 4400 None None 4/12/4 & XS13 4400
70	BYRON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & XS13 4400 4/12/4 & XS13 4400 None None
71	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & XS13 4400 4/12/4 & XS13 4400 None None
72	LANSDOWN	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & PIV None 4/12/4 & PIV 4/12/4 & PIV None
73	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & XS13 4400 None 4/12/4 & XS13 4400 4/12/4 & XS13 4400 None None
74	OAKWOOD	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV None None
75	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV 4/12/4 & PIV 10/12/6 PIV 10/12/6 PIV None

		Bedroom 4	None
76	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None 4/12/4 & PIV 4/12/4 & PIV 10/12/6 PIV 10/12/6 PIV 4/12/4 & PIV 4/12/4 & PIV
77	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & PIV None 10/12/6 PIV 10/12/6 PIV 4/12/4 & PIV 4/12/4 & PIV
78	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & XS13 4400 4/12/4 & XS13 4400 None None
79	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & XS13 4400 None 4/12/4 & XS13 4400 None
80	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & XS13 4400 4/12/4 & XS13 4400 None None
81	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & XS13 4400 4/12/4 & XS13 4400 None None
82	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & XS13 4400 4/12/4 & XS13 4400 None None
83	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None 4/12/4 & XS13 4400 4/12/4 & XS13 4400 None None
84	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
85	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
86	COVENTRY	Lounge Kitchen Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None None
87	COVENTRY	Lounge	None

		Kitchen Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
88	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
89	LANSDOWN	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
90	OAKWOOD	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
91	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
92	WISTASTON	Lounge/Kitchen Bedroom 1	None None
93	WISTASTON	Lounge/Kitchen Bedroom 1	None None
94	WISTASTON	Lounge/Kitchen Bedroom 1	None None
95	WISTASTON	Lounge/Kitchen Bedroom 1	None None
96	WISTASTON	Lounge/Kitchen Bedroom 1	None None
97	WISTASTON	Lounge/Kitchen Bedroom 1	None None
98	WISTASTON	Lounge/Kitchen Bedroom 1	None None
99	WISTASTON	Lounge/Kitchen Bedroom 1	None None
100	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV None 4/12/4 & PIV 4/12/4 & PIV
101	GORDON ALT B	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV 4/12/4 & PIV
102	STUDLEY	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	4/12/4 & XS13 4400 None 4/12/4 & XS13 4400 None
103	STUDLEY OPP	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	4/12/4 & XS13 4400 None 4/12/4 & XS13 4400 None
104	STUDLEY	Lounge Kitchen/ Dining Bedroom 1	4/12/4 & XS13 4400 None 4/12/4 & XS13 4400

		Bedroom 2	None
105	STUDLEY OPP	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	4/12/4 & XS13 4400 None 4/12/4 & XS13 4400 None
106	Monmouth	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450
107	Monmouth	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
108	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 None
109	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & XS13 4400 None 4/12/4 & XS13 4400 4/12/4 & XS13 4400 None None
110	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
111	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
112	WESTON/EASTON OPP	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
113	GORDON ALT B	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
114	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
115	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
116	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None

117	Kinnerton	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
118	Kinnerton	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None 4/12/4 & dB450 None
119	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None 4/12/4 & dB450 None 4/12/4 & dB450
120	Delemare	Family/Dining/Kitchen Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None 4/12/4 & dB450 None None 4/12/4 & dB450 4/12/4 & dB450
121	Kingsley	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
122	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 None
123	Kingsley	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None None None None None
124	Caernarfon	Living Room Study Kitchen/Breakfast Dining Master Bedroom Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None None
125	Caernarfon	Living Room Study Kitchen/Breakfast Dining Master Bedroom Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None None
126	Porthmadog	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
127	Ascott	Lounge Kitchen/ Dining	None None

		Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None
128	Porthmadog	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
129	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
130	Porthmadog	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
131	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
132	Meliden	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
133	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
134	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
135	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
136	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
137	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
138	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
139	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
140	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
141	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
142	Cardigan	Living Room Kitchen/Dining	None None

		Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None
143	Glyn	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
144	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
145	Glyn	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
146	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
147	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
148	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
149	Carmarthen	Lounge/Dining Bedroom 1 Bedroom 2	None None None
150	Meliden	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
151	Glyn	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
152	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
153	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
154	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
155	LARCH	Kitchen/Dining Lounge	None None

		Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None
156	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
157	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
158	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
159	GORDON ALT B	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
160	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
161	OAKWOOD	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
162	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
163	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
164	Kingsley	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
165	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None

		Bedroom 4	None
166	Delemare	Family/Dining/Kitchen Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
167	Kingsley	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
168	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
169	GORDON ALT B	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
170	OAKWOOD	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
171	OAKWOOD	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
172	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
173	GORDON ALT B	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
174	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
175	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
176	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2	None None None None None

		Bedroom 3 Bedroom 4	None None
177	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
178	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
179	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
180	GORDON ALT B	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
181	GORDON ALT B	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
182	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
183	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
184	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
185	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
186	OAKWOOD	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
187	OAKWOOD	Kitchen/Dining	None

		Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None
188	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
189	OAKWOOD	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
190	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
191	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
192	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
193	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
194	GORDON ALT B	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
195	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
196	GORDON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
197	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2	None None None None

		Bedroom 3 Bedroom 4	None None
198	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
199	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
200	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
201	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
202	FAIRHAVEN	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
203	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
204	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
205	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
206	LANSDOWN	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
207	OAKWOOD	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
208	GORDON ALT	Kitchen/Dining Lounge Bedroom 1	None None None

		Bedroom 2 Bedroom 3	None None
209	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
210	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
211	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
212	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
213	STUDLEY	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	None None None None
214	STUDLEY	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	None None None None
215	STUDLEY	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	None None None None
216	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
217	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
218	LARCH	Kitchen/Dining Lounge Family Room Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None None
219	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
220	GORDON ALT	Kitchen/Dining Lounge Bedroom 1	None None None

		Bedroom 2 Bedroom 3	None None
221	OAKWOOD	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
222	OAKWOOD	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
223	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
224	OAKWOOD	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
225	LANSDOWN	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
226	OAKWOOD	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
227	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
228	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
229	WESTON/EASTON	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
230	GORDON ALT	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
231	Monmouth	Lounge Kitchen Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
232	Monmouth	Lounge Kitchen	None None

		Bedroom 1 Bedroom 2 Bedroom 3	None None None
233	Monmouth	Lounge Kitchen Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
234	Chester	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
235	Elwy	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	None None None None
236	Elwy	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	None None None None
237	Elwy	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	None None None None
238	Kings	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
239	Delamere	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
240	Meliden	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
241	Cardigan	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
242	Kings	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
243	Meliden	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
244	Pulford	Lounge Kitchen/ Dining	None None

		Bedroom 1 Bedroom 2 Bedroom 3	None None None
245	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
246	Carmarthen	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	None None None None
247	Carmarthen	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	None None None None
248	Carmarthen	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	None None None None
249	Monmouth	Lounge Kitchen Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
250	Monmouth	Lounge Kitchen Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
251	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
252	Kings	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
253	Carmarthen	Lounge Kitchen Bedroom 1 Bedroom 2	None None None None
254	Carmarthen	Lounge Kitchen Bedroom 1 Bedroom 2	None None None None
255-266	Apartments	Lounge Kitchen Bedroom 1	4/12/4 & dB450 None 4/12/4 & dB450
267	Carmarthen	Lounge Kitchen Bedroom 1 Bedroom 2	None None None None
268	Carmarthen	Lounge Kitchen Bedroom 1 Bedroom 2	4/12/4 & dB450 None None 4/12/4 & dB450
269	Snowdon	Lounge/Dining Bedroom 1 Bedroom 2	4/12/4 & dB450 None 4/12/4 & dB450

		Bedroom 3	None
270	Snowdon	Lounge/Dining Bedroom 1 Bedroom 2 Bedroom 3	None None 4/12/4 & dB450 None
271	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None 4/12/4 & dB450 None 4/12/4 & dB450
272	Tenby	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None None 4/12/4 & dB450 None
273	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None None 4/12/4 & dB450 None
274	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 None None
275	Meliden	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
276	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None 4/12/4 & dB450 None 4/12/4 & dB450
277	Kinnerton	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None 4/12/4 & dB450 None 4/12/4 & dB450
278	Kinnerton	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None 4/12/4 & dB450 None 4/12/4 & dB450
279	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 4/12/4 & dB450 None 4/12/4 & dB450 None
280	Glyn	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 None None
281	Cardigan	Living Room Kitchen/Dining	None None

		Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None 4/12/4 & dB450 None 4/12/4 & dB450
282	Caernarfon	Living Room Study Kitchen/Breakfast Dining Master Bedroom Bedroom 2 Bedroom 3 Bedroom 4	None None None None 4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450
283	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None 4/12/4 & dB450 4/12/4 & dB450 None None
284	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
285	Snowdon	Lounge/Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None 4/12/4 & dB450
286	Snowdon	Lounge/Dining Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & dB450 None 4/12/4 & dB450
287	Camarthan	Lounge/Dining Bedroom 1 Bedroom 2	None None 4/12/4 & dB450
288	Camarthan	Lounge/Dining Bedroom 1 Bedroom 2	None None 4/12/4 & dB450
289	Camarthan	Lounge/Dining Bedroom 1 Bedroom 2	None None 4/12/4 & dB450
290	Camarthan	Lounge/Dining Bedroom 1 Bedroom 2	None None 4/12/4 & dB450
291	Yeovil F1	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	None None 4/12/4 & dB450 None None
292	Yeovil F2	Lounge Kitchen/Dining Bedroom 1	4/12/4 & dB450 None 4/12/4 & dB450
293	Kinnerton	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
294	Kinnerton	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
295	Snowdon	Lounge/Dining Bedroom 1	4/12/4 & dB450 4/12/4 & dB450

		Bedroom 2 Bedroom 3	10/12/6 & dB800 4/12/4 & dB450
296	Snowdon	Lounge/Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 4/12/4 & dB450 10/12/6 & dB800 4/12/4 & dB450
297	Porthmadog	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & dB450 10/12/6 & dB800 4/12/4 & dB450 10/12/6 & dB800
298	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 10/12/6 & dB800 4/12/4 & dB450 10/12/6 & dB800 4/12/4 & dB450
299	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	10/12/6 & dB800 10/12/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800
300	Porthmadog	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	10/12/6 & dB800 4/12/4 & dB450 10/12/6 & dB800 10.8/16/6 & dB800 10.8/16/6 & dB800
301	Porthmadog	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	10/12/6 & dB800 4/12/4 & dB450 10.8/16/6 & dB800 10.8/16/6 & dB800 10.8/16/6 & dB800
302	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	10.8/16/6 & dB800 4/12/4 & dB450 10.8/16/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800
303	Kinnerton	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	10.8/16/6 & dB800 4/12/4 & dB450 10.8/16/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800
304	Kinnerton	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	10.8/16/6 & dB800 4/12/4 & dB450 10.8/16/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800
305	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	10.8/16/6 & dB800 4/12/4 & dB450 10.8/16/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800
306	Elwy	Lounge Bedroom 1 Bedroom 2	10/12/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800
307	Elwy	Lounge Bedroom 1 Bedroom 2	10/12/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800
308	Ascott	Lounge Kitchen/ Dining	10.8/16/6 & dB800 4/12/4 & dB450

		Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	10.8/16/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800
309	Tenby	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	10.8/16/6 & dB800 4/12/4 & dB450 10/12/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800
310	Tenby	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	10.8/16/6 & dB800 4/12/4 & dB450 10/12/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800
311	Porthmadog	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 10.8/16/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800 10/12/6 & dB800
312	Kinnerton	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	10.8/16/6 & dB800 4/12/4 & dB450 10/12/6 & dB800 10.8/16/6 & dB800 10.8/16/6 & dB800
313	Kinnerton	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3	10/12/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800 10/12/6 & dB800
314	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	10/12/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800 10/12/6 & dB800
315	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	10/12/6 & dB800 None 4/12/4 & dB450 10/12/6 & dB800 10/12/6 & dB800 4/12/4 & dB450
316	Tenby	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
317	Tenby	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
318	Tenby	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
319	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
320	Cardigan	Living Room Kitchen/Dining	None None

		Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
321	Kings	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
322	Kings	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
323	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
324	Porthmadog	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
325	Glyn	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
326	Kings	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
327	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	10/12/6 & dB800 None 10/12/6 & dB800 10/12/6 & dB800 10/12/6 & dB800 4/12/4 & dB450
328	Porthmadog	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None 10/12/6 & dB800 10/12/6 & dB800 10/12/6 & dB800 10/12/6 & dB800
329	Kings	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	10.8/16/6 & dB800 4/12/4 & dB450 10.8/16/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800
330	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	10/12/6 & dB800 4/12/4 & dB450 10.8/16/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800
331	Delemare	Family/Dining/Kitchen Lounge	4/12/4 & dB450 10.8/16/6 & dB800

		Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	10.8/16/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800 10/12/6 & dB800
332	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	10/12/6 & dB800 4/12/4 & dB450 10/12/6 & dB800 10.8/16/6 & dB800 10/12/6 & dB800 10.8/16/6 & dB800
333	Meliden	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	10.8/16/6 & dB800 4/12/4 & dB450 10/12/6 & dB800 10.8/16/6 & dB800 10.8/16/6 & dB800 10.8/16/6 & dB800
334	Delemare	Family/Dining/Kitchen Lounge Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 10/12/6 & dB800 10/12/6 & dB800 10/12/6 & dB800 10/12/6 & dB800 4/12/4 & dB450
335	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 10/12/6 & dB800 4/12/4 & dB450 4/12/4 & dB450 10/12/6 & dB800
336	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
337	Caernarfon	Living Room Study Kitchen/Breakfast Dining Master Bedroom Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 4/12/4 & dB450 None None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
338	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None None 4/12/4 & dB450 4/12/4 & dB450
339	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None 4/12/4 & dB450 None 4/12/4 & dB450
340	Glyn	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None 4/12/4 & dB450 4/12/4 & dB450
341	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2	None None None 4/12/4 & dB450

		Bedroom 3 Bedroom 4	None 4/12/4 & dB450
342	Meliden	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 None
343	Tenby	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
344	Tenby	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
345	Glyn	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
346	Glyn	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 10/12/6 & dB800 10/12/6 & dB800 4/12/4 & dB450 4/12/4 & dB450
347	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None 10/12/6 & dB800 4/12/4 & dB450 10/12/6 & dB800 10/12/6 & dB800
348	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	4/12/4 & dB450 None None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
349	Chester	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None 4/12/4 & dB450 4/12/4 & dB450 None
350	Chester	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
351	Tenby	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
352	Bretton	Kitchen/Dining Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None None
353	Bretton	Kitchen/Dining	None

		Lounge Bedroom 1 Bedroom 2 Bedroom 3	None None None None
354	Kings	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
355	Meliden	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
356	Cardigan	Living Room Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
357	Meliden	Lounge Kitchen/Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None None None None None
358	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None 4/12/4 & dB450 None 4/12/4 & dB450 None
359	Glyn	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None 4/12/4 & dB450 4/12/4 & dB450 None None
360	Ascott	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3 Bedroom 4	None None 4/12/4 & dB450 None 4/12/4 & dB450 None
361	Tenby	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	None None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450
362	Pulford	Lounge Kitchen/ Dining Bedroom 1 Bedroom 2 Bedroom 3	4/12/4 & dB450 None 4/12/4 & dB450 4/12/4 & dB450 4/12/4 & dB450

Appendix C
Glazing and Ventilation Specifications

Glazing Sound Reduction Data

Glazing	Octave Band								
	31.5	63	125	250	500	1000	2000	4000	8000
4/12/4	12	18	24	20	25	23	29	35	35

Glazing	Octave Band								
	31.5	63	125	250	500	1000	2000	4000	8000
10/12/6	14	20	26	27	34	40	38	46	46

Glazing	Octave Band								
	31.5	63	125	250	500	1000	2000	4000	8000
10.8/16/6	20	25	25	28	38	45	44	56	56

Ventilation Sound Reduction Data

Ventilation	Octave Band								
	31.5	63	125	250	500	1000	2000	4000	8000
Passivent TVALdB 450 (2500equiv free) Window frame vent	29.5	35.5	44.7	42.2	36.2	40.1	42.5	52.8	52.8

(Or alternative manufacturer to provide same or better specification)

Ventilation	Octave Band								
	31.5	63	125	250	500	1000	2000	4000	8000
Passivent TVALdB 800 (2012equiv free) Window frame vent	28.3	34.3	46.0	43.8	37.9	43.4	43.4	49.5	49.5

(Or alternative manufacturer to provide same or better specification)

Ventilation	Octave Band								
	31.5	63	125	250	500	1000	2000	4000	8000
Titan XS13 4400EA Vent Screw Fix	25.5	31.5	32.0	36.5	37.1	36.4	36.1	34.8	40.1

(Or alternative manufacturer to provide same or better specification)

PIV - How It Works



3) The air is then passed through the filters, and is gently fed into the dwelling via a central hallway diffuser

2) The warm air then rises to the highest point, gaining heat energy giving you the benefit of some heat recovery

1) Clean, fresh air is continuously drawn in to the loft space through the loft's natural leakage points



4) The air then gently pressurises the house from inside out, driving out the moisture and condensation

5) This process creates a clean, healthy environment to live in as fresh air replaces the stale air

Dilute – Displace – Replace

DRIMASTER - POSITIVE INPUT VENTILATION (PIV)

LOW COST WHOLE HOUSE VENTILATION THAT MEETS BUILDING REGULATIONS, SAVES ENERGY AND PREVENTS CONDENSATION.



BENEFITS

EXTREMELY LOW POWER CONSUMPTION

Average approximately 0.16 watts / litre / second and solar gains up to 550kW / hr / year.

EASY INSTALLATION & VERY LOW MAINTENANCE REQUIREMENT

Filter clean or replacement every 5 years.

SIGNIFICANTLY IMPROVES INDOOR AIR QUALITY

Using positive input ventilation removes indoor air pollutants such as carbon monoxide and keeps out traffic fumes, pollen and outdoor pollutants.

COMPLIES WITH THE BUILDING REGULATION VENTILATION REQUIREMENTS

Meets Part F&L England and Wales and contributes towards 'conservation of fuel and power'. (Please refer to BBA Certificate).

RADON GAS CONTROL

Helps reduce and maintain radon gas levels.

CREATES A HEALTHIER LIVING ENVIRONMENT

High efficiency G4 filters removes up to 95% dust particles.

FIT & FORGET OPERATION

Fully automatic when airflow set on installation.

FIRE DAMPER AND DIFFUSER FOR 3-STOREY ACCOMMODATION AVAILABLE

The diffuser is manufactured from aluminium and powder coated to an off white finish (RAL 9003). Product code Drimaster-3S.

SYSTEM STANDBY MODE

For summer months when loft temperature exceeds 23°C.

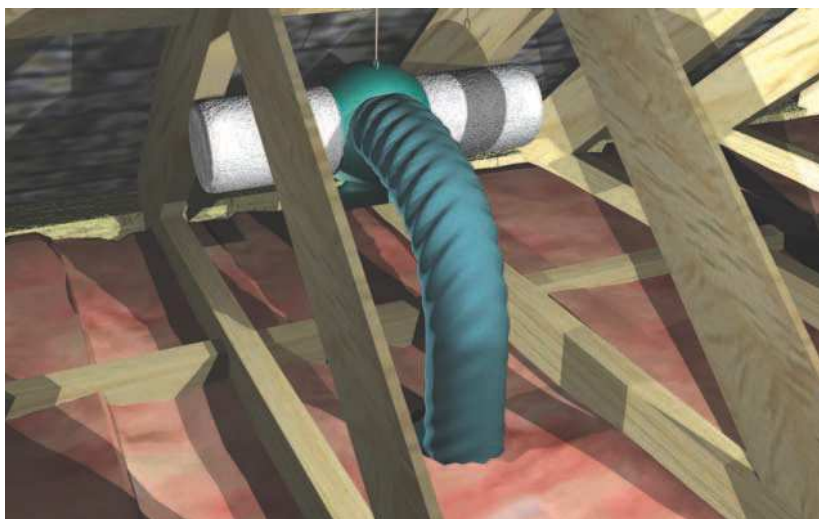
HEALTH

Clinically proven to help allergy and asthma sufferers.

WARRANTY

5 year warranty for peace of mind.

TYPICAL INSTALLATION



Ceiling diffuser.



DRIMASTER

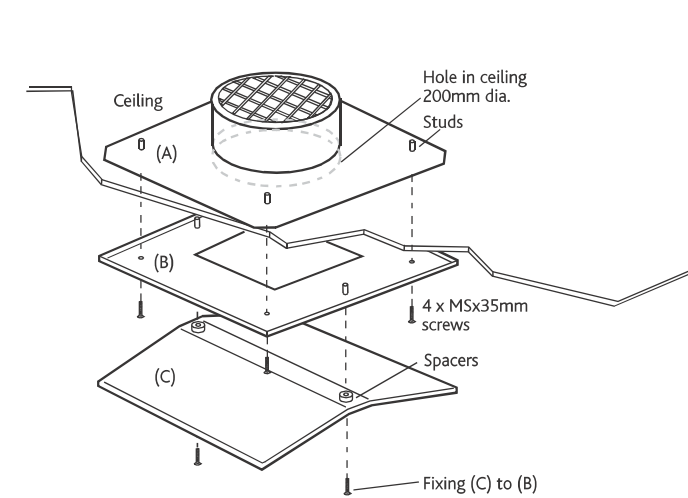
The Drimaster provides whole home ventilation using the Positive Input Ventilation principle. Essentially the concept is to introduce fresh, filtered air into the dwelling at a continuous rate, encouraging movement of air from inside to outside. To achieve this, the unit is mounted in the loft space, drawing air through the filters and inputting it, at ceiling level, into the property.

The Drimaster units are fitted with an internal temperature sensor. This sensor continuously monitors the temperature in the loft, boosting the air volume when the loft temperature is above a set level (heat recovery mode).

If the loft temperature becomes excessive the unit will switch to standby mode (no airflow). Once installed, the airflow can be set to suit the house size and, if required, the way it responds to the temperature changes within.

AIR DIFFUSER WITH FIRE DAMPER

For use in stairwells of three storey properties, the optional powder-coated aluminium diffuser with 'Fireblock' provides 1 hour of fire resistance in accordance with BS476 Part 20 and ISO834.

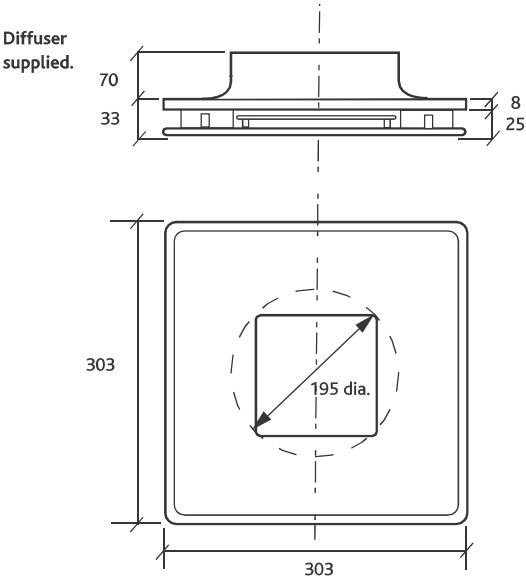


WIRING

The unit is supplied with a pre-wired power supply. This power supply unit has a metal bracket incorporating fixing holes, which should be used to fit the power supply to a suitable surface e.g. a wooden joist. The fan unit is also supplied with a fused spur. The 3 core mains cable from the power supply should be connected to a fixed wiring installation, via the isolator, via the spur, in accordance with current IEE wiring regulations.

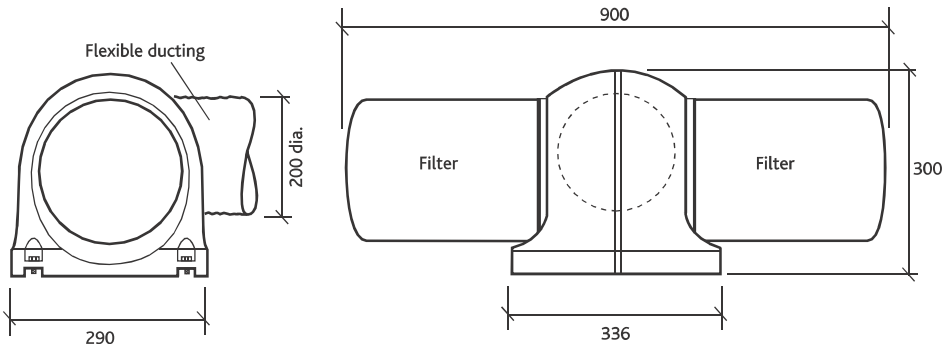
Electrical details:-

- Voltage: 240V 1ph 50Hz
- Consumption: 1.6W(min) 15.3W(max)
- Fuse size: 1 Amp



DIMENSIONS (MM) & WEIGHT DRIMASTER UNIT

Weight: 5.7kg



CONSULTANTS SPECIFICATION

FAN DESCRIPTION

Low energy positive input ventilation unit – for use in homes with a loft.

The unit shall be robustly constructed from flame retardant VO rated ABS polymer and the casing shall be of spherical pattern with a flat mounting base.

Flame retardant filters of G4 grade, surface area approx 0.47m² (with 5 year typical maintenance period) shall be fitted, which may be removed from the unit without the use of tools. The filters shall be arranged such as to prevent their obstruction in the loft space.

The unit shall incorporate a forward curved centrifugal impeller and high efficiency brushless DC motor fitted with sealed for life, self lubricating bearings and locked rotor protection. The unit's average power consumption shall be 0.16 watts per l/s of airflow.

The unit shall be supplied with a length of flexible ducting, and all necessary connectors and fixings.

The unit shall weigh less than 6kg and we recommend that the unit is suspended from the roof structure.

The unit shall be supplied with a purpose designed flame retardant polymer diffuser for efficient, directable air input. The diffuser design shall be optimised for use in areas where smoke detectors are fitted. The unit shall include 5 programmable temperature control strategies, 6 volume control settings and an optional high duty boost setting providing an airflow rate of 70l/s for optimum performance and occupant comfort.

The units "Fixed Temperature Heat Recovery" strategy shall be achieved via a sensor located in the unit and shall improve energy performance accordingly. An internal monitor shall record the unit's operational time.

The unit shall be offered with a 5 year warranty.

For information on reducing radon egress, it is suggested that the details given in Positive pressurisation: a guide to radon remedial measures in existing dwellings may be considered.

Installation and Maintenance

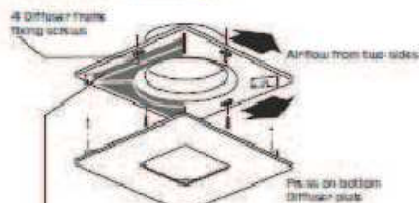
DRIMASTER/DRIMASTER 35 Anti-Condensation & Whole House Ventilation

Note: SMOKE ALARMS

It is also important to ensure that the diffuser is NOT placed within 1 metre of a smoke alarm.

If the diffuser cannot be re-positioned, two sides of the diffuser must be closed off using the foam strips supplied to encourage the air through the remaining open sides that face at least 1.5 metres of unobstructed area away from the smoke alarm sensor.

Figure 3. Fitting the 2 foam strips.



2 Foam strips (supplied) fit on any of the diffuser plates to guide airflow away from a smoke detector and/or obstructions as required.

3.0 Fitting the Diffuser

3.1 Plastic Type

Cut a circular hole 225mm diameter in the ceiling between two convenient joists. Position the diffuser frame and secure it to the underside of the ceiling with the 1 1/2" x 8 sch. hd. screws and plugs provided.

Attach the diffuser plate to the frame using the four built in press on clips provided.

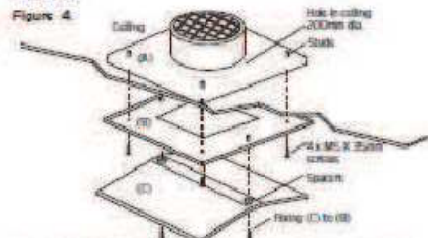
Foam strips should also be used as required when this method of installing the diffuser is used.

3.2 Painted aluminium type c/w Intumescent fireblock

Cut a 200mm hole in ceiling and align the top portion of unit (A) above the ceiling over the hole.

Position the control ceiling plate (B) on the ceiling in the room ensuring the central hole is aligned with the hole in the ceiling. Use the 4 MS X 35mm screws to fix (B) to (A) through the 4 studs positioned on the upper side of (B).

Screw bottom part of the unit (C) to the ceiling plate (B) through the plastic spacers and into the 2 studs positioned on the upper side of (A).



Note: Due to the higher air resistance of the fireblock, the speed of the unit should be increased by one increment for the particular property (see 19.0 speed setting).

4.0 Fitting the filters to the unit

The filter has a push fit rim to attach itself to the main body of the unit.

Offer the filters up to the unit and apply a small amount of pressure to the filters rim (by hand). The filter will clip into place.

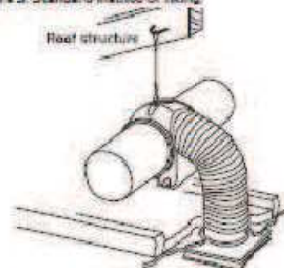
The unit can then be attached to the roof via the chain (or fixed to the floor joists using the optional anti vibration mounting kit).

5.0 Fitting the Drimaster Unit

The standard method of installation is suspended from a convenient roof beam via the cord/chain supplied.

(Note: unit weight = 3.2 kg).

Figure 5. Standard method of fixing.



The method of locating the wire to the roof timber is the responsibility of the installer.

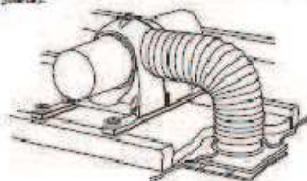
The flexible ducting fitted to the fan unit is connected to the outlet diffuser spigot by securing the end over the spigot using the tie band supplied. Ensures all duct joints are air tight.

6.0 Optional AV mounting

The AV kit contains all the parts necessary to complete a joint mounted installation. If this option is required the kit can be purchased direct from Nuair using the following code number: 771993.

Lower the unit with the battens attached onto the joists (see Figure 6). Mark and drill the 12mm dia. clearance holes required in the ends of the battens (not supplied). Figure 7 shows a sectional view of the fixing.

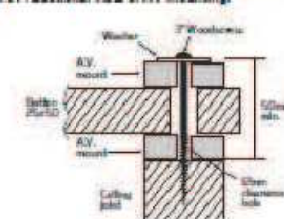
Figure 6. Optional method of fixing (AV mounting kit onto roof joists).



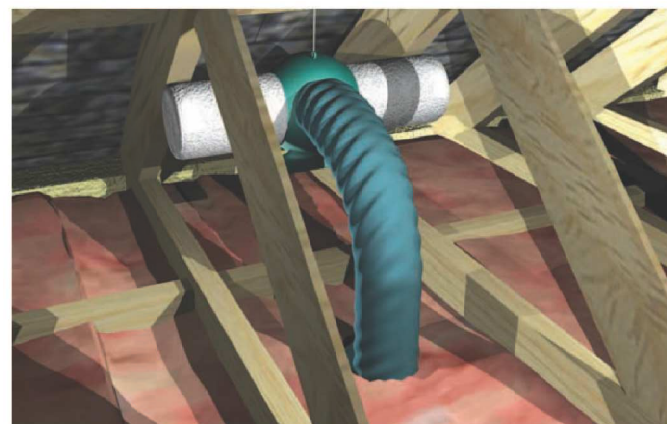
Place anti-vibration mounts above and below each batten fixing point and, using the 4 large screws and special washers, fix the unit to the joists.

Do not overtighten the fixings. The distance from the top washer to the joist when installed must not be less than 50mm.

Figure 7. Sectional view of AV mounting.

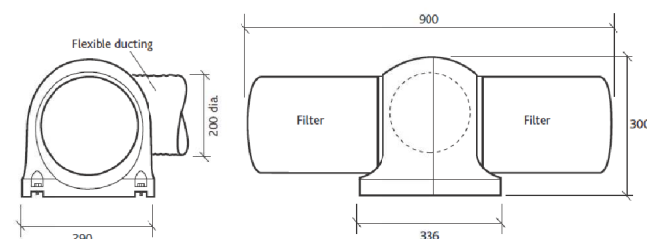


TYPICAL INSTALLATION



DIMENSIONS (MM) & WEIGHT

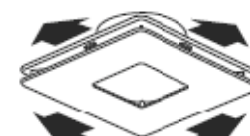
Weight: 5.7kg



2.0 Siting the Diffuser position

The diffuser has a unique air throw pattern and it is essential that it is located correctly in the central hallway in single storey properties or in the ceiling of the top floor landing on 2 or more storey dwellings. As can be seen in Figure 2 the diffuser discharges air evenly from all four sides along the underside of the ceiling.

Figure 2. Diffuser (viewed from below).



Airflow from four sides

Note: The positioning of the diffuser should be in strict accordance with the table shown below to ensure correct operation.

Speed Setting	Minimum distance of diffuser from wall
1	100mm
2	155mm
3	400mm
4	625mm
5	850mm
6	1000mm

Nuair Ltd
Western Ind Estate
Cannock
Staffs ST10 2NS
Tel 01820 885 500
Fax 01820 885 955
Email enquiries@nuair.co.uk



DO NOT SCALE
THE DRAWING IS FOR ILLUSTRATION PURPOSES ONLY. IN PREPARING THIS DOCUMENTATION, NUAIR HAS USED CARE TO COMPLY WITH THE REQUIREMENTS OF THE BUILDING REGULATIONS AND OTHER RELEVANT APPROVED DOCUMENTS AND ASSUMES THAT THIS DOCUMENT IS IN ACCORDANCE WITH THE BUILDING REGULATIONS.

14/16882

☐ on wall	☐ in corner only
☐ on ceiling	☐ in corner only

No.	Revision Description	Date

By: Bellway Homes

Checked by: []

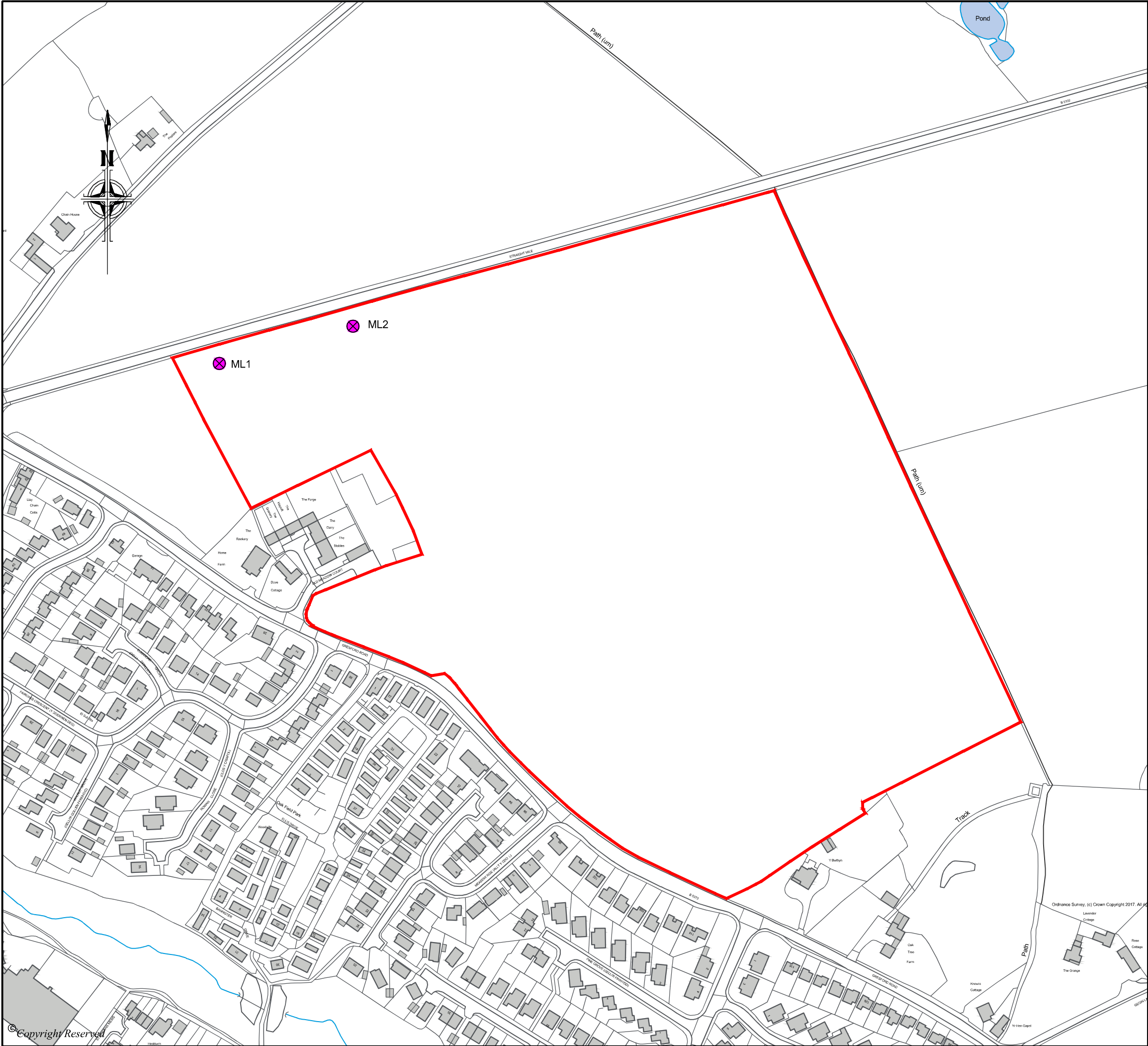
By: Bellway House Types

14/16882

By: 14/16882 - Spec

By: 08/10/2014 AM A

Drawings



DO NOT SCALE FROM THIS DRAWING

- REFERENCE
- SITE BOUNDARY
 - NOISE MONITORING LOCATION

REVISION		DETAILS		DATE	DR'N	CHK'D	APP'D
CLIENT Bellway Home Limited (North West) and Anwyl Homes							
PROJECT Land off Gresford Road Llay, Wrexham							
DRAWING TITLE Noise Monitoring Locations							
DRG No. LE14078001				REV A			
DRG SIZE A3		SCALE 1:2500		DATE 19/12/17			
DRAWN BY SG		CHECKED BY TD		APPROVED BY CMD			
☒ LEIGH		TEL 0194 226 0101		WEB: WWW.WARDELL-ARMSTRONG.COM			
☐ BIRMINGHAM		☐ CARDIFF		☐ CARLISLE		☐ CROYDON	
☐ EDINBURGH		☐ GLASGOW		☐ LONDON		☐ MANCHESTER	
☐ NEWCASTLE UPON TYNE		☐ SHEFFIELD		☐ STOKE ON TRENT		☐ TAUNTON	
 							



Gresford Road, Wrexham
LE14078

**LE14078-002 Daytime Noise
Levels - 1.8m Fence Height**
Daytime Noise Level at the Development Site

Drawn By: T Dalton

Checked By: R Calvert

Approved By: M Dawson

15/06/2018

Signs and symbols

- Road axis
- Emission line
- Building
- Wall
- Base line

Noise levels
in L_{eq} 16 hour dB(A)

	< 50
	50 - 55
	55 - 60
	>= 60



Length scale 1:2328

0 25 50 75
m



wardell
armstrong

Gresford Road, Wrexham
LE14078

LE14078-003
Daytime Ground Floor - Facade
Noise Map

Drawn By: J Schofield

Checked By: R Calvert

Approved By: M Dawson

15/06/2018

Signs and symbols

- Emission line
- Building
- Wall

Noise levels

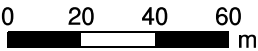
in L_{eq} 16 hour dB(A)

Glazing and Ventilation Requirements

- Open Windows
- 4/12/4 & Acoustic Vents
- 10/12/6 & Acoustic Vents
- 10.8/16/6 & Acoustic Vents



Length scale 1:2052



Gresford Road, Wrexham
LE14078

LE14078-004
Night-time 1st Floor -
Facade Noise Map

Drawn By: J Schofield

Checked By: R Calvert

Approved By: M Dawson

15/06/2018

Signs and symbols

- Emission line
- Building
- Wall

Noise levels
in L_{eq} 8 hour dB(A)

Glazing and Ventilation Requirements

- Open Windows
- 4/12/4 & Acoustic Vents
- 10/12/6 & Acoustic Vents
- 10.8/16/6 & Acoustic Vents

Length scale 1:2090

0 20 40 60 m



Gresford Road, Wrexham
LE14078

LE14078-005
Night-time Max 1st Floor - Facade
Noise Map

Drawn By: J Schofield

Checked By: R Calvert

Approved By: M Dawson

15/06/2018

Signs and symbols

- Building
- Base line
- Wall

Noise levels
in L_{MAX} dB(A)

Glazing and Ventilation Requirements

- Open Windows
- 4/12/4 & Acoustic Vents
- 10/12/6 & Acoustic Vents
- 10.8/16/6 & Acoustic Vents



Length scale 1:2128

0 20 40 60
m



STOKE-ON-TRENT
Sir Henry Doulton House
Forge Lane
Etruria
Stoke-on-Trent
ST1 5BD
Tel: +44 (0)845 111 7777

CARDIFF
22 Windsor Place
Cardiff
CF10 3BY
Tel: +44 (0)29 2072 9191

EDINBURGH
Suite 2/3, Great Michael House
14 Links Place
Edinburgh
EH6 7EZ
Tel: +44 (0)131 555 3311

GREATER MANCHESTER
2 The Avenue
Leigh
Greater Manchester
WN7 1ES
Tel: +44 (0)1942 260101

LONDON
Third Floor
46 Chancery Lane
London
WC2A 1JE
Tel: +44 (0)20 7242 3243

NEWCASTLE UPON TYNE
City Quadrant
11 Waterloo Square
Newcastle upon Tyne
NE1 4DP
Tel: +44 (0)191 232 0943

PENRYN
Tremough Innovation Centre
Tremough Campus
Penryn
Cornwall
TR10 9TA
Tel: +44 (0)1872 560738

SHEFFIELD
Unit 5
Newton Business Centre
Newton Chambers Road
Thorncliffe Park
Chapelton
Sheffield
S35 2PH
Tel: +44 (0)114 245 6244

TRURO
Wheal Jane
Baldhu
Truro
Cornwall
TR3 6EH
Tel: +44 (0)1872 560738

WEST BROMWICH
Thynne Court
Thynne Street
West Bromwich
West Midlands
B70 6PH
Tel: +44 (0)121 580 0909

International offices:

ALMATY
29/6 Satpaev Avenue
Rakhat Palace Hotel
Office Tower, 7th Floor
Almaty
050040
Kazakhstan
Tel : +7-727-3341310

MOSCOW
Suite 2, Block 10,
Letnikovskaya St.
Moscow, Russia
115114
Tel: +7(495) 980 07 67

Wardell Armstrong Archaeology:

CUMBRIA
Cocklakes Yard
Carlisle
Cumbria
CA4 0BQ
Tel: +44 (0)1228 564820

