



now part of



No. 1 Reading, 29-35 Station Road

Ventilation and Extraction Statement

On behalf of **Station Road Dev Co Ltd**



Document Control Sheet

Project name: No. 1 Reading, 29-38 Station Road
Project ref: 43102
Report Title: Ventilation and Extraction Statement
Doc Ref: 43102/001
Date: October 2018

	Name	Position	Signature	Date
Prepared by:	Jan Artemenko	Principal Engineer		02.11.18
Reviewed by:	Darveer Sahans	Principal Engineer		02.11.18
Approved by:	Stuart McDougall	Director		02.11.18
For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved
P01	12.10.18	Draft Issue	JA	DS	SMcD
P02	16.10.18	Updated to Client's comments	JA	DS	SMcD
P03	17.10.18	Updated to Turley comments	JA	DS	SMcD
P04	02.11.18	Kitchen layout updated to latest architect's drawings	JA	DS	SMcD

Peter Brett Associates LLP disclaims any responsibility to the Client and others in respect of any matters outside the scope of this report. This report has been prepared with reasonable skill, care and diligence within the terms of the Contract with the Client and generally in accordance with the appropriate ACE Agreement and taking account of the manpower, resources, investigations and testing devoted to it by agreement with the Client. This report is confidential to the Client and Peter Brett Associates LLP accepts no responsibility of whatsoever nature to third parties to whom this report or any part thereof is made known. Any such party relies upon the report at their own risk.

© Peter Brett Associates LLP 2018

1.1 Purpose of the Statement

1.1.1 The Ventilation & Extraction Statement has been prepared on behalf of Station Road Dev Co Ltd for the redevelopment of 29-35 Station Road, Reading.

1.1.2 This report accompanies a Full Planning application for the demolition of existing building and erection of replacement mixed use building comprised of hotel (Class C1), office (Class B1a) and flexible ground floor retail use (Classes A1, A2, A3 or A4 use), with associated servicing from Garrard Street.

1.1.3 In accordance with Reading Borough Council's (RBCs) core strategy policy CS34 and policy CC3 of the emerging local plan this document sets out how the ventilation is to be considered to reduce the impact of noise and air pollution to the surrounding environment.

1.1.4 The proposed new build includes the following mixed-use spaces:

Ground Floor	Retail
1 st Floor	Hotel Reception / Bar
2 nd Floor	Hotel Restaurant
3 rd Floor	Plant Room / Service Floor
4 th – 16 th Floor	Hotel Rooms
17 th – 21 st Floor	Offices
22 nd Floor	Offices Plant Room

1.1.5 This Statement addresses the control of noise, odour and fumes from the premises generated by catering use from within the building.

1.1.6 This Statement also outlines the ventilation provisions for the whole development.

1.2 Kitchen location

1.2.1 The proposed location for the kitchen is at second floor level adjacent to the restaurant. A copy of the architect's draft kitchen layout has been appended with this document.

1.2.2 As the restaurant is likely to be used for commercial purposes we have reviewed this against the guidance provided in the BESA document DW 172, specification for kitchen ventilation systems.

1.2.3 Section 3 of the specification recommends a minimum kitchen extract air change rate of 40 air changes per hour should be applied to a commercial kitchen area, as a basis of design.

1.2.4 Table 15 recommends that extract ductwork should be sized between 6-9m/s for main runs. On this basis we suggest a kitchen extract riser is allowed for within the scheme, sized at 600 x 600mm, that will need be routed from the kitchen to roof level, which is circa 80m above the ground level.

- 1.2.5 Where the ductwork passes out of the kitchen fire compartment it shall need to be fire rated along its entire length and no fire dampers shall be used within the ductwork.
- 1.2.6 General extract air will also be taken from these areas in the kitchen as good practice and mitigate any build-up of steam. Make up air shall also be provided from a separate air handling unit, refer to section below.

1.3 Design

- 1.3.1 Supply and extract ventilation complete with heat recovery devices (in accordance European Ecodesign directive).
- 1.3.2 An AHU serving the restaurant shall be located at the service floor and will provide tempered fresh air and stale air extract to/from the seating area located at the second-floor restaurant. The fresh air intake and exhaust shall terminate/be drawn in from louvers located at the service floor. Additional general extract terminals shall be provided to the kitchen area on this system as described in section above.
- 1.3.3 There are 2 AHUs located within a service floor which shall serve hotel rooms above. Each of these AHUs will provide tempered fresh air and stale air extract. The fresh air intake and exhaust shall terminate/be drawn in from louvers located at the service floor
- 1.3.4 A tenant's AHU (fit out by the tenant) shall be located at ground floor which will provide tempered fresh and stale air extract to/from retail located on the ground floor. The fresh air intake and exhaust shall terminate/be drawn in from louvers located within their ground floor demise.
- 1.3.5 An AHU serving the offices shall be located at roof level and will provide tempered fresh and stale air extract to/from offices located on the 17th to 21st floor. The fresh air intake and exhaust shall terminate/be drawn in from louvers located at roof level.
- 1.3.6 All the AHUs will incorporate heat recovery devices to ensure heat from the stale air extract air can be transferred into the supply air to each of the spaces there served, therefore reducing the size of the major plant.
- 1.3.7 The AHUs will all be provided with heating and cooling coils to temper the air before it is delivered to the space.

1.3.8 Hours of Operation

- 1.3.9 It is anticipated that tenancies may look to operate through-out the day and into the evening.

1.4 Noise Control

- 1.4.1 The AHUs and fans shall generally be provided with attenuators located on the atmospheric side and the 'discharge side' of the supply and extract fans to ensure the noise of the fans are attenuated in accordance with the design criteria set out in the acoustic report/noise impact assessment. The AHUs shall also be provided within suitable casing to ensure the break out noise is in accordance with the criteria set out of the acoustic report/noise impact assessment and CIBSE guidance for noise criteria within the different rooms uses.
- 1.4.2 Where attenuators cannot be accommodated within the AHUs on the discharge side of the fans, due to space limitations of the plant area, they shall instead be located within the ductwork.

Stair down to reception/bar

UP

202

Hotel Room 22 m²

WC 2 m²

WC 2 m²

AWC 3 m²

Accessible Room 26 m²

201

Store 12 m²

Store 6 m²

Kitchen 43 m²

Servery 20 m²

Restaurant 148 m²

Approx 100 seats

Meeting/Dining 20 m²

UP

DOWN