

Early-stage feasibility only . RIBA Stage 1-2 . Concept design . Preliminary enquiry basis
For contractors, M&E consultants, and engineers
Generated: 06 Sept 2026
Standards: Approved Document F Volume 2 (2021) . Approved Document L Volume 2 (2021 edition incorporating 2023 amendments) . CIBSE Guide B2 (2016)
Output mode: Preliminary Enquiry

NON-DOMESTIC / PURPOSE-BUILT STUDENT ACCOMMODATION (PBSA)

Approved Document F Volume 2: Buildings other than dwellings (2021) | Approved Document L Volume 2 (2021 edition incorporating 2023 amendments), Table 6.9 | Approved Document E (2003, 2004 amendment) | BSRIA BG2/2020: Commissioning Air Systems | Indicative central balanced MVHR SFP benchmark <= 1.5 W/(l.s) -- applicable PBSA Part L route and edition to be confirmed by appointed engineer

PRE-EXPORT VALIDATION -- PASS WITH WARNINGS

[!] KITCHEN SCENARIO -- INSUFFICIENT INFORMATION: the drawing does not clearly evidence which ADF Vol 2 Para 1.28 cooking-facility scenario applies. Volume 2 kitchen scenarios (ADF Vol 2 Para 1.28) -- microwave/drinks-preparation only: 15 l/s; domestic-type hob with adjacent (local) extract: 30 l/s; domestic-type hob with remote (ducted away) extract: 60 l/s. UNCONFIRMED feasibility assumption used: hob, adjacent extract (30 l/s), pending engineer/manufacture confirmation. This is NOT an ADF Volume 2 compliance figure.

PROJECT REF: Example Student Accommodation -- Demonstration Project

EARLY-STAGE FEASIBILITY ONLY -- NOT A COMPLIANCE CERTIFICATE

This report provides indicative duty points to support concept design and early-stage manufacturer enquiries. It is not a substitute for detailed design, coordinated construction information, or a compliance certificate. All airflow and pressure values must be verified by the appointed engineer at detailed design stage before equipment selection, procurement, or submission to Building Control.

DRAWING INTERPRETATION SUMMARY

Detected project type	Non-Domestic -- Residential Institutional (Part F Vol 2)
Overall confidence	High
Estimated interpreted area	146-206 m2 (high confidence)
Area basis: Scale detection from drawing	
Total zones detected	10
Included in airflow	10
Infrastructure / excluded	0
Spaces needing review	0
Equipment detected	8

TABLE A -- FULL DETECTED DRAWING SCHEDULE

Every labelled space on the drawing, including infrastructure -- confirms drawing was read correctly.

Space / Zone Name	Ventilation Treatment	Approx Area	Conf.
BED-01	MVHR supply zone	~12 m2	High
BED-02	MVHR supply zone	~12 m2	High

BED-03	MVHR supply zone	~12 m2	High
BED-04	MVHR supply zone	~12 m2	High
BED-05	MVHR supply zone	~12 m2	High
BED-06	MVHR supply zone	~12 m2	High
BED-07	MVHR supply zone	~12 m2	High
KITCHEN-01	MVHR extract (ADF Vol 2 Para 1.28 -- see Table B)	~14.2 m2	High
WC-01	MVHR extract (ADF Vol 2 Para 1.26)	~2.1 m2	High
SHOWER-01	MVHR extract (ADF Vol 2 Para 1.26)	~3 m2	High

~ areas are low-confidence proportional estimates. All values must be verified against the original drawing.

TABLE B -- VENTILATION CALCULATION SCHEDULE

Spaces contributing to airflow calculations. Infrastructure/service zones are excluded.

Space / Zone	Ventilation Treatment	Approx Area	Est. Flow	Conf.
BED-01	MVHR supply zone	~12 m2	0.9 l/s/m² prop. ~11 l/s	High
BED-02	MVHR supply zone	~12 m2	0.9 l/s/m² prop. ~11 l/s	High
BED-03	MVHR supply zone	~12 m2	0.9 l/s/m² prop. ~11 l/s	High
BED-04	MVHR supply zone	~12 m2	0.9 l/s/m² prop. ~11 l/s	High
BED-05	MVHR supply zone	~12 m2	0.9 l/s/m² prop. ~11 l/s	High
BED-06	MVHR supply zone	~12 m2	0.9 l/s/m² prop. ~11 l/s	High
BED-07	MVHR supply zone	~12 m2	0.9 l/s/m² prop. ~11 l/s	High
KITCHEN-01	MVHR extract (ADF Vol 2...	~14.2 m2	30 l/s (ADF Vol 2 Par... ~30 l/s	High
WC-01	MVHR extract (ADF Vol 2...	~2.1 m2	6 l/s (ADF Vol 2 Para... ~6 l/s	High
SHOWER-01	MVHR extract (ADF Vol 2...	~3 m2	15 l/s (ADF Vol 2 Par... ~15 l/s	High

Total indicative: 91 l/s | Est. flows are proportional/fixed-rate estimates only -- verify at detailed design stage.

Analysis note: Synthetic demonstration drawing -- no real building, client or address.

Confidence Summary

Drawing / area confidence	[***] High
Airflow confidence	[***] High
Pressure confidence	[**-] Medium
Unit sizing confidence	[**-] Medium

1. PROJECT SUMMARY

Sector	Non-Domestic / PBSA (Part F Vol 2)
System type	Student Accommodation / PBSA -- centralised MVHR serving one 7-bedroom cluster flat
Output mode	Preliminary Enquiry
Use case	Early-stage feasibility -- not for compliance submission
Selection status	Preliminary enquiry basis -- verify at detailed design
Calculation basis	feasibility
RIBA stage	RIBA Stage 1-2 -- Manufacturer enquiry & budget quotation basis
Regulation version	Current / 2021 guidance -- confirm applicable Building Regulation version for this project
Total airflow	91 l/s

ADF Vol 2 Two-Check (cluster mode, non-statutory feasibility): Check A = 56 l/s (indicative CIBSE Guide A per-occupant fresh air rate (8 l/s/person x 7 bedrooms = 56 l/s -- indicative, engineer to confirm exact ADF Vol 2/CIBSE rate)). Check B = 51 l/s (kitchen 30 l/s -- ADF Vol 2 Para 1.28, UNCONFIRMED feasibility assumption + 1 shower/bathroom x 15 l/s, ADF Vol 2 Para 1.26). Design duty = 67 l/s -- Indicative CIBSE Guide A occupant fresh-air benchmark governs -- indicative CIBSE Guide A per-occupant fresh air rate (8 l/s/person x 7 bedrooms = 56 l/s -- indicative, engineer to confirm exact ADF Vol 2/CIBSE rate). Cluster: 1 flat x 7 beds. Kitchen rate is an UNCONFIRMED feasibility assumption pending engineer/manufacturer confirmation -- NOT an ADF Volume 2 compliance figure. Washable grease filter required at MVHR kitchen spigot.

Duty pressure	237 Pa
Total fan power	39.2 W
SFP (limit)	1.50 W/(l/s)

Approved Document L Volume 2, 2021 edition incorporating 2023 amendments, Table 6.9 -- all other central balanced mechanical ventilation systems: maximum SFP 1.5 W/(l.s). Applicable regulatory edition and project route to be confirmed by the appointed engineer. Calculated SFP is indicative -- pressure, fan efficiency, and manufacturer fan input are not all confirmed.

SFP (calculated)	0.43 W/(l/s)
------------------	--------------

SFP check

Indicative feasibility check -- within Part L 2021 guidance limit -- verify applicable version at detailed design

SYSTEM DUTY POINT SUMMARY

System Component	Airflow	Static P.	SFP calc	SFP limit
Centralised MVHR -- 1 central unit (MVHR-01) serving...	91 l/s	237 Pa	0.43 W/(l/s)	1.50

1A.II. STUDENT ACCOMMODATION -- VENTILATION FEASIBILITY REVIEW

RIBA Stage 1-2 indicative feasibility. Not a compliance certificate -- appointed engineer to verify.
Regulatory class: Hall of residence / rooms for residential purposes -- Approved Document F Volume 2 applies (NOT Volume 1 Table 1.3). Duty uses an indicative CIBSE Guide A / ADF Vol 2 benchmark for residential-institutional adequacy -- engineer to confirm exact rate.
Kitchen facility: UNCONFIRMED -- insufficient drawing evidence of cooking-facility type (ADF Vol 2 Para 1.28). Feasibility assumption used: hob, adjacent extract (30 l/s), pending

engineer/manufacture confirmation. NOT an ADF Volume 2 compliance figure.

30 l/s is an early-stage assumption for a separate adjacent extract route discharging outside. The recirculating cooker hood alone does not satisfy this extract provision. Engineer/manufacture confirmation is required.

STEP 1 -- DETECTED ZONES (Drawing Verification)

Bedrooms detected: 7

BED-01	BED-02	BED-03	BED-04	BED-05	BED-06
12m2	12m2	12m2	12m2	12m2	12m2
BED-07					
12m2					
Communal spaces: KITCHEN-01 . WC-01 . SHOWER-01					

STEP 2 -- FLOOR AREA VERIFICATION

Detected area: 171.83 m² High

Not stated on drawing

Area check (0.3 l/s/m²): 0.3 × 171.83 m² = 51.5 l/s -> 52 l/s (rounded up -- design duty) -> used in Two-Check Step 3

STEP 3 -- TWO-CHECK CALCULATION CHAIN (ADF Vol 2 Para 1.26/1.28 -- indicative, non-statutory)

Mode	Cluster flat MVHR (1 unit per flat)
Check A -- occupant fresh-air (CIBSE Guide A / ADF Vol 2)	56 l/s
Check B -- kitchen (ADF Vol 2 Para 1.28)	30 l/s (UNCONFIRMED assumption)
Check B -- wet room extract (ADF Vol 2 Para 1.26)	15 l/s (15 l/s each)
Per-flat MVHR design duty (compliance x 1.2 margin)	67 l/s
SFP target (Approved Document L Volume 2, Table 6.9)	<= 1.50 W/(l/s)

hall-of-residence indicative benchmark (CIBSE Guide A / ADF Vol 2) -- non-statutory, engineer to confirm exact rate

Base calculated airflow	56 l/s
Feasibility allowance (20%, non-statutory)	11 l/s
Indicative feasibility duty	67 l/s
Drawing-annotated duty	91 l/s @ 237 Pa (drawing-annotated, subject to verification)
Manufacturer-enquiry duty	91 l/s, subject to annotation verification
Pressure	237 Pa, drawing-annotated and subject to verification

[!] HIGH DUTY WARNING

67 l/s design duty exceeds the typical entry-level central MVHR output (55 l/s). High fan speed may breach 30 dB LAeq,T bedroom limit.

STEP 3b -- CALCULATION SUMMARY (Static Pressure & SFP)

Dwelling-equivalent feasibility benchmark governs (67 l/s per unit incl. 20% early-stage feasibility allowance -- non-statutory)	
Total system airflow	91 l/s
Static pressure (ESP)	237 Pa
Pressure basis	Drawing-annotated pressure (237 Pa, MVHR-01 annotation), subject to verification.
SFP (calculated)	0.43 W/(l/s)
SFP limit	1.50 W/(l/s) (cluster MVHR)
SFP compliance	PASS -- 0.43 <= 1.50 W/(l/s)

STEP 4 -- SPATIAL COORDINATION (Part E Acoustic Compliance)

Unit coverage	1 MVHR unit per 7-bed flat -- serves 7 bedrooms and kitchen
Mounting	Wall-mounted / utility cupboard -- NOT ceiling void (Part E 30 dB LAeq,T bedroom limit)
Indicative size	~300 mm W x 350 mm H x 1200 mm D (drawing-estimated available space, unconfirmed -- confirm with manufacturer)
Front clearance	600 mm minimum -- filter access and maintenance

CTA allowance	25 Pa -- cross-talk attenuators on all bedroom duct connections
Kitchen	Rate 30 L/s (ADF Vol 2 Para 1.28, UNCONFIRMED assumption). Grease filter required at hob.

RIBA Stage 1-2 -- Indicative Feasibility Only.
An appointed M&E engineer must verify final procurement duties, carry out air pressure testing, and commission balancing per BSR1A BG2/2020.

[i] PBSA -- PART O PLANNING & OVERHEATING COORDINATION NOTES
PBSA COORDINATION NOTE: For London sites, Approved Document O (Overheating) is a planning and design consideration. Advisory only -- confirm applicability with appointed design team. Consider MVHR unit with Summer Bypass or Cooling Module where overheating risk is identified. Allow 200 mm additional unit length for cooling coil footprint. Confirm with manufacturer. Overheating assessment requirements should be confirmed by the design team before Stage 3.

1B. EQUIPMENT SPACE ESTIMATE

Max unit height (governing)	1800 mm
Ceiling height input ? 600 mm service clearance	
[!] Max unit height = ceiling height - 600 mm service clearance. Drawing dims include 600 mm front + 300 mm side clearance. Verify all dimensions against structural drawings before ordering.	

1C. INDICATIVE UNIT RECOMMENDATION

Generic rule-of-thumb sizing for architect coordination. Not a manufacturer selection.	
Suggested system	Compact MVHR Unit -- Wall-Mounted (Whole-Flat)
Indicative airflow	91 l/s
Install type	Utility cupboard or airing cupboard within flat -- wall-mounted or floor-standing. 600 mm front clearance required for filter access.
Indicative unit envelope -- from face velocity (2.0 m/s) + component build-up:	

Length (sections) 1.20 m	Face Width 0.30 m	Height (+ plinth) 0.35 m
------------------------------------	-----------------------------	------------------------------------

Component build-up (non-manufacturer rule-of-thumb depths):

Filter Bank (G4/M5)	250 mm
Counter-Flow Heat Exchanger	700 mm
Supply + Extract Fan Assembly	150 mm
Duct Spigots + Flex Connectors	100 mm
TOTAL UNIT LENGTH	1200 mm (1.20 m)

Access clearances (incorporated in plant room above):	
* Filter access (front -- allow 600 mm clear):	600 mm
* Side clearance:	200 mm
* Top clearance:	200 mm
Install strategy: dedicated plant room or roof enclosure -- confirm with structural engineer.	
Unit sizing confidence	[**-] Medium

[!] RIBA Stage 1-2 feasibility guidance only. Not a manufacturer selection or procurement document.

SECTION 4 -- EQUIPMENT SIZING NOTE: Dimensions and duties include a 20% early-stage feasibility allowance -- non-statutory -- for detailed design coordination and site-specific resistance.

1E. DUCT CONNECTION GUIDE

Indicative duct sizes from design airflow. Verify with coordinated ductwork layout.

Connection	Max Velocity	Design Flow	Round Duct dia.	Rect. alternative
Main branch (central)	6.0 m/s	91 l/s	150 mm dia.	188 x 90 mm
Residential branch	2.5 m/s	60 l/s	175 mm dia.	219 x 105 mm

2. SYSTEM BREAKDOWN

Indicative system sizing based on input assumptions and standard UK design methods.

Centralised MVHR -- 1 central unit (MVHR-01) serving 7 bedrooms via terminal (CTA) units

	1x Centralised MVHR unit
Airflow	91 l/s
Airflow basis	drawing annotation
Airflow confidence	[***] High
Static pressure	237 Pa
Pressure basis	drawing annotated
Pressure confidence	[**-] Medium
Duct diameter	200 mm
Fan power	39.2 W
SFP	0.43 W/(l/s) (limit 1.50) within limit

FORMULA TRACE

Fan power: $P = Q \times dP / (n \times 1000) = 91 \times 237 / (0.55 \times 1000) = 39.2 \text{ W}$
SFP: $= dP / (n \times 1000) = 237 / (0.55 \times 1000) = 0.430 \text{ W/(l/s)}$
Duty: $Q = 91 \text{ l/s} \mid dP = 237 \text{ Pa} \mid D = 200 \text{ mm} \mid n = 55\%$

Assumptions:

- * SYSTEM STRATEGY: centralised MVHR -- 1 central unit serves the whole flat via terminal (CTA) units. CTAs are ceiling-void/terminal units, NOT separate MVHR units.
- * VOLUME-FIRST WET ROOMS: Bathroom/shower -- ADF Vol 2 Para 1.26: 15 l/s.
- * HALL-OF-RESIDENCE INDICATIVE BENCHMARK (CIBSE Guide A occupant fresh-air rate / ADF Vol 2 -- non-statutory, engineer to confirm exact rate): base calculated airflow = 56 l/s (Indicative CIBSE Guide A occupant fresh-air benchmark governs -- indicative CIBSE Guide A per-occupant fresh air rate (8 l/s/person x 7 bedrooms = 56 l/s -- indicative, engineer to confirm exact ADF Vol 2/CIBSE rate)). 20% early-stage feasibility allowance (non-statutory) = 11 l/s. Indicative feasibility duty = 67 l/s.
- * PBSA REGULATORY CLASSIFICATION: hall_of_residence_adf_vol2 -- Hall of residence / rooms for residential purposes -- shared kitchen/bathroom facilities serve multiple bedrooms. Approved Document F Volume 2 (non-domestic) applies; the whole-dwelling bedroom-count method for self-contained dwellings does not apply here.
- * KITCHEN SCENARIO -- INSUFFICIENT INFORMATION: the drawing does not clearly evidence which ADF Vol 2 Para 1.28 cooking-facility scenario applies. Volume 2 kitchen scenarios (ADF Vol 2 Para 1.28) -- microwave/drinks-preparation only: 15 l/s; domestic-type hob with adjacent (local) extract: 30 l/s; domestic-type hob with remote (ducted away) extract: 60 l/s. FEASIBILITY ASSUMPTION USED: hob, adjacent extract (30 l/s) -- the most common PBSA cluster-kitchen configuration, pending engineer/manufacturer confirmation. This is NOT an ADF Volume 2 compliance figure

- and MUST NOT be presented as such.
- * MANUFACTURER-ENQUIRY DUTY: drawing-annotated duty 91 l/s @ 237 Pa (drawing-derived, subject to annotation verification) -- kept separate from the 67 l/s feasibility benchmark, never merged into it.
 - * Per-unit MVHR sizing -- each cluster flat has its own central MVHR unit
 - * Hall-of-residence indicative benchmark: CIBSE Guide A occupant fresh-air check = 56 l/s, wet-room high-rate check = 51 l/s -- base = 56 l/s (indicative -- no equivalent Volume 2 bedroom-count table exists; engineer to confirm exact applicable rate)
 - * Duct diameter per unit: 200 mm at 4 m/s
 - * Duct friction per unit (calculated, not used -- drawing-annotated pressure governs): 104 Pa
 - * Component resistance: 140 Pa (HX + filters 100 Pa + CTA 25 Pa (cross-talk attenuators, Part E) + fire dampers 15 Pa = 140 Pa total)
 - * Total indicative ESP per unit: 237 Pa -- drawing-annotated (MVHR-01 annotation), subject to verification
 - * Kitchen: recirculating hob filter -- no ducted kitchen extract
 - * KITCHEN -- ADF Vol 2 Para 1.28 rate: 30 L/s (unclear, UNCONFIRMED feasibility assumption -- engineer/manufacture confirmation required, NOT an ADF Volume 2 compliance figure). Washable grease filter required on kitchen spigot to protect MVHR heat exchanger.
 - * ACOUSTIC -- Bedroom target: 30 dB LAeq,T. Kitchen/communal: 45 dB LAeq,T. MVHR unit to be acoustic rated; anti-vibration mounts required.
 - * ACOUSTIC -- Cross-talk attenuators required between rooms sharing ductwork -- verify with acoustic consultant.
 - * FIRE -- Intumescent fire dampers required at all fire compartment wall penetrations (15 Pa included in ESP).
 - * Fan efficiency assumed 55%
 - * [!] HIGH DUTY WARNING -- 67 l/s design duty exceeds the typical entry-level central MVHR output (55 l/s). High fan speed may exceed 30 dB LAeq,T bedroom noise limit. Specify a 100 l/s rated unit to maintain fan speed at or below 70% for acoustic compliance.

3. DRAWING EQUIPMENT SCHEDULE

Equipment identified in drawing. Tags are preserved exactly as shown. Classified type is an engineering interpretation based on duty, pattern, and context.

Drawing Ref	Classified Type	System Role	l/s
MVHR-01	MVHR	-	91
Location: Utility cupboard			
CTA-01	CTA	-	-
Location: BED-01			
CTA-02	CTA	-	-
Location: BED-02			
CTA-03	CTA	-	-
Location: BED-03			
CTA-04	CTA	-	-
Location: BED-04			
CTA-05	CTA	-	-
Location: BED-05			
CTA-06	CTA	-	-
Location: BED-06			

CTA-07

CTA

-

-

Location: BED-07

4. ASSUMPTIONS

The following assumptions have been applied to generate this feasibility estimate:

Airflow basis:

ADF Vol 2 Two-Check (cluster mode, non-statutory feasibility): Check A = 56 l/s (indicative CIBSE Guide A per-occupant fresh air rate (8 l/s/person x 7 bedrooms = 56 l/s -- indicative, engineer to confirm exact ADF Vol 2/CIBSE rate)). Check B = 51 l/s (kitchen 30 l/s -- ADF Vol 2 Para 1.28, UNCONFIRMED feasibility assumption + 1 shower/bathroom x 15 l/s, ADF Vol 2 Para 1.26). Design duty = 67 l/s -- Indicative CIBSE Guide A occupant fresh-air benchmark governs -- indicative CIBSE Guide A per-occupant fresh air rate (8 l/s/person x 7 bedrooms = 56 l/s -- indicative, engineer to confirm exact ADF Vol 2/CIBSE rate). Cluster: 1 flat x 7 beds. Kitchen rate is an UNCONFIRMED feasibility assumption pending engineer/manufacturer confirmation -- NOT an ADF Volume 2 compliance figure. Washable grease filter required at MVHR kitchen spigot.

Pressure basis:

Drawing-annotated pressure (237 Pa, MVHR-01 annotation), subject to verification.

General assumptions:

- * Building type: student accommodation / PBSA cluster flat
- * System strategy: centralised MVHR -- 1 central unit per flat serving all bedrooms via terminal (CTA) units
- * PBSA regulatory classification: hall_of_residence_adf_vol2 -- Hall of residence / rooms for residential purposes -- shared kitchen/bathroom facilities serve multiple bedrooms. Approved Document F Volume 2 (non-domestic) applies; the whole-dwelling bedroom-count method for self-contained dwellings does not apply here.
- * [!] KITCHEN SCENARIO -- INSUFFICIENT INFORMATION: the drawing does not clearly evidence which ADF Vol 2 Para 1.28 cooking-facility scenario applies. Volume 2 kitchen scenarios (ADF Vol 2 Para 1.28) -- microwave/drinks-preparation only: 15 l/s; domestic-type hob with adjacent (local) extract: 30 l/s; domestic-type hob with remote (ducted away) extract: 60 l/s. UNCONFIRMED feasibility assumption used: hob, adjacent extract (30 l/s), pending engineer/manufacturer confirmation. This is NOT an ADF Volume 2 compliance figure.
- * Assessment basis: 2021 Approved Documents selected for this feasibility assessment. The applicable regulatory edition depends on the project's building-control route and transitional arrangements. The appointed engineer/building-control team must confirm the applicable edition.
- * Accommodation type: cluster flat (1 central MVHR per flat unit; CTAs/terminal units are NOT separate MVHR units)
- * Benchmark: hall-of-residence indicative benchmark (CIBSE Guide A / ADF Vol 2) -- non-statutory, engineer to confirm exact rate -- NOT PBSA statutory compliance
- * Base calculated airflow: 56 l/s. 20% early-stage feasibility allowance (non-statutory): 11 l/s. Indicative feasibility duty: 67 l/s.
- * Drawing-annotated duty: 91 l/s @ 237 Pa -- kept separate from the feasibility benchmark, never substituted into it.
- * Manufacturer-enquiry duty: 91 l/s, subject to annotation verification.
- * Kitchen: recirculating hob filter -- not an extract route to outside (recirculates through a filter, no ducted kitchen extract). Kitchen extract remains 30 l/s (ADF Vol 2 Para 1.28, UNCONFIRMED feasibility assumption -- see kitchen scenario note),

never an area-multiplied commercial rate, and never the ADF Vol 1 Table 1.2 domestic kitchen rate.

- * Units: 1 × 7-bed cluster flat
- * Building status: new
- * ESP: drawing-annotated -- from drawing annotation, subject to verification
- * Fan efficiency assumed 55%

5. MANUFACTURER ENQUIRY NOTE

This report is intended to support early-stage manufacturer enquiries, equipment selection discussions, and budget quotation exercises. Duty points (airflow and pressure) are indicative and should be validated against detailed design, confirmed layouts, and final system requirements.

When submitting to manufacturers, please confirm:

- * Exact site conditions, duct layout, fittings, and system resistance
- * Acoustic requirements, access clearances, and electrical supply
- * Thermal and humidity loads at detailed design stage
- * Final duty and ESP to be confirmed by a Chartered Mechanical Engineer

If confidence is medium or low:

Indicative manufacturer enquiry only -- final duty and ESP to be confirmed by detailed design and manufacturer selection.

Confidence: Airflow high . Pressure medium . Zoning high

6. CONFIDENCE TRACEABILITY

Category-by-category confidence -- airflow confidence cannot exceed Medium when area is Low.

Category	Confidence	Value / Detail
Building Function Detection	[*--] Low	Not determined
Room Recognition	[***] High	10 spaces detected
Occupancy Interpretation	[*--] Low	Not annotated
Area / Geometry	[***] High	146--206 m2
Equipment Recognition	[***] High	8 items
Airflow Feasibility Basis	[*--] Low	91 l/s
Pressure Estimate	[*-] Medium	237 Pa
Ventilation Strategy	[*-] Medium	Student Accommodation / PBSA -- centralised MVHR ser...

How to read confidence levels:

- * HIGH -- values based on Part F schedules, measured areas, or entered duct runs.
- * MEDIUM -- rule-of-thumb rates or partial layout information.
- * LOW -- estimated defaults; treat as a planning figure only.
- * Note: Airflow cannot be HIGH when area confidence is LOW.

7. EXCLUSIONS

The following items are excluded from this feasibility report and must be addressed during detailed design:

- * Detailed duct design and terminal pressure drops
- * Attenuator and acoustic confirmed losses
- * Exact acoustic design and noise criteria verification
- * Fire strategy and smoke control design

- * Coordination clash detection
- * Final compliance sign-off
- * Controls integration and BMS specification
- * Commissioning and balancing

This feasibility report is provided for early-stage design support, manufacturer enquiry, and budget costing purposes only. It does not constitute professional engineering advice, a compliance certificate, or a final design specification. Final system design, co-ordination, and regulatory compliance remain the responsibility of the project engineer or consultant. Generated using UK-referenced ventilation calculation methods (Approved Document F, Part L, CIBSE guidance where applicable). Regulatory guidance and project applicability may depend on project date, transitional provisions and appointed design team review. Project date not confirmed -- confirm applicable Building Regulation version before relying on this feasibility output.