Lothian NHS Board

Mainpoint
102 West Port
Edinburgh
EH3 9DN

Telephone: 0131 536 9000
www.nhslothian.scot.nhs.uk

Date: 16/10/2026
Our Ref: 11295
Enquiries to loth.freedomofinfomation@nhs.scot

Dear

FREEDOM OF INFORMATION – OCULOPLASTIC EYELID PROCEDURES

I write in response to your request for information in relation to oculoplastic eyelid procedures in NHS Lothian.

Question:

For the purposes of this request, please interpret “clean treatment room” to mean a non-main-theatre clinical procedure room used for sterile or minor operative procedures, whether described locally as a clean room, treatment room, procedure room, minor ops room, or outpatient procedure room.

Please provide the following information for the period 1 January 2023 to the date of your reply.

1. Has your organisation undertaken any of the following procedures in a clean treatment room rather than in a main operating theatre? Please answer Yes / No for each, and if readily available please provide either the exact number of cases or an approximate number of cases performed in that setting during the period above.

a) Entropion repair
b) Ectropion repair
c) Ptosis repair
d) Upper blepharoplasty
e) Canthoplasty / canthopexy
f) Eyelid reconstruction following lesion excision
g) Other eyelid or oculoplastic procedures performed in that setting (please specify)

Answer:

Yes, NHS Lothian carries out all these procedures in a clean treatment room.

Question:

2. If your organisation performs any of the above in a clean treatment room, please provide copies of any recorded documents that set out:

a) case selection or inclusion / exclusion criteria

Answer:

There are no specific NHS Lothian written policy documents, risk assessments or governance approvals for carrying out these procedures.

An assessment and clinical risk assessment will be undertaken by each clinician with each individual patient. This information is not collected centrally but is recorded in individual patient records. In order to provide the information you request it would be necessary to review each patient record over the period you have specified, requiring significant resources. Under section 12 of the Freedom of Information (Scotland) Act 2002, NHS Lothian is not required to respond to your request if the resources required to do so equate to more than £600 in cost.

Question:

b) local SOPs, policies, pathways, or protocols

Answer:

NHS Lothian apply SHTM 03-01 Ventilation for Healthcare Premises (SHTM 03-01) | National Services Scotland and Humphreys et al (2012) Guidance on facilities for minor procedures as directed by the SHTM 03-01 Part A (2022) para 2.8 Guidelines on the facilities required for minor surgical procedures and minimal access interventions.

Question:

c) clinical risk assessments relating to undertaking such procedures in that setting

Answer:

Risk assessments are carried out on an interactive basis in response to annual ventilation verification reports to confirm the ongoing safety and suitability individual rooms use for invasive procedures, where the healthcare environment was designed and constructed before guidance was issued. NHS Lothian has established a process for managing ventilation non-conformances.

Question:

d) infection prevention and control assessments, approvals, or sign-off documents

Answer:

The Infection Prevention and Control Team in NHS Lothian are key stakeholders and advisors in the process above.

Question:

e) estates / ventilation / room suitability assessments, if held

Answer:

Annual verification records and assurance team non-conformance records are enclosed.

Information which may identify individual members of staff has been redacted from the documents. Since we do not have their consent to release their personal data, the information is exempt under section 38 of the Freedom of Information (Scotland) Act 2002 as to provide it would breach the principles of the Data Protection Act 2018.

Question:

f) governance approvals, committee papers, or decision records approving this practice, if held

Answer:

All ventilation non conformances and clinical or service risks associated with healthcare ventilation are considered at the Board Ventilation Safety Group. Any infection risks associated with ophthalmology services are considered at the local infection control committee, and the Pan Lothian Infection Control Committee.

Question:

3. If held, please state the room or environment requirements specified by your organisation for carrying out these procedures in a clean treatment room, for example any recorded requirements relating to:

a) ventilation or air-handling standard

Answer:

SHTM 03-01 is used.

Question:

b) staffing model
c) monitoring / resuscitation equipment
d) maximum anticipated procedure duration

Answer:

There are no specific NHS Lothian written policy documents which state requirements for these elements.

Question:

e) whether procedures must be under local anaesthesia only

Answer:

In line with SHTM 03-01, Health and Safety requirements and clinical best practice, general anaesthetic would only be provided in an operating theatre environment, and not in a clean room.

Question:

f) whether any procedures are excluded if grafts, flaps, sedation, or reconstruction are involved

Answer:

See note above. Safety and suitability of the environment for invasive procedures is considered on an iterative basis. A hierarchy of risk and suitability of available accommodation is in place.

Question:

4. If held, please provide any recorded audit, surveillance, or governance information for procedures undertaken in a clean treatment room during the same period, including:

a) surgical site infection data

Answer:

Ophthalmology procedures are not included in national mandatory surgical site infection surveillance. NHS Lothian maintains alert organism surveillance in line with NIPCM appendix 13. National Infection Prevention and Control Manual: Appendix 13 - NHS Scotland Minimum Alert organism/Condition list

Question:

b) adverse incident or complication data reported by setting

Answer:

No adverse events have been reported.

Question:

c) unplanned transfer to theatre or admission

Answer:

There have been no unplanned transfers to theatre or admission to hospital.

Question:

d) any review or audit reports specifically considering the safety or suitability of these procedures in that setting.

Answer:

NHS Lothian has not carried out any reviews or audits specifically on the safety of these procedures in this setting. The Ventilation Safety Group will consider any non-conformance reports, service reports or risk and the suitability of the environment for invasive procedures.

Question:

5. If your organisation does not hold a single document answering any part of the above, please provide the recorded information in the form in which it is held.

Answer:

There are no specific NHS Lothian documents regarding the carrying out of eye treatments in clean rooms.

I hope the information provided helps with your request.

If you are unhappy with our response to your request, you do have the right to request us to review it. Your request should be made within 40 working days of receipt of this letter, and we will reply within 20 working days of receipt. If our decision is unchanged following a review and you remain dissatisfied with this, you then have the right to make a formal complaint to the Scottish Information Commissioner within 6 months of receipt of our review response. You can do this by using the Scottish Information Commissioner's Office online appeals service at https://www.foi.scot/appeal. If you remain dissatisfied with the Commissioner's response you then have the option to appeal to the Court of Session on a point of law.

If you require a review of our decision to be carried out, please write to the reviewer at the address at the top of this letter. The review will be undertaken by a Reviewer who was not involved in the original decision-making process.

FOI responses (subject to redaction of personal information) may appear on NHS Lothian's Freedom of Information website at: https://org.nhslothian.scot/FOI

Yours sincerely

ALISON MACDONALD
Executive Director of Nursing Midwifery and AHPs
Cc: Chief Executive

[redacted]

From: [redacted]
Sent: 15 July 2026 10:23
To: [redacted]
Subject: Fw: Castle suite

[redacted]
Senior Charge Nurse
Ophthalmology
[redacted]

From: [redacted] <[redacted]@nhs.scot>
Sent: Thursday, June 11, 2026 10:04 AM
To: [redacted] <[redacted]@nhs.scot>; [redacted], [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>
Cc: [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted], [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>
Subject: Re: Castle suite

Hello [redacted] and [redacted]

The results of the annual verifications for the POD and suits are as follows:

Room Reference	SHTM ac/hr	Recorded ac/hr
Castle Suite	>10	26.0
Braid Suite	>10	21.4
Pentland Suite	>10	18.1

Regards
[redacted]

From: [redacted] <[redacted]@nhs.scot>
Sent: 10 June 2026 06:47
To: [redacted], [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>
Cc: [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>
Subject: Re: Castle suite

Hi [redacted]

Can you ensure that everyone knows this POD cannot be used until we have the results.

Thanks

[redacted]
Senior Charge Nurse
Ophthalmology
[redacted]

From: [redacted], [redacted] <[redacted]@nhs.scot>
Sent: Tuesday, June 9, 2026 5:39 PM
To: [redacted] <[redacted]@nhs.scot>
Cc: [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>
Subject: Re: Castle suite

Hi

Thank you so much for updating us . Will be looking forward to hearing from about ventilation for air flow.

Regars'
[redacted]

From: [redacted] <[redacted]@nhs.scot>
Sent: 09 June 2026 11:41
To: [redacted] <[redacted]@nhs.scot>
Cc: [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>
Subject: Re: Castle suite

Hi [redacted]

The validation for air flow changes was carried out at the weekend which we have not received the results as yet. The roof of the POD was cleaned last week under the quarterly PPM.

Regards.

[redacted]
NHS Lothian
Team Leader
Estates Department
Service/Car Park Level
Lauriston Building
39 Lauriston Place
Edinburgh
EH3 9EN
Mob: [redacted]

NHS Lothian ☎ [redacted]
✉ [redacted]@nhs.scot

From: [redacted] <[redacted]@nhs.scot>
Sent: Tuesday, June 9, 2026 10:14
To: [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>
Cc: [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>; [redacted] <[redacted]@nhs.scot>
Subject: Castle suite

Hello [redacted]

I am aware that three technician attended on Saturday and Sunday to check the air conditioning and air flow in Castle suit (OLD POD in E3) . Could you please confirm the ventilation has been fixed and the roof of the POD is also clean to move forward with the plan of using the room by nurse practitioners to run cyst clinics .

Regards'
[redacted]
E3 (Macular clinic)
Eye pavilion hospital .

SHTM 03-01 CRITICAL VENTILATION ANNUAL VERIFICATION & INSPECTION

E3 CLEANROOM POD

Client:	NHS Lothian	**Client Contact:**	Scott Robertson
Hospital:	The Princess Alexandra Eye Pavilion	**Site Address:**	Chalmers Street, Edinburgh EH3 9HA
Area:	E3 Cleanroom Pod	**AHU:**	FFU
Theatre Condition:	Average	**Report No:**	PM06-060626
Date of Test:	6th June 2026	**Date of Last Test:**	17th April 2025
Test Engineer & Report Preparation:	Paul McShee	**Signature:**	
H&V Approval:	Steven McFadyen	**Signature:**	
Client Reviewed by:		**Signature:**	

H&V COMMISSIONING SERVICES LTD
KILKNOWE OFFICE
16 BARRMILL ROAD
GALSTON
AYRSHIRE
KA4 8HH

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Section 1 – Scope of Works

Annual Inspection of Critical Ventilation Systems

To carry out a compliance and performance inspection of all critical path ventilation systems in accordance with - Heating and Ventilation Systems - SHTM – Scottish Health Technical Memorandum 03-01: Specialised Ventilation for Healthcare Premises. *Part B: Operational management & Performance Verification.*

This report is for the Monmouth Treatment Pod, located on the 3rd floor of The Princess Alexandra Eye Pavilion. The treatment room is designed to provide a clean environment to a level that meets BS EN ISO 14644-1:2015 Class 7.

Section 2 – Definition of Terms

Assessment of compliance with Health Building Note and Scottish Health Technical Memorandum 03-01

Poor

Air volumes and hence air-change rate is less than 80% of the design. Room pressure differentials do not ensure a flow from clean to less clean areas. Supply or extract air diffusers are not clean. Airborne particle levels are higher than the limits allowable for a Class 7 environment. Visible faults in the fabric of the suite; doors unable to close completely; general air of neglect.

Action: Urgent management action required.

Average

Air volumes and room pressure differentials approximate to the original design values. Supply air diffusers clean but extracts visibly fouled. Airborne particle levels are only just within the limits allowable for a Class 7 environment. Minor faults in the fabric and décor of the suite.

Action: Maintenance action required.

Good

Better than average.

Action: None.

Maintenance quality

Poor

More than three answers are negative.

Action: Management action required by estates/facilities department.

Average

No more than three answers are negative

Action: Maintenance action required.

Good

No answers are negative.

Action: None.

Section 3 – Executive Summary

The HEPA Filter was tested and found to be integral.

The area particle counts achieve the required specification.

All air change rates and room overpressures were recorded and were above the design specification

Section 4 – Ventilation Verification Checklist

	Poor	Average	Good
Compliance with HBN & SHTM			✓
Maintenance Quality		✓	

No	Survey Question	Yes	No	Comments
1	Has the annual verification of the FFU been carried out?	✓		
2	Are windows hermetically sealed?	✓		
3	Are the ceilings in the pod complete and sealed?	✓		
4	Is the room free any significant faults in the fabric of the room?	✓		
5	Are room light fittings correctly sealed?	✓		
6	Do all doors close completely and hold against the room pressure?	✓		
7	Are all supply and extract air terminals and pressure stabilisers visibly clean?	✓		
8	Measure and record the operating room temperature	✓		
9	Measure and record the air flow at all supply and extract terminals	✓		
10	Does the derived air-change rate achieve at least 80% of the design?	✓		
11	Measure and record the room differential pressures	✓		
12	Do the room differential pressures ensure a flow of air from the clean to the less clean areas?	✓		
13	Measure and record the noise levels in the principal rooms of the suite	✓		
14	Do the noise levels fall below the limits set out in Table 2 of Health Technical Memorandum 03-01, Part B?		✓	**Castle Suite exceeds noise levels**

Section 5 – Supply Air Volumes, Air Change Rates Room Pressures & Environment Readings

Grille Volume Flow Rates

Grille Reference	Room Name	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
S1	Castle Suite	0.216	777.6	0.081	266
S2	Braid Suite	0.114	410.6	n/a	n/a
S3		0.112	403.2	n/a	n/a
E1		0.199	716.4	n/a	n/a
S4	Pentland Suite	0.104	374.4	n/a	n/a
S5		0.095	342	n/a	n/a
E2		0.010	36	n/a	n/a

Air Change Rate

Room Reference	Recorded Air Volume m³/hr	Room Volume m³	Recorded ac/hr	SHTM ac/hr
Castle Suite	777.6	28.95	26.0	≥10
Braid Suite	813.8	37.99	21.4	≥10
Pentland Suite	689.4	37.99	18.1	≥10

Room Pressure Differentials

Room Reference	Target Room Pressure (Pa)	Recorded Room Pressure (Pa)
Castle Suite to Corridor	+ve	+1
Braid Suite to Corridor	+ve	+3
Pentland Suite to Corridor	+ve	+19

Environment Readings

Room Reference	Temperature Allowable limits	Temperature Reading	Target Noise Level	Recorded Noise Level
Cleanroom Pod	18 - 25°C	19.8°C	40db(A)	62.2db(A)

Section 6 – HEPA Filter Integrity

Filter Integrity Result

Location	HEPA Filter Ref.	Upstream Challenge (10-100mg/m^3)	Downstream Penetration Reading (%)	Post scan Upstream Concentration (%)	Results (Pass/Fail)
Castle Suite Pod	Supply HEPA	10	0.0002	100	Pass
Acceptance Criteria Test Method: BS EN ISO 14644-3:2005 - BS PD 6609:2007 'Insitu Aerosol testing of HEPA Filter' (Maximum Allowable Penetration = <0.01%)					

Section 7 – Particle Counts

Test Method

Measure the floor area of each of the rooms to be tested.
To achieve the required amount of test stations required you must:

- Review Table A.1 of BSEN ISO 14644-1:2015 to determine the amount of test stations for the floor area.
- Grid out the floor area to achieve test stations.
- Set the tripod to sample at 900mm above the floor level.
- The particle counter is designed to sample 1cfm.
- Set the particle counter to sample 1 minute (28l) sample at each test station.
- On setting up the tripod at each test station, allow for a clean down time at each sample location.
- On completion at each test station, print out the data from the particle counter.

Particle Count Results

Area/Room	ISO Class	Floor Area	Sample Volume (l)	Required Positions
Castle Suite Pod	7	12.75m²	100	6

Test Station	0.5µm	5µm	Pass/Fail
1	16,340	1,800	Pass
2	10,840	1,070	Pass
3	6,390	750	Pass
4	4,990	450	Pass
5	3,480	290	Pass
6	2,700	120	Pass
Equipment Used	A2100075	Calibration Due	January 2027

Section 8 - Test Equipment Used

Type of Equipment	Serial No	Cal Due Date
Micromanometer	TA4652147001	Feb 2027
Environmental Meter	160506299	March 2027
Balometer	PH7312032002	Nov 2026
Photometer	04939	Dec 2026
Smoke Generator	CAG14217	Dec 2026
Particle Counter	A2100075	Jan 2027

Section 9 - Calibration Certificates

CERTIFICATE OF CALIBRATION

Issued By PASS Ltd
Date of Issue **09 February 2026**
Date Received **04 February 2026**

Certificate Number
HAM90605

Pass Ltd (Hamilton branch)
1 Parkburn Court
Parkburn Industrial Estate
Hamilton, ML3 0QQ
Tel: 01698 829711, calibrate@pass.co.uk

Approved Signatory

P.Greenshields D.Rae **X** D.Semple T.Bryson P.Coleman

Customer : H & V Commissioning Services Ltd
Kilknowe Office, 16 Barrmill Road
Galston, Ayrshire, KA4 8HH

Instrument :

System ID :	P0011471
Description :	Air Velocity Meter
Manufacturer :	Airflow
Model Number :	TA465
Serial Number :	TA4652147001
Customer Ref :	
Procedure :	7583

Environmental Conditions
Temperature : 20°C ± 2°C

Comments
This Certificate Records The On Receipt Calibration Status Of The Instrument.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period Weeks*
LCA501 Digital Anemometer	LCA501216002	25264	20/11/2025	52
DPI142 Digital Pressure Indicator	1422562944	135008	12/01/2026	52
744 Process Calibrator	8074003	22610	10/06/2025	52
HMI41 Humidity Indicator	S1330009	UH3444	08/10/2025	52
HMP41/45 Humidity Probe	J3215002	UH3444.	08/10/2025	52

Calibrated By **: D Rae** Date of Calibration : **09 February 2026**

This is to certify the above instrument was fully tested and calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017. The accuracies of the standards used are traceable to National Standards, via UKAS approved laboratories.

CERTIFICATE OF CALIBRATION

AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Probe Model 964 S/N: P21480003			
Velocity	0.28m/s	0.29m/s	0.15m/s
Velocity	0.49m/s	0.51m/s	0.15m/s
Velocity	1.00m/s	1.02m/s	0.15m/s
Velocity	2.00m/s	2.02m/s	0.22m/s
Velocity	5.00m/s	5.05m/s	0.22m/s
Temperature	20.8°C	21.0°C	0.33°C
Probe Model 995 S/N: P21470014			
Velocity	0.28m/s	0.28m/s	0.15m/s
Velocity	0.49m/s	0.51m/s	0.15m/s
Velocity	1.00m/s	1.00m/s	0.15m/s
Velocity	2.00m/s	2.02m/s	0.22m/s
Velocity	5.00m/s	5.02m/s	0.22m/s
Temperature	20.8°C	21.0°C	0.33°C
PRESSURE RANGE			
	500.0PA	495.9PA	0.03%
	1000.0PA	994.2PA	0.03%
	1500.0PA	1489.6PA	0.03%
	2000.0PA	1988.5PA	0.03%
	2500.0PA	2483.0PA	0.03%
	3000.0PA	2978.9PA	0.03%
	3500.0PA	3474.6PA	0.03%

CERTIFICATE OF CALIBRATION

Certificate Number
HAM90605

AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Temperature			
T1			
	0.0°C	0.1°C	0.38°C
	10.0°C	10.1°C	0.38°C
	20.0°C	20.2°C	0.38°C
	30.0°C	30.2°C	0.38°C
	40.0°C	40.2°C	0.38°C
	50.0°C	50.2°C	0.38°C
	60.0°C	60.3°C	0.38°C
	70.0°C	70.3°C	0.38°C
	80.0°C	80.3°C	0.38°C
	90.0°C	90.3°C	0.38°C
	100.0°C	100.3°C	0.38°C
T2			
	0.0°C	0.0°C	0.38°C
	10.0°C	10.1°C	0.38°C
	50.0°C	50.2°C	0.38°C
	100.0°C	100.3°C	0.38°C

End of Results.

CERTIFICATE OF CALIBRATION

Issued By PASS Ltd
Date of Issue **19 March 2026**
Date Received **18 March 2026**

Certificate Number
HAM92053

Pass Ltd (Hamilton branch)
1 Parkburn Court
Parkburn Industrial Estate
Hamilton, ML3 0QQ
Tel: 01698 829711, calibrate@pass.co.uk

Approved Signatory

P.Greenshields D.Rae D.Semple **X** T.Bryson P.Coleman

Customer : H & V Commissioning Services Ltd
Kilknowe Office, 16 Barrmill Road
Galston, Ayrshire, KA4 8HH

Instrument :

System ID :	ID23629
Description :	Environment Meter
Manufacturer :	Precision Gold
Model Number :	N09AQ
Serial Number :	160506299
Customer Ref :	
Procedure :	2491

Environmental Conditions
Temperature : 20°C ± 2°C

Comments
This Certificate Records The On Receipt Calibration Status Of The Instrument.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period Weeks*
P100B Sound Level Calibrator	035219	G005583	16/09/2024	104
HMI41 Humidity Indicator	S1330009	UH3444	08/10/2025	52
HMP41/45 Humidity Probe	J3215002	UH3444.	08/10/2025	52

Calibrated By **: D Semple** Date of Calibration : **19 March 2026**

This is to certify the above instrument was fully tested and calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017. The accuracies of the standards used are traceable to National Standards, via UKAS approved laboratories.

CERTIFICATE OF CALIBRATION

Certificate Number
HAM92053

AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Sound Level Meter			
Lo C	94dB	92.8dB	0.6dB
Hi C	94dB	93.1dB	0.6dB
Hi C	104dB	103.1dB	0.6dB
Humidity Meter			
%Rh	50.3%Rh	49.5%Rh	1.56%Rh
Temperature Meter			
°C	25.0°C	22.1°C	0.33°C

End Of Results

CERTIFICATE OF CALIBRATION

Certificate Number 290025

Issued By Instrument Repairs & Calibration

Date of Issue 12 November 2025 Date of Calibration : 12 November 2025

Instrument Repairs and Calibration
5 Howard Court,
East Kilbride, G74 4QZ
Tel: 01355 264120
www.instrument-repairs.com

Approved Signatory

Keith Low

Customer : H&V Commissioning Services Ltd
Kilknowe Offices
Galston
16 Barrmill Road
KA4 8HY

Instrument -

System ID :	IRC68183
Description :	Balometer
Manufacturer :	TSI/Airflow
Model Number :	PH731
Serial Number :	PH7312032002
Procedure Version	4876

Customer Ref :
Job Number : R116267-2

Environmental Conditions

Temperature : 23°C ± 3°C
Relative Humidity : 50%RH ± 25%RH
Mains Voltage : 230V ± 20V
Mains Frequency 50Hz ± 1Hz

Comments

The instrument stabilised in the laboratory for 4 hours prior to calibration.
Results at the time of test carry no long term stability of the instrument.
This certificate records the ON RECEIPT calibration status.
Recalibration period 52 weeks by customer request.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period*
CP6050 Pressure Calibrator	41000UIV	19031 19032	25/04/2024	156

Electronically Signed : K. Low

Calibrated By : Keith Low
Date of receipt : 07 November 2025

This is to certify that the above instrument was fully calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017.
The accuracies of the standards used are traceable to National Standards,via UKAS approved laboratories.
The copyright of this certificate is owned by IRC Ltd and may not be reproduced except with the prior written approval of the issuing laboratory.
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor *k*=2 providing a level of confidence of approximately 95%.

CERTIFICATE OF CALIBRATION

Certificate Number
290025

Test Title	Tolerance	Applied Value	Reading	Pass / Fail
Pascals	15.5pa	250.0pa	255pa	PASS
	28pa	500.0pa	518pa	PASS
	37.5pa	750pa	761pa	PASS
	53pa	1000.0pa	1025pa	PASS
	20pa	2000.0pa	2019pa	PASS
	153pa	3000.0pa	3025pa	PASS
Negative	50pa	1000.0pa	1005pa	PASS
	100pa	2000.0pa	2010pa	PASS
	150pa	3000.0pa	3028pa	PASS

End of Results

Uncertainties
Pressure TE69 : 0- 1000mBar +/- 0.01% of reading

The Authority in HEPA support

S & M Electronics Ltd.
105 Eastcote Road, Pinner,
Middlesex HA5 1ET, UK.
Tel : (020) 8429 1222
Fax: (020) 8248 4313
info@sandmelectronics.com

AEROSOL PHOTOMETER CERTIFICATE OF CALIBRATION

Certificate No:	20719	Test Date:	3rd December 2025
Manufacturer:	TEC SERVICES INC	Model:	PH 4
Serial No:	4939	Test Due:	3rd December 2026
Customer:	H & V Commissioning Services Kilknowe Office, 16 Barrmill Road, Galston, Ayrshire KA4 8HH	Contact:	Ms. Angela Daly

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This instrument has been tested & Calibrated in accordance with the manufacturer's specification against our Aerosol Test Rig & Certified to meet all current U.S.A. & U.K. requirements for filter testing. This includes the following: CS-1T,2T,6T; ANSI 101 & 150; NSF 49,ASTM D-1899; IEST-RP-CC-013-86-T, IEST-RP-CC-002.2, IEST-RP-CC-034.1,EN 12469:2000, ISO 14644-3 and British Standard BS5295 and BS EN 1822.

The Aerosol Test Rig is calibrated annually when the actual mass concentration is measured by collecting and weighing the particulate, using Sartorius Scale Model 1712 s/n 3308 087 which has been certified by Sartorius Limited, UKAS Certificate No: 509NHA106, to meet British Standard using weights traceable to NPL standard. **Shell Ondina Oil X420 (OND)** is used for calibration of Aerosol Photometer.

Expanded Uncertainty of Measurement: ± 3.3%

Stated uncertainty based on a temperature, humidity and pressure within 18-25 ^{O} C, 35 to 70% RH and 960 to 1045 mbar.

Reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Calibration Completed by: *Atul Patel* Mr. A. Patel (Engineer)



ISO 9001
QUALITY MANAGEMENT

S & M Electronics Ltd.
105 Eastcote Road, Pinner,
Middlesex HA5 1ET, UK.
Tel : (020) 8429 1222
Fax: (020) 8248 4313
info@sandmelectronics.com

The Authority in HEPA support

AEROSOL PHOTOMETER CALIBRATION REPORT

Customer Name: H & V Commissioning Services Ltd ***(OND)*** Date: 3-Dec-2025

SHELL Ondina Oil (MK III)

Model No : PH 4 Serial No : 4939 Our Ref: 20719

Internal Reference set point Check.	Set Memory	Tolerance
Previous Service:	100.00	Ug/Litre.
Before Calibration:	100.00	10.00% +/-

D.C. Power supplies Volts :	12.00 Volt +	12.00 Volt -	5.00. +V	Pump: +V
	11.64	11.94	5.15	24.18

Test:		Linear Reading:
1	22	100.00%
2	21	92.60%
3	20	50.90%
4	19	27.60%
5	18	0.1600%
6	15	0.1100%
7	10	0.0230%
8	8	0.0140%
9	5	0.0042%
10	4	0.0029%
11	1	0.0001%

Rev: 1.535, 1.2

1= 0.00005

2= 0.0005

3= 0.005

		Channel :
PMT Gain:	97	4
Stray Light:	0.05	
Memory Value:	100.00	ug/Litre.
Air Flow :	28.50	Litre /Min.

Tolerance:µg/l ± 10 %

Expanded Uncertainty of Measurement 3.3%

Reported expanded uncertainty is based on standard uncertainty multiplied by coverage factor of k=2, Providing a level of confidence of approximately 95%.

This Photometer is Calibrated by: *Atul Patel* Date: 3-Dec-2025

ISO 9001 QUALITY MANAGEMENT

THIS DOCUMENT IS VALID FOR 12 MONTHS FROM DATE OF CALIBRATION

The Authority in HEPA support

S & M Electronics Ltd.
105 Eastcote Road, Pinner,
Middlesex HA5 1ET, UK.
Tel : (020) 8429 1222
Fax: (020) 8248 4313
info@sandmelectronics.com

CERTIFICATE OF ELECTRICAL SAFETY TEST

Certificate No:	20719	Test Date:	3rd December 2025
Manufacturer:	TEC SERVICES INC	Model:	PH 4
Serial No:	4939	Test Due:	3rd December 2026
Customer:	H & V Commissioning Services Kilknowe Office, 16 Barrmill Road, Galston, Ayrshire KA4 8HH	Contact:	Ms. Angela Daly

---

This instrument has been tested against our portable appliance tester Seaward Europa Plus S/N: 27B-0771

The results are as follows:

Test Number	:	20719		
Date	:	3rd December 2025		
Test Mode	:	Automatic		
Visual Check	:	Pass		
Earth Test	:	0.12	Ohms	Pass
Insulation Test	:	>99.9	Meg Ohms	Pass
Load Test	:	<0.05	K.V.A.	Pass
Leakage Test	:	1.24	Ma	Pass

Test Completed by: *Atul Patel* Mr. A. Patel (Engineer)

Certified Test Equipment: Seaward Europa Plus S/N: 27B-0771



British Assessment Bureau UKAS MANAGEMENT SYSTEMS 8289 ISO 9001 QUALITY MANAGEMENT

The Authority in HEPA support

S & M Electronics Ltd.
105 Eastcote Road, Pinner,
Middlesex HA5 1ET, UK.
Tel : (020) 8429 1222
Fax: (020) 8248 4313
info@sandmelectronics.com

AEROSOL GENERATOR CERTIFICATE OF COMPLIANCE

Certificate No:	20717	Test Date:	3rd December 2025
Manufacturer:	S&M Electronics Limited	Model:	SCIENTIFIC
Serial No:	CAG 14217	Test Due:	3rd December 2026
Customer:	H & V Commissioning Services Limited Kilknowe Office, 16 Barrmill Road, Galston, Ayrshire KA4 8HH	Contact:	Ms. Angela Daly

---

Upon receipt by S & M Electronics Limited, on first inspection & testing, the Generator Heater Block Temperature was 347 °C (Tolerance +/- 10 °C) & the instrument was found to be in good working order.

This instrument has been serviced by S & M Electronics Limited in accordance with the Manufacturer's requirements, having been fully tested and found to be in good order.

This equipment has been tested using instruments traceable to National Standard. The measurements were correct at the time of testing.

The testing was performed in the service area at room temperature of 21 °C +/- 5 °C.
Environmental considerations are not relevant to the performance of the instrument.

Results:

Heater Block Temperature: 346 °C +/- 10 °C. Regulator: 0 - 60 PSI
Heater Assembly: 230V 1.00K Watts. Output: Infinity Variable 0 – 60 PSI
Smoke Output: 0- 200 m³/min @ 40-50cm visibility
Oil/Gas ratio: Smear free at 20 P.S.I. visually at 5-6cm from the heater block nozzle.
Only **Shell Ondina X420 Oil** is recommended for this equipment.

Completed by: *Atul Patel* Mr. A. Patel (Engineer)

Certified Test Equipment: Model TLK - 38 S/N: S&M CAL-4 UKAS Cert. No: C68498

S & M ELECTRONICS TESTED & CALIBRATED LIMITED

British Assessment Bureau UKAS MANAGEMENT SYSTEMS 8289 ISO 9001 QUALITY MANAGEMENT

The Authority in HEPA support

S & M Electronics Ltd.
105 Eastcote Road, Pinner,
Middlesex HA5 1ET, UK.
Tel : (020) 8429 1222
Fax: (020) 8248 4313
info@sandmelectronics.com

CERTIFICATE OF ELECTRICAL SAFETY TEST

Certificate No:	20717-1	Test Date:	3rd December 2025
Manufacturer:	S&M Electronics Limited	Model:	SCIENTIFIC
Serial No:	CAG 14217	Test Due:	3rd December 2026
Customer:	H & V Commissioning Services Limited Kilknowe Office, 16 Barrmill Road, Galston, Ayrshire KA4 8HH	Contact:	Ms. Angela Daly

---

This instrument has been tested against our portable appliance tester Seaward Europa Plus S/N: 27B-0771

The results are as follows:

Test Number	:	20717		
Date	:	3rd December 2025.		
Test Mode	:	Automatic		
Visual Check	:	Pass		
Earth Test	:	0.13	Ohms	Pass
Insulation Test	:	>99.99	Meg Ohms	Pass
Load Test	:	0.98	K.V.A.	Pass
Leakage Test	:	<0.10	Ma	Pass

Test Completed by: *Atul Patel* Mr. A. Patel (Engineer)

Certified Test Equipment: Seaward Europa Plus S/N: 27B-0771



ISO 9001 QUALITY MANAGEMENT

PMT GB Ltd.

CERTIFICATE OF CALIBRATION

Calibration laboratory
Kalibrierlaboratorium

Calibration Certificate No: RMA UK 18905 ISO 9001:2015
Kalibrierschein:

Object *Gegenstand*	**PMT Aerosol Particle Counter**
Manufacture *Hersteller*	**MicronView LLC**
Model *Model*	**Portable PMT A210 Mini APC 100.0LPM.**
Serial number *Seriennummer*	**A2100075**
Customer inventory No. *Kd.Inventar-Nr*	-
Customer Details *Auftraggeber*	**H & V Commissioning Services**
Customer Address *Kundenadresse*	**16 Barrmill Road, Galston KA4 8HH Ayrshire**
Customer order No. *Kd.-Auftragsnummer*	-

PMT certifies that the instrument listed here meets or exceeds all published specifications by the manufacture and has been calibrated using equipment and standards traceable to national or international Standards (e.g. N.I.S.T; JIS; PTB). The used calibration procedure (SOP) is in accordance with relative standards appropriate to the instrument under test and can be viewed by an audit at PMT. The test results are valid at the moment of calibration. The user is obliged to have the object recalibrated.The ISO 21501 recommends a calibration interval of no longer than 12 months.

Die Firma PMT bestätigt, dass das hier aufgelistete Partikelmessgerät den veröffentlichten Herstellerspezifikationen entspricht. Es werden ausschließlich Prüfmittel und Kalibrierstandards verwendet, die auf nationale oder internationale Standards (z.B. N.I.S.T; JIS; PTB) rückführbar sind. Die verwendete Kalibriervorschrift (SOP) entspricht den für das zu prüfende Gerät geltenden Normen und kann im Rahmen eines Audits bei PMT eingesehen werden. Die Messergebnisse gelten zum Zeitpunkt der Kalibrierung. Für die Einhaltung der Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich. Die ISO 21501 schlägt einen Kalibrierintervall von nicht länger als 12 Monate vor.

Number of pages of the certificate **2**
Anzahl der Seiten des Kalibrierscheins

Date of calibration **27. January 2026**
Datum der Kalibrierung

This calibration certificate may not be reproduced other than in full except with the permission of the issuing laboratory. Calibration certificates without signature are not valid.

Dieser Kalibrierschein darf nur vollständig und unverändert weiterverbreitet werden. Auszüge oder Änderungen bedürfen der Genehmigung des ausstellenden Kalibrierlaboratoriums. Kalibrierscheine ohne Unterschrift haben keine Gültigkeit.

Calibration Engineer
Bearbeiter

Joseph Egginton

Date of issue
Ausgabedatum

27 Jan 26

Object *Kalibriergegenstand*	**PMT Aerosol Particle Counter**		
Calibration Certificate *Kalibrierschein*	**RMA UK 18905**		
Model *Model*	**Portable PMT A210** **Mini APC 100.0LPM.**	*Serial number* *Seriennummer*	**A2100075**

Calibration standard *Kalibriernorm*	**ISO 21501-4:2018**
Calibration procedure *Kalibrierverfahren*	**Mini APC**
Place of Calibration *Ort der Kalibrierung*	**PMT Malvern**
As found *as found*	**In manufactures specification**
As Left *as left*	**In manufacturers specification**

Calibration standards used
Verwendete Kalibrierstandards

Actual size / Größe	*Range / Genauigkeit*	*Deviation / Stand.Abw.*	*Lot. No. / Lot. Nr.*	*Cert. date / Zert. Datum*	*Exp. date / Ablaufdatum*
0.510um	***+/- 7.0nm***	**9.2nm**	**268638**	**03/2023**	**06/2026**
0.994um	***+/- 0.021um***	**0.01um**	**275827**	**05/2023**	**01/2027**
2.02um	***+/-0.015um***	**0.021um**	**282917**	**01/2024**	**07/2027**
2.998um	***+/-0.032um***	**0.03um**	**279595**	**10/2023**	**04/2027**
9.93um Dry	***0.12um***	**0.13um**	**272121**	**09/2023**	**09/2026**

Test equipments used
Verwendete Prüfmittel

Model / Model	*Serial number / Seriennummer*	*Cal. date / Kal. Datum*	*Next cal. / nächste Kal.*	*Certification no. / Kalibrierschein-Nr.*
A150 Reference Unit	***A1500010***	**04/2025**	**04/2026**	**RMA UK 17607**
TSI Mass Flowmeter	***40460710006***	**07/2025**	**07/2026**	**C259766**
(Flowmeter standard conditions as 21.1°C and 101.3 kPa)				

SHTM 03-01 CRITICAL VENTILATION ANNUAL VERIFICATION & INSPECTION

MINOR OPS THEATRE

Client:	NHS Lothian	**Client Contact:**	Scott Robertson
Hospital:	The Princess Alexandra Eye Pavilion	**Site Address:**	Chalmers Street, Edinburgh EH3 9HA
Area:	Minor Ops Theatre	**AHU:**	CHV053 AHU
Theatre Condition:	Average	**Report No:**	PM05-060626
Date of Test:	6th June 2026	**Date of Last Test:**	17th April 2025
Test Engineer & Report Preparation:	Paul McShee	**Signature:**	
H&V Approval:	Steven McFadyen	**Signature:**	
Client Reviewed by:		**Signature:**	

H&V COMMISSIONING SERVICES LTD
KILKNOWE OFFICE
16 BARRMILL ROAD
GALSTON
AYRSHIRE
KA4 8HH

Table of Contents

1. Scope of Works
2. Definition of Terms
3. Executive Summary
4. Ventilation Verification Checklist
5. Supply / extract flow rates & air change rates
6. Room Pressure Differentials, Temperature, Humidity & Noise Levels
7. Schematic Layout of Minor Ops Theatre
8. Test Equipment Used
9. Calibration Certificates

Section 1 – Scope of Works

Annual Inspection of Critical Ventilation Systems

To carry out a compliance and performance inspection of all critical path ventilation systems in accordance with - Heating and Ventilation Systems - SHTM – Scottish Health Technical Memorandum 03-01: Specialised Ventilation for Healthcare Premises. *Part B: Operational management & Performance Verification.*

This report is for Minor Ops Theatre, located on level 4 in The Princess Alexandra Eye Pavilion.

Section 2 – Definition of Terms

Assessment of compliance with Health Building Note 26 and Scottish Health Technical Memorandum 03-01 (all questions relevant to the type of theatre)

Poor

Air volumes and hence air-change rate is less than 80% of the design. Room pressure differentials do not ensure a flow from clean to less clean areas. Supply or extract air diffusers are not clean; pressure stabilisers not clean and/or not operating correctly. Significant faults or failures of indicators on surgeon's panel. Visible faults in the fabric of the suite; doors unable to close completely, general air of neglect.

Action: Urgent management action required.

Average

Air volumes and room pressure differentials approximate to the original design values; supply air diffusers clean but extracts visibly fouled; most pressure stabilisers clean and operating correctly; some of the indicators on the surgeons panel not working; minor faults in the fabric and décor of the suite.

Action: Maintenance action required.

Good

Better than average.

Action: None.

Maintenance quality (all questions relevant to the type of theatre)

Poor

More than three answers are negative.

Action: Management action required by estates/facilities department.

Average

No more than three answers are negative

Action: Maintenance action required.

Good

No answers are negative.

Action: None.

Section 3 – Executive Summary

Theatre

- All air change rates are below the recommended limit however fall within 80%
- All pressures below recommended limit however, the airflow is in the correct direction,
- All room noise levels are above recommended limit.

Section 4 – Ventilation Verification Checklist

	Poor	Average	Good
Compliance with HBN & SHTM		✓	
Maintenance Quality		✓	

No	Survey Question	Yes	No	Comments
1	Has the annual verification of the AHU been carried out?	✓		
2	Are windows hermetically sealed?			n/a
3	Are the ceilings in the theatre and prep room complete and sealed?	✓		
4	Is the fabric of the rooms in the suite free from any significant faults?	✓		
5	Are room light fittings correctly sealed?	✓		
6	Do all doors close completely and hold against the room pressure?	✓		
7	Are the pressure stabilisers operating correctly and silently?			n/a
8	Are all supply and extract air terminals and pressure stabilisers visibly clean?	✓		
9	Measure and record the operating room temperature	✓		
10	Does this accord with that displayed on the surgeon's panel?			n/a
11	Measure and record the operating room relative humidity	✓		
12	Does this accord with that displayed on the surgeon's panel?			n/a
13	Measure and record the supply and extract air flow in the principle ducts		✓	No test holes are drilled in ducting
14	Measure and record the air flow at all supply and extract terminals	✓		
15	Does the derived air-change rate achieve at least 80% of the design?	✓		
16	For UCV units, also measure and record the air velocities within the canopy using the method set out in Chapter 8 of Health Technical Memorandum 03-01 (Part A)			n/a
17	Do the air velocities achieve the standard appropriate for the type of canopy?			n/a
18	Measure and record the room differential pressures	✓		
19	Do the room differential pressures ensure a flow of air from the clean to the less clean areas?	✓		
20	Measure and record the noise levels in the principal rooms of the suite	✓		
21	Do the noise levels fall below the limits set out in Table 2 of Health Technical Memorandum 03-01, Part B?		✓	
22	Check the operation of all ventilation control functions represented on the surgeon's panel.			n/a
23	Do the indicators accurately represent the operational state of the ventilation system(s)?			n/a
24	For UCV systems: is the UCV and AHU interlocked to ensure that the AHU runs at full speed when the UCV is at operating speed or at set-back? (see Table 6 in Health Technical Memorandum 03-01, Part A)			n/a
25	With the UCV running at set-back, does the system maintain the standard of a conventional operating room?			n/a
26	For all theatres: with the system running at set-back, does it maintain a flow of air from the clean to the less clean areas?			n/a

Section 5 – Supply / Extract Air Volumes & Air Change Rates

Grille Volume Flow Rates

Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
S1	0.192	691.2	0.229	84
Rec	0	0	n/a	n/a
E1	0.173	622.8	n/a	n/a
Rec	0	0	n/a	n/a

Air Change Rates

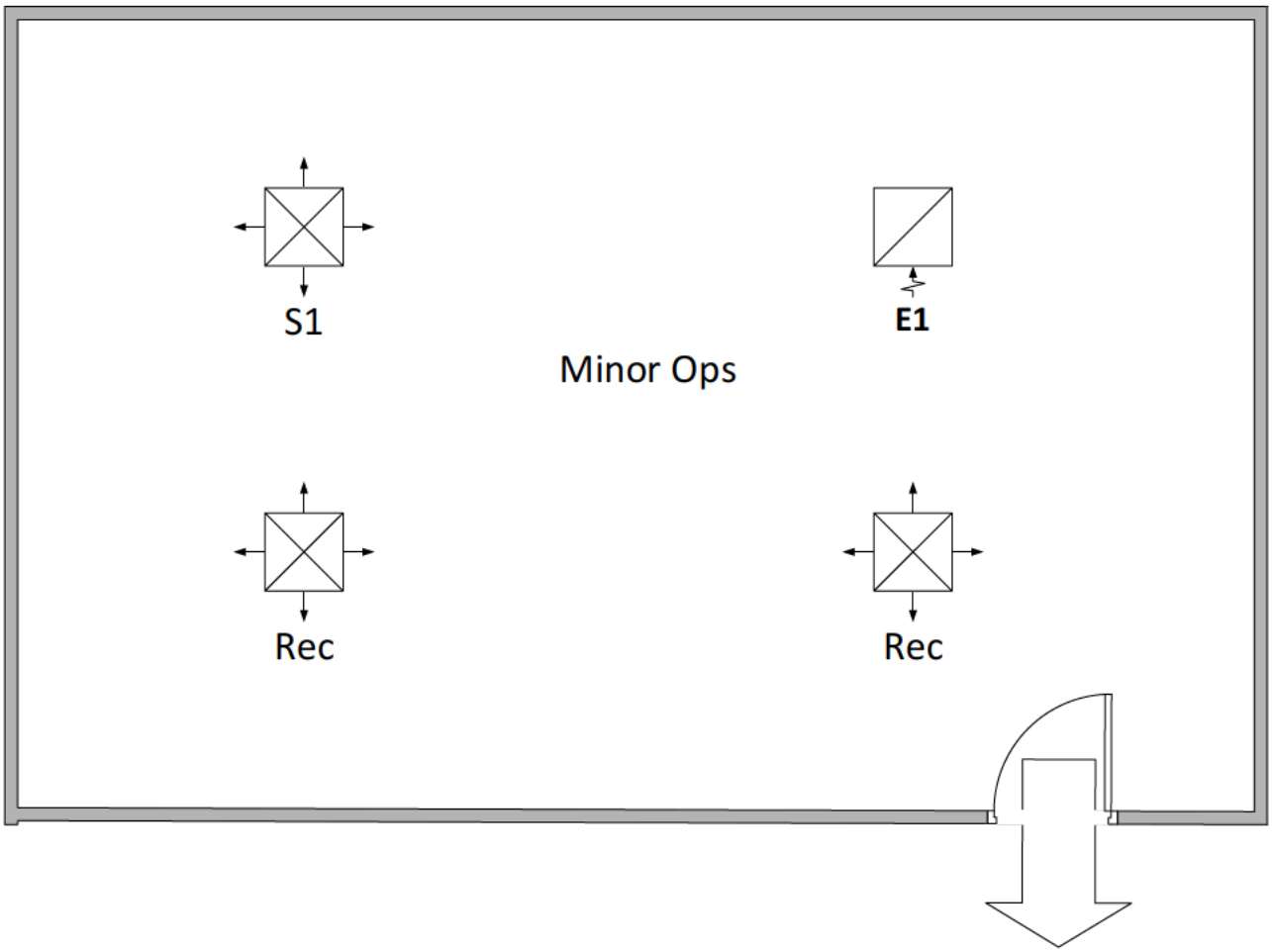
Room Reference	Recorded Air Volume m³/hr	Room Volume m³	Recorded ac/hr	SHTM 03-01 Air Change Rates ac/hr
Theatre	691.2	54.8	12.6	15

Section 6 – Room Pressure Differentials, Temperature, Humidity & Noise Levels

Environmental Results

Room Reference	SHTM Room Pressure (Pa)	Recorded Room Pressures (Pa)	Recorded Temp °C Target 18 – 25°C	Recorded %RH	Theatre Recorded Noise Target 45dBA
Theatre	+ve	+0.6	19.4	42.1	49.3
Comments: All noise levels are above the current SHTM limits.					

Section 7 – Schematic Layout of Princess Alexandra Eye Pavilion – Minor Ops Theatre



Section 8 - Test Equipment Used

Type of Equipment	Serial No	Cal Due Date
Micromanometer	TA4652147001	February 2027
Environmental Meter	160506299	March 2027
Balometer	PH7312032002	November 2026

Section 9 - Calibration Certificates

CERTIFICATE OF CALIBRATION

Certificate Number 290025

Issued By Instrument Repairs & Calibration

Date of Issue 12 November 2025 Date of Calibration : 12 November 2025

Instrument Repairs and Calibration
5 Howard Court,
East Kilbride, G74 4QZ
Tel: 01355 264120
www.instrument-repairs.com

Approved Signatory

Keith Low

Customer : H&V Commissioning Services Ltd
Kilknowe Offices
Galston
16 Barrmill Road
KA4 8HY

Instrument -

System ID :	IRC68183
Description :	Balometer
Manufacturer :	TSI/Airflow
Model Number :	PH731
Serial Number :	PH7312032002
Procedure Version	4876

Customer Ref :
Job Number : R116267-2

Environmental Conditions

Temperature : 23°C ± 3°C
Relative Humidity : 50%RH ± 25%RH
Mains Voltage : 230V ± 20V
Mains Frequency 50Hz ± 1Hz

Comments

The instrument stabilised in the laboratory for 4 hours prior to calibration.
Results at the time of test carry no long term stability of the instrument.
This certificate records the ON RECEIPT calibration status.
Recalibration period 52 weeks by customer request.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period*
CP6050 Pressure Calibrator	41000UIV	19031 19032	25/04/2024	156

Electronically Signed : K. Low

Calibrated By : Keith Low
Date of receipt : 07 November 2025

This is to certify that the above instrument was fully calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017.
The accuracies of the standards used are traceable to National Standards,via UKAS approved laboratories.
The copyright of this certificate is owned by IRC Ltd and may not be reproduced except with the prior written approval of the issuing laboratory.
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor *k*=2 providing a level of confidence of approximately 95%.

CERTIFICATE OF CALIBRATION

Certificate Number
290025

Test Title	Tolerance	Applied Value	Reading	Pass / Fail
Pascals	15.5pa	250.0pa	255pa	PASS
	28pa	500.0pa	518pa	PASS
	37.5pa	750pa	761pa	PASS
	53pa	1000.0pa	1025pa	PASS
	20pa	2000.0pa	2019pa	PASS
	153pa	3000.0pa	3025pa	PASS
Negative	50pa	1000.0pa	1005pa	PASS
	100pa	2000.0pa	2010pa	PASS
	150pa	3000.0pa	3028pa	PASS

End of Results

Uncertainties
Pressure TE69 : 0- 1000mBar +/- 0.01% of reading

CERTIFICATE OF CALIBRATION

Issued By PASS Ltd
Date of Issue **19 March 2026**
Date Received **18 March 2026**

Certificate Number
HAM92053

Pass Ltd (Hamilton branch)
1 Parkburn Court
Parkburn Industrial Estate
Hamilton, ML3 0QQ
Tel: 01698 829711, calibrate@pass.co.uk

Approved Signatory

P.Greenshields D.Rae D.Semple **X** T.Bryson P.Coleman

Customer : H & V Commissioning Services Ltd
Kilknowe Office, 16 Barrmill Road
Galston, Ayrshire, KA4 8HH

Instrument :

System ID :	ID23629
Description :	Environment Meter
Manufacturer :	Precision Gold
Model Number :	N09AQ
Serial Number :	160506299
Customer Ref :	
Procedure :	2491

Environmental Conditions
Temperature : 20°C ± 2°C

Comments
This Certificate Records The On Receipt Calibration Status Of The Instrument.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period Weeks*
P100B Sound Level Calibrator	035219	G005583	16/09/2024	104
HMI41 Humidity Indicator	S1330009	UH3444	08/10/2025	52
HMP41/45 Humidity Probe	J3215002	UH3444.	08/10/2025	52

Calibrated By **: D Semple** Date of Calibration : **19 March 2026**

This is to certify the above instrument was fully tested and calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017. The accuracies of the standards used are traceable to National Standards, via UKAS approved laboratories.

CERTIFICATE OF CALIBRATION

Certificate Number
HAM92053

AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Sound Level Meter			
Lo C	94dB	92.8dB	0.6dB
Hi C	94dB	93.1dB	0.6dB
Hi C	104dB	103.1dB	0.6dB
Humidity Meter			
%Rh	50.3%Rh	49.5%Rh	1.56%Rh
Temperature Meter			
°C	25.0°C	22.1°C	0.33°C

End Of Results

CERTIFICATE OF CALIBRATION

Issued By PASS Ltd
Date of Issue **09 February 2026**
Date Received **04 February 2026**

Certificate Number
HAM90605

Pass Ltd (Hamilton branch)
1 Parkburn Court
Parkburn Industrial Estate
Hamilton, ML3 0QQ
Tel: 01698 829711, calibrate@pass.co.uk

Approved Signatory

P.Greenshields D.Rae **X** D.Semple T.Bryson P.Coleman

Customer : H & V Commissioning Services Ltd
Kilknowe Office, 16 Barrmill Road
Galston, Ayrshire, KA4 8HH

Instrument :

System ID :	P0011471
Description :	Air Velocity Meter
Manufacturer :	Airflow
Model Number :	TA465
Serial Number :	TA4652147001
Customer Ref :	
Procedure :	7583

Environmental Conditions
Temperature : 20°C ± 2°C

Comments
This Certificate Records The On Receipt Calibration Status Of The Instrument.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period Weeks*
LCA501 Digital Anemometer	LCA501216002	25264	20/11/2025	52
DPI142 Digital Pressure Indicator	1422562944	135008	12/01/2026	52
744 Process Calibrator	8074003	22610	10/06/2025	52
HMI41 Humidity Indicator	S1330009	UH3444	08/10/2025	52
HMP41/45 Humidity Probe	J3215002	UH3444.	08/10/2025	52

Calibrated By **: D Rae** Date of Calibration : **09 February 2026**

This is to certify the above instrument was fully tested and calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017. The accuracies of the standards used are traceable to National Standards, via UKAS approved laboratories.

CERTIFICATE OF CALIBRATION

AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Probe Model 964 S/N: P21480003			
Velocity	0.28m/s	0.29m/s	0.15m/s
Velocity	0.49m/s	0.51m/s	0.15m/s
Velocity	1.00m/s	1.02m/s	0.15m/s
Velocity	2.00m/s	2.02m/s	0.22m/s
Velocity	5.00m/s	5.05m/s	0.22m/s
Temperature	20.8°C	21.0°C	0.33°C
Probe Model 995 S/N: P21470014			
Velocity	0.28m/s	0.28m/s	0.15m/s
Velocity	0.49m/s	0.51m/s	0.15m/s
Velocity	1.00m/s	1.00m/s	0.15m/s
Velocity	2.00m/s	2.02m/s	0.22m/s
Velocity	5.00m/s	5.02m/s	0.22m/s
Temperature	20.8°C	21.0°C	0.33°C
PRESSURE RANGE			
	500.0PA	495.9PA	0.03%
	1000.0PA	994.2PA	0.03%
	1500.0PA	1489.6PA	0.03%
	2000.0PA	1988.5PA	0.03%
	2500.0PA	2483.0PA	0.03%
	3000.0PA	2978.9PA	0.03%
	3500.0PA	3474.6PA	0.03%

CERTIFICATE OF CALIBRATION

Certificate Number
HAM90605

AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Temperature			
T1			
	0.0°C	0.1°C	0.38°C
	10.0°C	10.1°C	0.38°C
	20.0°C	20.2°C	0.38°C
	30.0°C	30.2°C	0.38°C
	40.0°C	40.2°C	0.38°C
	50.0°C	50.2°C	0.38°C
	60.0°C	60.3°C	0.38°C
	70.0°C	70.3°C	0.38°C
	80.0°C	80.3°C	0.38°C
	90.0°C	90.3°C	0.38°C
	100.0°C	100.3°C	0.38°C
T2			
	0.0°C	0.0°C	0.38°C
	10.0°C	10.1°C	0.38°C
	50.0°C	50.2°C	0.38°C
	100.0°C	100.3°C	0.38°C

End of Results.

SHTM 03-01 CRITICAL VENTILATION ANNUAL VERIFICATION & INSPECTION

THEATRE 2

Client:	NHS Lothian	**Client Contact:**	Scott Robertson
Hospital:	The Princess Alexandra Eye Pavilion	**Site Address:**	Chalmers Street, Edinburgh EH3 9HA
Area:	Theatre 2	**AHU:**	CHV048
Theatre Condition:	Poor	**Report No:**	PM04-060626
Date of Test:	6th June 2026	**Date of Last Test:**	17th April 2025
Test Engineer & Report Preparation:	Paul McShee	**Signature:**	
H&V Approval:	Steven McFadyen	**Signature:**	
Client Reviewed by:	Scott Robertson	**Signature:**	

H&V COMMISSIONING SERVICES LTD
KILKNOWE OFFICE
16 BARRMILL ROAD
GALSTON
AYRSHIRE
KA4 8HH

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7. Schematic Layout of Theatre 2
8. Test Equipment Used
9. Calibration Certificates

Section 1 – Scope of Works

Annual Inspection of Critical Ventilation Systems

To carry out a compliance and performance inspection of all critical path ventilation systems in accordance with - Heating and Ventilation Systems - SHTM – Scottish Health Technical Memorandum 03-01: Specialised Ventilation for Healthcare Premises. *Part B: Operational management & Performance Verification.*

This report is for operating theatre 2, located in The Princess Alexandra Eye Pavilion.

Section 2 – Definition of Terms

Assessment of compliance with Health Building Note 26 and Scottish Health Technical Memorandum 03-01 (all questions relevant to the type of theatre)

Poor

Air volumes and hence air-change rate is less than 80% of the design. Room pressure differentials do not ensure a flow from clean to less clean areas. Supply or extract air diffusers are not clean; pressure stabilisers not clean and/or not operating correctly. Significant faults or failures of indicators on surgeon's panel. Visible faults in the fabric of the suite; doors unable to close completely, general air of neglect.

Action: Urgent management action required.

Average

Air volumes and room pressure differentials approximate to the original design values; supply air diffusers clean but extracts visibly fouled; most pressure stabilisers clean and operating correctly; some of the indicators on the surgeons panel not working; minor faults in the fabric and décor of the suite.

Action: Maintenance action required.

Good

Better than average.

Action: None.

Maintenance quality (all questions relevant to the type of theatre)

Poor

More than three answers are negative.

Action: Management action required by estates/facilities department.

Average

No more than three answers are negative

Action: Maintenance action required.

Good

No answers are negative.

Action: None.

Section 3 – Executive Summary

Theatre

- Pressure – As there is no direct door to the clean corridor from the theatre, the collective pressure through recovery where the patients enter has been calculated to give overall pressure. A collective pressure of +47Pa was recorded which is well above the required +25Pa for an operating theatre. This high pressure is pushing against the door to recovery causing it to stay slightly open. This may cause reduced protection against ingress of contaminated air and disruption to designed airflow patterns.

Anaesthetic

- Pressure – Pressure recorded from anaesthetic room to corridor was +8Pa instead of +15Pa which is less that 80% of design. This area is where patients are prepared, induced and transferred to the theatre. The primary purpose of the required air change in the ventilation system is to dilute and remove airborne contamination which risks reaching the surgical site, increasing chance of infection to the patient.

Prep (SPS)

- SPS has a negative pressure towards any corridor within the theatre suite. The purpose of the SPS is to store sterile instruments and consumables before use. It should be maintained at a positive pressure relative to surrounding areas so that when doors are opened air flows outwards helping protect sterile items from contamination.

Surgeons Panel

- **S**urgeons panel has no indication of relative humidity within the theatre. Without this being monitored a potential increase of microbial growth like mould and mildew may occur and may possibly contribute to a higher risk of would infections.

Section 4 – Ventilation Verification Checklist

	Poor	Average	Good
Compliance with HBN & SHTM	✓		
Maintenance Quality	✓		

No	Survey Question	Yes	No	Comments
1	Has the annual verification of the AHU been carried out?	✓		
2	Are windows hermetically sealed?		✓	Window cracked in Recovery
3	Are the ceilings in the theatre and prep room complete and sealed?	✓		
4	Is the fabric of the rooms in the suite free from any significant faults?	✓		
5	Are room light fittings correctly sealed?	✓		
6	Do all doors close completely and hold against the room pressure?		✓	Theatre to Recovery not holding
7	Are the pressure stabilisers operating correctly and silently?	-	-	n/a
8	Are all supply and extract air terminals and pressure stabilisers visibly clean?	✓		
9	Measure and record the operating room temperature	✓		
10	Does this accord with that displayed on the surgeon's panel?	✓		
11	Measure and record the operating room relative humidity	✓		
12	Does this accord with that displayed on the surgeon's panel?	-	-	n/a
13	Measure and record the supply and extract air flow in the principle ducts		✓	No test holes are drilled in ducting
14	Measure and record the air flow at all supply and extract terminals	✓		
15	Does the derived air-change rate achieve at least 80% of the design?		✓	SPS at 28%
16	For UCV units, also measure and record the air velocities within the canopy using the method set out in Chapter 8 of Health Technical Memorandum 03-01 (Part A)	-	-	n/a
17	Do the air velocities achieve the standard appropriate for the type of canopy?	-	-	n/a
18	Measure and record the room differential pressures	✓		
19	Do the room differential pressures ensure a flow of air from the clean to the less clean areas?		✓	SPS to clean corridor negative
20	Measure and record the noise levels in the principal rooms of the suite	✓		
21	Do the noise levels fall below the limits set out in Table 2 of Health Technical Memorandum 03-01, Part B?		✓	
22	Check the operation of all ventilation control functions represented on the surgeon's panel.	✓		
23	Do the indicators accurately represent the operational state of the ventilation system(s)?	✓		
24	For UCV systems: is the UCV and AHU interlocked to ensure that the AHU runs at full speed when the UCV is at operating speed or at set-back? (see Table 6 in Health Technical Memorandum 03-01, Part A)	-	-	n/a
25	With the UCV running at set-back, does the system maintain the standard of a conventional operating room?		--	n/a
26	For all theatres: with the system running at set-back, does it maintain a flow of air from the clean to the less clean areas?			

Section 5 – Supply / Extract Air Volumes & Air Change Rates

Grille Volume Flow Rates

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
Theatre	S1	0.185	666	0.192	96
	S2	0.185	666		96
	S3	0.171	615.6		89
	S4	0.180	648		94
	E7	0.031	111.6	N/A	N/A
	E8	0.010	36		

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
Anaesthetic	S5	0.190	684	0.240	79
	E1	0.138	496.8	0.120	115
	E2	0.031	111.6	0.120	26

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
Recovery	S7	0.225	810	0.213	106
	E9	0.279	1,004.4		131

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
Scrub/(SPS)	S6	0.028	100.8	0.121	23
	E4	0	0	N/A	N/A
	E3	0.010	36		
	E5	0.140	504		

Section 6 - Air Change Rates

Air Change Rates

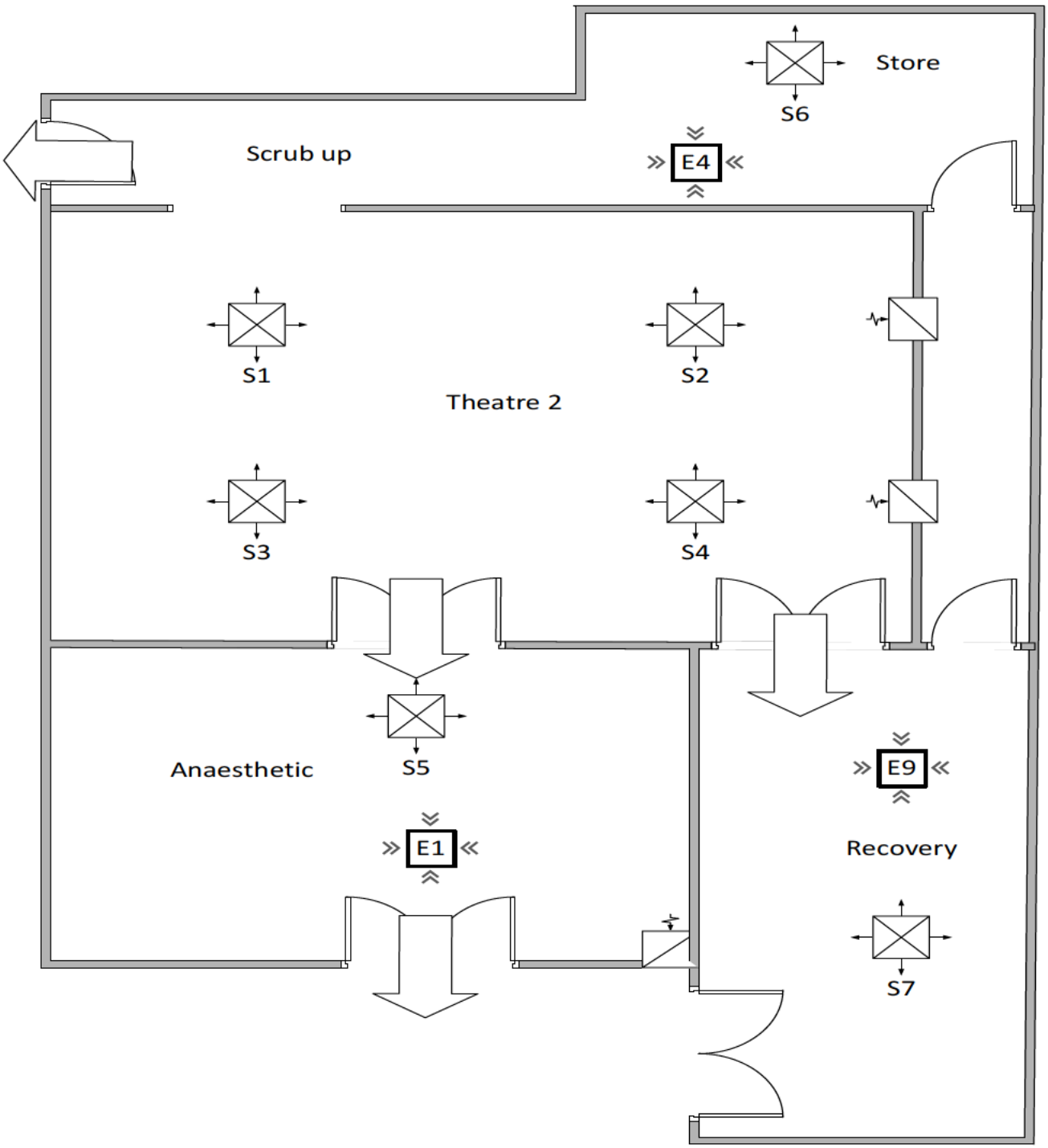
Room Reference	Recorded Air Volume m³/hr	Room Volume m³	Recorded ac/hr	SHTM 03-01 Air Change Rates ac/hr
Theatre	2,595.6	110.7	23.4	25
Anaesthetic Supply	684	40.6	16.8	15
Anaesthetic Extract	608.4	40.6	15.0	
Prep (SPS)	100.8	43.4	2.3	10
Recovery - Supply	810	51.1	15.8	15
Recovery - Extract	1,004.4	51.1	19.7	
Comments:				

Section 7 – Room Pressure Differentials, Temperature, Humidity & Noise Levels

Environmental Results

Room Reference	SHTM Room Pressure (Pa)	Recorded Room Pressures (Pa)	Surgeons Panel Temp Target 18-25°C	Recorded Temp °C	Surgeons Panel %RH	Recorded %RH	Theatre Recorded Noise Target 45dBA
Theatre 2	+25	+47	N/A	21.1	n/a	44.2	50.9
Anaesthetic	+15	+8	n/a	21.6	n/a	41.3	47.6
SPS	+25	-7	n/a	20.5	n/a	42.6	40.3
Recovery	0	+21	n/a	19.8	n/a	44.2	53.5
Comments: See Executive Summary							

Section 8 – Schematic Layout of Princess Alexandra Eye Pavilion – Theatre 2



Section 9 - Test Equipment Used

Type of Equipment	Serial No	Cal Due Date
Micromanometer	TA4652147001	February 2027
Environmental Meter	160506299	March 2027
Balometer	PH7312032002	November 2026

Section 10 - Calibration Certificates

CERTIFICATE OF CALIBRATION

Issued By PASS Ltd
Date of Issue **09 February 2026**
Date Received **04 February 2026**

Certificate Number
HAM90605

Pass Ltd (Hamilton branch)
1 Parkburn Court
Parkburn Industrial Estate
Hamilton, ML3 0QQ
Tel: 01698 829711, calibrate@pass.co.uk

Approved Signatory

P.Greenshields D.Rae **X** D.Semple T.Bryson P.Coleman

Customer : H & V Commissioning Services Ltd
Kilknowe Office, 16 Barrmill Road
Galston, Ayrshire, KA4 8HH

Instrument :

System ID :	P0011471
Description :	Air Velocity Meter
Manufacturer :	Airflow
Model Number :	TA465
Serial Number :	TA4652147001
Customer Ref :	
Procedure :	7583

Environmental Conditions
Temperature : 20°C ± 2°C

Comments
This Certificate Records The On Receipt Calibration Status Of The Instrument.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period Weeks*
LCA501 Digital Anemometer	LCA501216002	25264	20/11/2025	52
DPI142 Digital Pressure Indicator	1422562944	135008	12/01/2026	52
744 Process Calibrator	8074003	22610	10/06/2025	52
HMI41 Humidity Indicator	S1330009	UH3444	08/10/2025	52
HMP41/45 Humidity Probe	J3215002	UH3444.	08/10/2025	52

Calibrated By **: D Rae** Date of Calibration : **09 February 2026**

This is to certify the above instrument was fully tested and calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017. The accuracies of the standards used are traceable to National Standards, via UKAS approved laboratories.

CERTIFICATE OF CALIBRATION

AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Probe Model 964 S/N: P21480003			
Velocity	0.28m/s	0.29m/s	0.15m/s
Velocity	0.49m/s	0.51m/s	0.15m/s
Velocity	1.00m/s	1.02m/s	0.15m/s
Velocity	2.00m/s	2.02m/s	0.22m/s
Velocity	5.00m/s	5.05m/s	0.22m/s
Temperature	20.8°C	21.0°C	0.33°C
Probe Model 995 S/N: P21470014			
Velocity	0.28m/s	0.28m/s	0.15m/s
Velocity	0.49m/s	0.51m/s	0.15m/s
Velocity	1.00m/s	1.00m/s	0.15m/s
Velocity	2.00m/s	2.02m/s	0.22m/s
Velocity	5.00m/s	5.02m/s	0.22m/s
Temperature	20.8°C	21.0°C	0.33°C
PRESSURE RANGE			
	500.0PA	495.9PA	0.03%
	1000.0PA	994.2PA	0.03%
	1500.0PA	1489.6PA	0.03%
	2000.0PA	1988.5PA	0.03%
	2500.0PA	2483.0PA	0.03%
	3000.0PA	2978.9PA	0.03%
	3500.0PA	3474.6PA	0.03%

CERTIFICATE OF CALIBRATION

Certificate Number
HAM90605

AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Temperature			
T1			
	0.0°C	0.1°C	0.38°C
	10.0°C	10.1°C	0.38°C
	20.0°C	20.2°C	0.38°C
	30.0°C	30.2°C	0.38°C
	40.0°C	40.2°C	0.38°C
	50.0°C	50.2°C	0.38°C
	60.0°C	60.3°C	0.38°C
	70.0°C	70.3°C	0.38°C
	80.0°C	80.3°C	0.38°C
	90.0°C	90.3°C	0.38°C
	100.0°C	100.3°C	0.38°C
T2			
	0.0°C	0.0°C	0.38°C
	10.0°C	10.1°C	0.38°C
	50.0°C	50.2°C	0.38°C
	100.0°C	100.3°C	0.38°C

End of Results.

CERTIFICATE OF CALIBRATION

Certificate Number 290025

Issued By Instrument Repairs & Calibration

Date of Issue 12 November 2025 Date of Calibration : 12 November 2025

Instrument Repairs and Calibration
5 Howard Court,
East Kilbride, G74 4QZ
Tel: 01355 264120
www.instrument-repairs.com

Approved Signatory

Keith Low

Customer : H&V Commissioning Services Ltd
Kilknowe Offices
Galston
16 Barrmill Road
KA4 8HY

Instrument -

System ID :	IRC68183
Description :	Balometer
Manufacturer :	TSI/Airflow
Model Number :	PH731
Serial Number :	PH7312032002
Procedure Version	4876

Customer Ref :
Job Number : R116267-2

Environmental Conditions

Temperature : 23°C ± 3°C
Relative Humidity : 50%RH ± 25%RH
Mains Voltage : 230V ± 20V
Mains Frequency 50Hz ± 1Hz

Comments

The instrument stabilised in the laboratory for 4 hours prior to calibration.
Results at the time of test carry no long term stability of the instrument.
This certificate records the ON RECEIPT calibration status.
Recalibration period 52 weeks by customer request.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period*
CP6050 Pressure Calibrator	41000UIV	19031 19032	25/04/2024	156

Electronically Signed : K. Low

Calibrated By : Keith Low
Date of receipt : 07 November 2025

This is to certify that the above instrument was fully calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017.
The accuracies of the standards used are traceable to National Standards,via UKAS approved laboratories.
The copyright of this certificate is owned by IRC Ltd and may not be reproduced except with the prior written approval of the issuing laboratory.
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor *k*=2 providing a level of confidence of approximately 95%.

CERTIFICATE OF CALIBRATION

Certificate Number
290025

Test Title	Tolerance	Applied Value	Reading	Pass / Fail
Pascals	15.5pa	250.0pa	255pa	PASS
	28pa	500.0pa	518pa	PASS
	37.5pa	750pa	761pa	PASS
	53pa	1000.0pa	1025pa	PASS
	20pa	2000.0pa	2019pa	PASS
	153pa	3000.0pa	3025pa	PASS
Negative	50pa	1000.0pa	1005pa	PASS
	100pa	2000.0pa	2010pa	PASS
	150pa	3000.0pa	3028pa	PASS

End of Results

Uncertainties
Pressure TE69 : 0- 1000mBar +/- 0.01% of reading

CERTIFICATE OF CALIBRATION

Issued By PASS Ltd
Date of Issue **19 March 2026**
Date Received **18 March 2026**

Certificate Number
HAM92053

Pass Ltd (Hamilton branch)
1 Parkburn Court
Parkburn Industrial Estate
Hamilton, ML3 0QQ
Tel: 01698 829711, calibrate@pass.co.uk

Approved Signatory

P.Greenshields D.Rae D.Semple **X** T.Bryson P.Coleman

Customer : H & V Commissioning Services Ltd
Kilknowe Office, 16 Barrmill Road
Galston, Ayrshire, KA4 8HH

Instrument :

System ID :	ID23629
Description :	Environment Meter
Manufacturer :	Precision Gold
Model Number :	N09AQ
Serial Number :	160506299
Customer Ref :	
Procedure :	2491

Environmental Conditions
Temperature : 20°C ± 2°C

Comments
This Certificate Records The On Receipt Calibration Status Of The Instrument.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period Weeks*
P100B Sound Level Calibrator	035219	G005583	16/09/2024	104
HMI41 Humidity Indicator	S1330009	UH3444	08/10/2025	52
HMP41/45 Humidity Probe	J3215002	UH3444.	08/10/2025	52

Calibrated By **: D Semple** Date of Calibration : **19 March 2026**

This is to certify the above instrument was fully tested and calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017. The accuracies of the standards used are traceable to National Standards, via UKAS approved laboratories.

CERTIFICATE OF CALIBRATION

Certificate Number
HAM92053

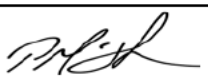
AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Sound Level Meter			
Lo C	94dB	92.8dB	0.6dB
Hi C	94dB	93.1dB	0.6dB
Hi C	104dB	103.1dB	0.6dB
Humidity Meter			
%Rh	50.3%Rh	49.5%Rh	1.56%Rh
Temperature Meter			
°C	25.0°C	22.1°C	0.33°C

End Of Results

SHTM 03-01 CRITICAL VENTILATION ANNUAL VERIFICATION & INSPECTION

THEATRES 1 & 3

Client:	NHS Lothian	**Client Contact:**	Scott Robertson
Hospital:	The Princess Alexandra Eye Pavilion	**Site Address:**	Chalmers Street, Edinburgh EH3 9HA
Area:	Theatres 1 & 3	**AHU:**	Theatre 1: CHV049, CHV050. Theatre 2 CHV051 & CHV052
Theatre Condition:	Poor	**Report No:**	PM03-060626
Date of Test:	6th June2026	**Date of Last Test:**	17th April 2025
Test Engineer & Report Preparation:	Paul McShee	**Signature:**	
H&V Approval:	Steven McFadyen	**Signature:**	
Client Reviewed by:		**Signature:**	

H&V COMMISSIONING SERVICES LTD
KILKNOWE OFFICE
16 BARRMILL ROAD
GALSTON
AYRSHIRE
KA4 8HH

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1. Scope of Works
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3. Executive Summary
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5. Ventilation Verification Checklist – Theatre 3
6. Supply / extract flow rates & air change rates – Theatre 1 & 3
7. Room Pressure Differentials, Temperature, Humidity & Noise Levels – Theatres 1 & 3
8. Schematic Layout of Theatres 1 & 3
9. Test Equipment Used
10. Calibration Certificates

Section 1 – Scope of Works

Annual Inspection of Critical Ventilation Systems

To carry out a compliance and performance inspection of all critical path ventilation systems in accordance with - Heating and Ventilation Systems - SHTM – Scottish Health Technical Memorandum 03-01: Specialised Ventilation for Healthcare Premises. *Part B: Operational management & Performance Verification.*

This report is for operating theatre's 1 & 3, located in The Princess Alexandra Eye Pavilion.

However as the theatres and recovery room were built prior to 2008, aspects of SHTM 03-01 are replaced with HTM-Health Technical Memorandum 2025: Ventilation in Healthcare Premises. HTM 2025 also incorporates the findings of the Hospital Infection Society (H.I.S), Working Party on Infection Control and Operating Theatres 1999. To make the report more legible, it will be assumed that the findings, methods and specifications from H.I.S Working Party on Infection Control and Operating Theatres 1999 are included within HTM2025 and will be referred to as HTM2025.

All design volumes are specified from HTM2025 as the theatres will built to that Memorandum however, Air Change rates and pressures are extracted from the current SHTM 03-01.

Section 2 – Definition of Terms

Assessment of compliance with Health Building Note 26 and Scottish Health Technical Memorandum 03-01 (all questions relevant to the type of theatre)

Poor

Air volumes and hence air-change rate is less than 80% of the design. Room pressure differentials do not ensure a flow from clean to less clean areas. Supply or extract air diffusers are not clean; pressure stabilisers not clean and/or not operating correctly. Significant faults or failures of indicators on surgeon's panel. Visible faults in the fabric of the suite; doors unable to close completely, general air of neglect.

Action: Urgent management action required.

Average

Air volumes and room pressure differentials approximate to the original design values; supply air diffusers clean but extracts visibly fouled; most pressure stabilisers clean and operating correctly; some of the indicators on the surgeons panel not working; minor faults in the fabric and décor of the suite.

Action: Maintenance action required.

Good

Better than average.

Action: None.

Maintenance quality (all questions relevant to the type of theatre)

Poor

More than three answers are negative.

Action: Management action required by estates/facilities department.

Average

No more than three answers are negative

Action: Maintenance action required.

Good

No answers are negative.

Action: None.

Section 3 – Executive Summary

Theatre 1

- Pressure – As there is no direct door to the clean corridor from the theatre, the collective pressure through recovery where the patients enter has been calculated to give overall pressure. A collective pressure of +5Pa was recorded which is well below the required +25Pa for an operating theatre. This low pressure may no longer provide the intended protection against ingress of contaminated air from surrounding areas.

- Air Changes – Air changes recorded were below 80% of the design for an operating theatre. The primary purpose of the required air change in the ventilation system is to dilute and remove airborne contamination which risks reaching the surgical site, increasing chance of infection to the patient.

Anaesthetic

- Pressure – Pressure recorded from anaesthetic room to corridor was -3Pa instead of +15Pa not only less but going in the complete opposite direction. This area is where patients are prepared, induced and transferred to the theatre. Air coming from less clean that may be contaminated could reduce the cleanliness of the environment during the preparation of the patient. It was noted that a pressure stabilizer from theatre 3 to anaesthetic has since been sealed up. This positive pressure being taken away has most likely contributed to the negative pressure to corridor.

- Air Changes – Air changes for supply are below 80% of Design. Low air changes may cause lack of protection meaning less assurance that airborne contaminants are being controlled, diluted & directed away from the patient as intended.

Scrub

- As the scrub is in a separate area through a door and not a bay, a transfer grille should be fitted on the lower side of the door. Also, a low level extract or pressure stabilizer should be fitted that discharges to the corridor. This is because the scrub is not assigned a specific air change in standard theatre lay outs, instead focusing on maintaining the correct pressure relationship and airflow path from the theatre (+25Pa). The scrub like the theatre is well below this design.

Prep (SPS)

- Informed by the client the store at the back of the theatre is used to keep the sterilised equipment prior to surgery. This would make the store a sterile pack store. Air changes are above what is required for this type of area although with no exit to the corridor, only through the theatre the accumulative pressure would also be +5Pa far less that what is required to adhere to SHTM03-01.

Section 3 – Executive Summary

Surgeons Panel

- **S**urgeons panel has no indication of relative humidity within the theatre. Without this being monitored a potential increase of microbial growth like mould and mildew may occur and may possibly contribute to a higher risk of would infections.

Recovery

- Air Changes – The recovery air changes fell well below the required 15AC/HR. Although consequences are similar to what was mentioned earlier in the theatre comments above, low air changes in the recovery area are also concerning as the patients may still be exhaling aerosols administered prior to operation

Section 4 – Ventilation Verification Checklist – Theatre 1

	Poor	Average	Good
Compliance with HBN & SHTM	✓		
Maintenance Quality	✓		

No	Survey Question	Yes	No	Comments
1	Has the annual verification of the AHU been carried out?	✓		
2	Are windows hermetically sealed?		✓	
3	Are the ceilings in the theatre and prep room complete and sealed?	✓		
4	IS the room free from any significant faults in the fabric of the rooms in the suite?		✓	
5	Are room light fittings correctly sealed?	✓		
6	Do all doors close completely and hold against the room pressure?	✓		
7	Are the pressure stabilisers operating correctly and silently?	✓		
8	Are all supply and extract air terminals and pressure stabilisers visibly clean?	✓		
9	Measure and record the operating room temperature	✓		
10	Does this accord with that displayed on the surgeon's panel?		✓	**No temperature detail**
11	Measure and record the operating room relative humidity	✓		
12	Does this accord with that displayed on the surgeon's panel?		✓	**No humidity detail**
13	Measure and record the supply and extract air flow in the principle ducts		✓	**No test holes in duct**
14	Measure and record the air flow at all supply and extract terminals	✓		
15	Does the derived air-change rate achieve at least 80% of the design?		✓	**All low except for prep**
16	For UCV units, also measure and record the air velocities within the canopy using the method set out in Chapter 8 of Health Technical Memorandum 03-01 (Part A)			**n/a**
17	Do the air velocities achieve the standard appropriate for the type of canopy?			**n/a**
18	Measure and record the room differential pressures	✓		
19	Do the room differential pressures ensure a flow of air from the clean to the less clean areas?		✓	**Anaesthetic pressure negative to corridor**
20	Measure and record the noise levels in the principal rooms of the suite	✓		
21	Do the noise levels fall below the limits set out in Table 2 of Health Technical Memorandum 03-01, Part B?		✓	
22	Check the operation of all ventilation control functions represented on the surgeon's panel.			**n/a**
23	Do the indicators accurately represent the operational state of the ventilation system(s)?			**n/a**
24	For UCV systems: is the UCV and AHU interlocked to ensure that the AHU runs at full speed when the UCV is at operating speed or at set-back? (see Table 6 in Health Technical Memorandum 03-01, Part A)			**n/a**
25	With the UCV running at set-back, does the system maintain the standard of a conventional operating room?			**n/a**
26	For all theatres: with the system running at set-back, does it maintain a flow of air from the clean to the less clean areas?			**n/a**

Section 5 – Ventilation Verification Checklist – Theatre 3

	Poor	Average	Good
Compliance with HBN & SHTM	✓		
Maintenance Quality	✓		

No	Survey Question	Yes	No	Comments
1	Has the annual verification of the AHU been carried out?	✓		
2	Are windows hermetically sealed?		✓	
3	Are the ceilings in the theatre and prep room complete and sealed?	✓		
4	Are there any significant faults in the fabric of the rooms in the suite?		✓	
5	Are room light fittings correctly sealed?	✓		
6	Do all doors close completely and hold against the room pressure?	✓		
7	Are the pressure stabilisers operating correctly and silently?	✓		
8	Are all supply and extract air terminals and pressure stabilisers visibly clean?	✓		
9	Measure and record the operating room temperature	✓		
10	Does this accord with that displayed on the surgeon's panel?		✓	**No panel fitted**
11	Measure and record the operating room relative humidity	✓		
12	Does this accord with that displayed on the surgeon's panel?		✓	**No panel fitted**
13	Measure and record the supply and extract air flow in the principle ducts		✓	**No test holes are drilled in ducting**
14	Measure and record the air flow at all supply and extract terminals	✓		
15	Does the derived air-change rate achieve at least 75% of the design?		✓	**All flow rates are low, apart from Theatre**
16	For UCV units, also measure and record the air velocities within the canopy using the method set out in Chapter 8 of Health Technical Memorandum 03-01 (Part A)			**n/a**
17	Do the air velocities achieve the standard appropriate for the type of canopy?			**n/a**
18	Measure and record the room differential pressures	✓		
19	Do the room differential pressures ensure a flow of air from the clean to the less clean areas?	✓		
20	Measure and record the noise levels in the principal rooms of the suite	✓		
21	Do the noise levels fall below the limits set out in Table 2 of Health Technical Memorandum 03-01, Part B?	✓		
22	Check the operation of all ventilation control functions represented on the surgeon's panel.			**n/a**
23	Do the indicators accurately represent the operational state of the ventilation system(s)?			**n/a**
24	For UCV systems: is the UCV and AHU interlocked to ensure that the AHU runs at full speed when the UCV is at operating speed or at set-back? (see Table 6 in Health Technical Memorandum 03-01, Part A)			**n/a**
25	With the UCV running at set-back, does the system maintain the standard of a conventional operating room?			**n/a**
26	For all theatres: with the system running at set-back, does it maintain a flow of air from the clean to the less clean areas?			**n/a**

Section 6 – Supply / Extract Air Volumes & Air Change Rates

Grille Volume Flow Rates

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
Theatre 1	S9	0.249	896.4	0.391	64
	S10	0.298	1,072.8	0.391	76
	E9	0.033	118.8	N/A	N/A
	E10	0.027	97.2		
	E11	0.040	144		
	E12	0.033	118.8		

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
Theatre 3	S2	0.147	529.2	0.168	88
	S3	0.139	500.4		83
	S4	0.119	428.4		71

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
Anaesthetic	S8	0.071	255.6	0.240	30
	E8	0.180	648		75

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
Scrub	S11	0.015	54	0.273	5

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
Recovery	S11	0.032	115.2	0.145	22

Section 6 – Supply / Extract Air Volumes & Air Change Rates

Grille Volume Flow Rates

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
SPS	S12	0.195	702	0.087	224
	S13	0.033	118.8	0.044	75
	S14	0.089	320.6	0.044	202
	E13	0.093	334.8	N/A	N/A
	E14	0.092	331.2		
	E15	0.092	331.2		
	E16	0.100	360		

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
Clean Corridor	S5	0.026	93.6	N/A	N/A
	S6	0.023	82.8		

Area	Grille Reference	Test Volume m³/s	Test Volume m³/hr	Design Volume m³/s	% of Design
Entrance Corridor	S1	0.067	241.2	N/A	N/A
	E1	0.018	64.8	N/A	N/A
	E2	0.020	72		
	E3	0.032	115.2		
	E4	0	0		
	E5	0.032	115.2		

Section 6 - Air Change Rates – Theatres 1 & 3

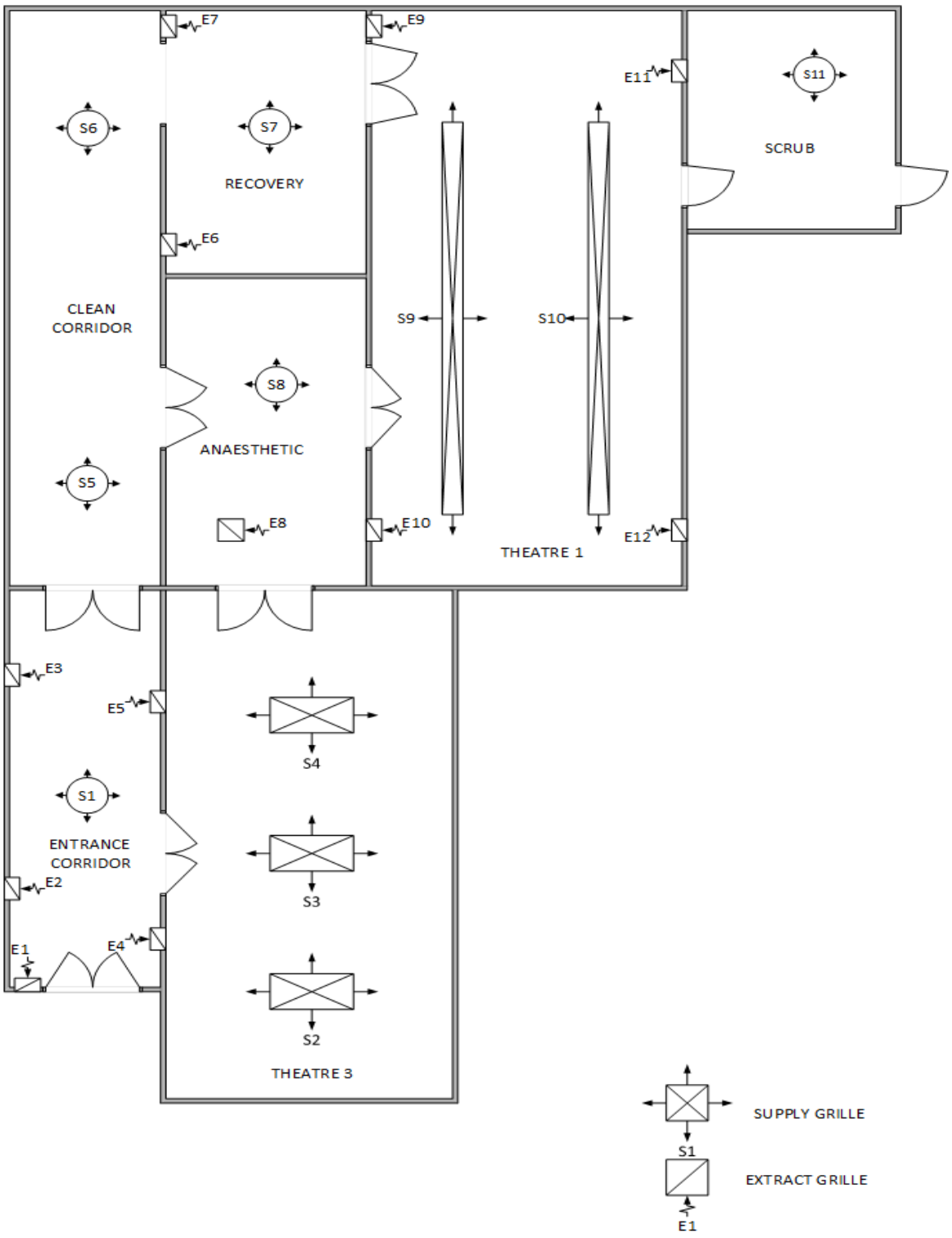
Air Change Rates

Room Reference	Recorded Air Volume m³/hr	Room Volume m³	Recorded ac/hr	SHTM 03-01 Air Change Rates ac/hr
Theatre 1	1,969.2	112.5	17.5	25
Theatre 3	1,458	72.4	20.1	25
Anaesthetic Supply	255.6	45.0	5.7	15
Anaesthetic Extract	648	45.0	14.4	15
Prep (SPS)	1,141.4	62.7	18.2	10
Recovery	115.2	34.6	3.3	15
Comments: All air changes within the theatre suite no not achieve atleast 80% of design with the exception of the SPS.				

Section 7 – Room Pressure Differentials, Temperature, Humidity & Noise Levels

Room Reference	SHTM Room Pressure (Pa)	Recorded Room Pressures (Pa)	Surgeons Panel Temp Target 18-25°C	Recorded Temp °C	Surgeons Panel %RH	Recorded %RH	Theatre Recorded Noise Target 45dBA
Theatre 1	+25	+5	n/a	19.8	n/a	38.1	36.3
Theatre 3	+25	+27	n/a	19.6	n/a	39.6	39.3
Anaesthetic	+15	-3	n/a	20.4	n/a	37.5	41.3
Prep	+25	+5	n/a	20.6	n/a	36.7	44.0
Scrub	+25	+4	n/a	19.1	n/a	39.4	36.1
Recovery	0	+1	n/a	19.9	n/a	38.8	38.3
Comments: See executive summary.							

Section 8 – Schematic Layout of Princess Alexandra Eye Pavilion – Theatres 1 & 3



Section 9 - Test Equipment Used

Type of Equipment	Serial No	Cal Due Date
Micromanometer	TA4652147001	February 2027
Environmental Meter	160506299	March 2027
Balometer	PH7312032002	November 2026

Section 10 - Calibration Certificates

CERTIFICATE OF CALIBRATION

Issued By PASS Ltd
Date of Issue **19 March 2026**
Date Received **18 March 2026**

Certificate Number
HAM92053

Pass Ltd (Hamilton branch)
1 Parkburn Court
Parkburn Industrial Estate
Hamilton, ML3 0QQ
Tel: 01698 829711, calibrate@pass.co.uk

Approved Signatory

P.Greenshields D.Rae D.Semple **X** T.Bryson P.Coleman

Customer : H & V Commissioning Services Ltd
Kilknowe Office, 16 Barrmill Road
Galston, Ayrshire, KA4 8HH

Instrument :

System ID :	ID23629
Description :	Environment Meter
Manufacturer :	Precision Gold
Model Number :	N09AQ
Serial Number :	160506299
Customer Ref :	
Procedure :	2491

Environmental Conditions
Temperature : 20°C ± 2°C

Comments
This Certificate Records The On Receipt Calibration Status Of The Instrument.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period Weeks*
P100B Sound Level Calibrator	035219	G005583	16/09/2024	104
HMI41 Humidity Indicator	S1330009	UH3444	08/10/2025	52
HMP41/45 Humidity Probe	J3215002	UH3444.	08/10/2025	52

Calibrated By **: D Semple** Date of Calibration : **19 March 2026**

This is to certify the above instrument was fully tested and calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017. The accuracies of the standards used are traceable to National Standards, via UKAS approved laboratories.

CERTIFICATE OF CALIBRATION

Certificate Number
HAM92053

AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Sound Level Meter			
Lo C	94dB	92.8dB	0.6dB
Hi C	94dB	93.1dB	0.6dB
Hi C	104dB	103.1dB	0.6dB
Humidity Meter			
%Rh	50.3%Rh	49.5%Rh	1.56%Rh
Temperature Meter			
°C	25.0°C	22.1°C	0.33°C

End Of Results

CERTIFICATE OF CALIBRATION

Certificate Number 290025

Issued By Instrument Repairs & Calibration

Date of Issue 12 November 2025 Date of Calibration : 12 November 2025

Instrument Repairs and Calibration
5 Howard Court,
East Kilbride, G74 4QZ
Tel: 01355 264120
www.instrument-repairs.com

Approved Signatory

Keith Low

Customer : H&V Commissioning Services Ltd
Kilknowe Offices
Galston
16 Barrmill Road
KA4 8HY

Instrument -

System ID :	IRC68183
Description :	Balometer
Manufacturer :	TSI/Airflow
Model Number :	PH731
Serial Number :	PH7312032002
Procedure Version	4876

Customer Ref :
Job Number : R116267-2

Environmental Conditions

Temperature : 23°C ± 3°C
Relative Humidity : 50%RH ± 25%RH
Mains Voltage : 230V ± 20V
Mains Frequency 50Hz ± 1Hz

Comments

The instrument stabilised in the laboratory for 4 hours prior to calibration.
Results at the time of test carry no long term stability of the instrument.
This certificate records the ON RECEIPT calibration status.
Recalibration period 52 weeks by customer request.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period*
CP6050 Pressure Calibrator	41000UIV	19031 19032	25/04/2024	156

Electronically Signed : K. Low

Calibrated By : Keith Low
Date of receipt : 07 November 2025

This is to certify that the above instrument was fully calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017.
The accuracies of the standards used are traceable to National Standards,via UKAS approved laboratories.
The copyright of this certificate is owned by IRC Ltd and may not be reproduced except with the prior written approval of the issuing laboratory.
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor *k*=2 providing a level of confidence of approximately 95%.

CERTIFICATE OF CALIBRATION

Certificate Number
290025

Test Title	Tolerance	Applied Value	Reading	Pass / Fail
Pascals	15.5pa	250.0pa	255pa	PASS
	28pa	500.0pa	518pa	PASS
	37.5pa	750pa	761pa	PASS
	53pa	1000.0pa	1025pa	PASS
	20pa	2000.0pa	2019pa	PASS
	153pa	3000.0pa	3025pa	PASS
Negative	50pa	1000.0pa	1005pa	PASS
	100pa	2000.0pa	2010pa	PASS
	150pa	3000.0pa	3028pa	PASS

End of Results

Uncertainties
Pressure TE69 : 0- 1000mBar +/- 0.01% of reading

CERTIFICATE OF CALIBRATION

Issued By PASS Ltd
Date of Issue **09 February 2026**
Date Received **04 February 2026**

Certificate Number
HAM90605

Pass Ltd (Hamilton branch)
1 Parkburn Court
Parkburn Industrial Estate
Hamilton, ML3 0QQ
Tel: 01698 829711, calibrate@pass.co.uk

Approved Signatory

P.Greenshields D.Rae **X** D.Semple T.Bryson P.Coleman

Customer : H & V Commissioning Services Ltd
Kilknowe Office, 16 Barrmill Road
Galston, Ayrshire, KA4 8HH

Instrument :

System ID :	P0011471
Description :	Air Velocity Meter
Manufacturer :	Airflow
Model Number :	TA465
Serial Number :	TA4652147001
Customer Ref :	
Procedure :	7583

Environmental Conditions
Temperature : 20°C ± 2°C

Comments
This Certificate Records The On Receipt Calibration Status Of The Instrument.

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period Weeks*
LCA501 Digital Anemometer	LCA501216002	25264	20/11/2025	52
DPI142 Digital Pressure Indicator	1422562944	135008	12/01/2026	52
744 Process Calibrator	8074003	22610	10/06/2025	52
HMI41 Humidity Indicator	S1330009	UH3444	08/10/2025	52
HMP41/45 Humidity Probe	J3215002	UH3444.	08/10/2025	52

Calibrated By **: D Rae** Date of Calibration : **09 February 2026**

This is to certify the above instrument was fully tested and calibrated. Work carried out was in accordance with procedures laid down in BS EN ISO/IEC 17025:2017. The accuracies of the standards used are traceable to National Standards, via UKAS approved laboratories.

CERTIFICATE OF CALIBRATION

AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Probe Model 964 S/N: P21480003			
Velocity	0.28m/s	0.29m/s	0.15m/s
Velocity	0.49m/s	0.51m/s	0.15m/s
Velocity	1.00m/s	1.02m/s	0.15m/s
Velocity	2.00m/s	2.02m/s	0.22m/s
Velocity	5.00m/s	5.05m/s	0.22m/s
Temperature	20.8°C	21.0°C	0.33°C
Probe Model 995 S/N: P21470014			
Velocity	0.28m/s	0.28m/s	0.15m/s
Velocity	0.49m/s	0.51m/s	0.15m/s
Velocity	1.00m/s	1.00m/s	0.15m/s
Velocity	2.00m/s	2.02m/s	0.22m/s
Velocity	5.00m/s	5.02m/s	0.22m/s
Temperature	20.8°C	21.0°C	0.33°C
PRESSURE RANGE			
	500.0PA	495.9PA	0.03%
	1000.0PA	994.2PA	0.03%
	1500.0PA	1489.6PA	0.03%
	2000.0PA	1988.5PA	0.03%
	2500.0PA	2483.0PA	0.03%
	3000.0PA	2978.9PA	0.03%
	3500.0PA	3474.6PA	0.03%

CERTIFICATE OF CALIBRATION

Certificate Number
HAM90605

AS FOUND RESULTS

Test Title	Applied Value	Reading	Uncertainties
Temperature			
T1			
	0.0°C	0.1°C	0.38°C
	10.0°C	10.1°C	0.38°C
	20.0°C	20.2°C	0.38°C
	30.0°C	30.2°C	0.38°C
	40.0°C	40.2°C	0.38°C
	50.0°C	50.2°C	0.38°C
	60.0°C	60.3°C	0.38°C
	70.0°C	70.3°C	0.38°C
	80.0°C	80.3°C	0.38°C
	90.0°C	90.3°C	0.38°C
	100.0°C	100.3°C	0.38°C
T2			
	0.0°C	0.0°C	0.38°C
	10.0°C	10.1°C	0.38°C
	50.0°C	50.2°C	0.38°C
	100.0°C	100.3°C	0.38°C

End of Results.

SBAR – Cyst Procedures undertaken by Nursing staff

S	**Situation** Approval is sought to continue cyst removal procedures (skin/ocular minor surgery under local anaesthetic) within E4 theatre at Princess Alexandra Eye Pavilion (PAEP), where the measured ventilation provides 12.6 ACPH at last validation. We request confirmation that this ventilation performance is appropriate and safe for the risk profile of these procedures, with defined mitigations and monitoring.
B	**Background** • Clinical activity: Cyst removal procedures (e.g., eyelid/ocular epidermoid or sebaceous cysts, chalazia, small benign lesions) are short-duration, minor surgery cases typically performed under local anaesthesia using aseptic technique. • Environment: E4 theatre is a controlled clinical environment with measured air changes of 12.6 ACPH, supported by routine environmental cleaning and established patient flow. • Operational context: Main theatre capacity is constrained. Undertaking these cases in E4 supports timely care, reduces waits, and avoids unnecessary escalation to ultra-clean/laminar flow theatres not required for this risk category. • Current controls: Staff follow standard aseptic non-touch technique (ANTT), pre-/post-procedure environmental cleaning, and sterile field setup with appropriate PPE as per NHS Lothian Infection Prevention and Control Guidelines.
A	**Assessment** • Risk profile: Cyst removal is classed as minor surgery with a low risk of surgical site infection (SSI) when standard asepsis is maintained. Procedures are brief, have limited tissue exposure, and do not require ultra-clean ventilation. • Ventilation adequacy: 12.6 ACPH in a controlled theatre environment provides frequent air dilution and reduces particulate load consistent with minor clean surgical activity. • Infection prevention safeguards: With adherence to ANTT, sterile draping, skin preperation, appropriate PPE, and room turnaround cleaning, residual environmental risk is low. • Patient safety and service need: Conducting these procedures in E4 balances patient safety with service efficiency, minimising delays and maintaining throughput without compromising infection prevention standards.

SBAR – Cyst Procedures undertaken by Nursing staff

R	**Recommendation** It is recommended that the NHSL Ventilation Safety Group: 1. Approve E4 theatre (PAEP) for cyst removal procedures under local anaesthesia, acknowledging ventilation performance of 12.6 ACPH as suitable for this category of minor surgery. 2. Confirm and document operating conditions and controls, including: o Strict ANTT and sterile field management. o Skin antisepsis per NHSL policy (chlorhexidine/alcohol or povidone-iodine where indicated). o Procedure list discipline to avoid concurrent or sequential higher-risk cases that may increase bioburden. o Room turnaround cleaning between cases; daily and periodic deep cleans as per local SOPs. o Waste and sharps management compliant with policy. 3. Maintain ventilation monitoring: o Re-verify ACPH at defined intervals (e.g., annually or after engineering works) and document results. o Record and act on any adverse trends or alarms (filters, pressure regimes, or plant faults). 4. Escalation criteria: o If measured ACPH falls below agreed threshold, or if procedure complexity increases (e.g., deeper tissue dissection, significant implant use), pause and re-review suitability and consider alternative venues. 5. Communication: o Share the approved scope and controls with appropriate teams, Infection Prevention and Control, and scheduling staff to ensure consistent application. 6. Audit: An audit process is now in place to ensure all surgeries undertaken in line with this SBAR and process have traceability and review of infection control rates. Please see page 11 &

SBAR – Cyst Procedures undertaken by Nursing staff

	12 of this SOP for guidance on this process. These results will be kept within the band 6 folder – Minor Operations Infections Audit. Conclusion: With 12.6 ACH and the above control measures, E4 theatre is suitable for cyst removal minor procedures, supporting safe, timely care and effective use of theatre resources.

Name: [redacted]

Date: 20/05/2026