

## **Scottish Hospitals Inquiry**

### **Witness Statement of Questions and Responses**

#### **Melville MacMillan**

*This statement was produced by the process of sending the witness a questionnaire with an introduction followed by a series of questions and spaces for answers. The introduction, questions and answers are produced within the statement.*

#### **Personal Details and Professional Background**

1. Full name  
A. Melville Russell MacMillan.
  
2. Occupation  
A. Operational Estates Manager.
  
3. Qualification(s)  
A. MSc Building Services Engineering / BEng Building Services Engineering.

#### **Please provide information in respect of the following:**

4. Professional role(s) at NHS GGC  
A. Operational Estates Manager.
  
5. Area(s) of the hospital in which you worked/work.  
A. QEUH Campus.

6. Role and responsibilities within the above area(s)
- A.** Operational Estates Manager. responsible for daily breakdowns reported on FM System (electronic reporting system used by all departments to log faults and breakdowns) allocated to Estates technicians and Contractors (if required). Queen Elizabeth University Campus only

**Specific Role(s) at NHS GGC**

7. When were you appointed to your role(s)? How did you come to be appointed, who selected you, what was the selection process, did you have previous working relationships with those who selected you?
- A.** November 2014. Applied for the position of Estates Duty Manager. Ian Powrie and Alan Gallagher. Yes, through my supervisor and manager at IRH.
8. Go through each of your roles in turn held in Estates at the QEUH: Describe the role.
- A.** Estates Duty Manager (working a shift rota) November 2014 to April 2018, Day shift Operational Estates Manager April 2018 to present day.
9. What were your duties in this role?
- Operational Estates. At that time, I was line manager of a shift team responsible for allocating workload through FM First and telephone requests from the helpdesk
10. Who did you report to in this role? Detail superiors/superiors for this role.
- A.** Ian Powrie / Andy Wilson / David Bratney / Colin Purdon / Darryl Conner.
11. What was your relationship like with your supervisor in this role?
- A.** All good with the exception of Ian Powrie. I had no supervisor and at the time Ian was my direct line manager. He was micro manager who did that to the whole team.

12. Can you give me an example of micro manager.
- A.** He would come In and tell you to get a job done and give you two minutes to do. He was the boss he ran the show, and you have to it in the time he gave you and if you didn't there were questions were asked and questions had to be given. That was everyone on the team not just me. No autonomy to do our job.
13. Would you say as a result of Ian Powrie attitude that effected the team's performance.
- A.** That's an unfair question because we worked very hard as a department above any beyond any other department in my opinion. Wouldn't you say it's reasonable to assume due to the manager attitude it would affect the team performance. For me I did speak to him but then I stopped. I didn't have to speak to him to do my job. He didn't get involved in the shift patterns. I had a couple of managers above me David Bratty Colin Purdon they were my line managers when I moved to shifts and Ian was in charge of them, so I reported directly to them.
14. Provide details of staff who reported to you, and you were responsible for in this role, and your relationship with them.
- A.** Estates Technicians / Contractors (good working relationship).
15. Provide the name and role of any managers you worked with. Please provide their job (s) and role responsibilities.
- A.** Estates Duty Managers (Paul McAllister, James Guthrie, Tommy Romeo, and Darryl Conner).
16. How was work delegated in the Estates team?
- A.** Manager's work delegated by Ian Powrie / Technicians work by the supervisors and managers.

17. How did you check that the work delegated had been carried out?
- A.** FM First, visual and verbal check.
18. Did you have any concerns about any member of staff or management? If so, please describe these concerns. What action, if any, did you take in relation to these concerns?
- A.** Ian Powrie (micromanaged from the very beginning and wouldn't listen to technical advice). Ian micromanaged the whole department. Ian would not listen, and everything had to be done his way. I spoke to him directly one day and there after relationships were strained. I prefer not to talk about the situation at the time.
19. Describe the interpersonal relationships within the Estates team. How would you describe communication between you and your supervisor(s)/ superior(s)? How would you describe communication to you from those who were senior to you/ supervised you?
- A.** On the whole relationships were good with the exception of Ian Powrie, he never spoke for best part of 2-3 years after a heated discussion in his office one day, which is mentioned in Q16. I am really not comfortable talking about this as this was not a great time for me personally.
20. On how many occasions, if any, did issues arise caused by misunderstandings or poor communication? Please provide details of any such instances.
- A.** I think as a whole the team work well, however in all workplaces there are times where things are misunderstood or not relayed in a timely manner. I do not think this was any way different to other areas.

21. How many people worked within QUEH hard facilities management when you started? How many people worked within QUEH soft facilities management when you started? Did the number of people working at QUEH change during your time there? If so, how many people changed in soft facilities management? If so, how many people changed in hard facilities management?
- A.** Approx 75-80 people, however I would not know this detail. I had 4 or 5 on a shift at any one time and these were who I managed. I was not responsible for the day shift.
22. How did Estates management operate on a daily basis? Was responsibility shared between different teams? If so, to what extent was responsibility shared?
- A.** At this time, it felt like we were firefighting due to the new site opening. The work was split between day shift managers/dayshift supervisors and operational duty estates managers.
23. **Refer to the Estates Communications Bundle, document 29 - Organograms showing the organisational structures within QUEH.**
- a) Do the organograms match the organisational structures of QUEH?
- A.** I have never seen this document before.
- b) If not, why not?
- A.** NA.
- c) How did the structure and hierarchy operate across the different sectors?
- A.** No Idea.

24. Estates Staff and Training: What do you know about the staffing levels in estates at the point of handover? Where did the staff come from? Were they mainly transferred from the old site? Were there any concerns about staffing and workload management?

**A.** Staff came from the old site and the other hospitals that the QEUH was replacing. Insufficient staff were employed to run the QEUH campus. Workload was very extensive. Can you expand. As far I believe the staff we had was half the number of we needed. I think IP did ask for more staff as it wasn't given.

25. What training did you receive or undertake for your role(s) in estates?

**A.** I received various one day training courses on Building Services Engineering systems installed within the QEUH, also a training course for AP HV.

26. What qualifications did you have for your role(s) in estates?

**A.** Fully qualified plumber and heating engineer (Advanced Crafts City and Guilds) and HNC in Electrical Electronic Engineering and was attending University for my BEng BSE.

27. What experience did you have working in estates prior to the QEUH/RHC? How similar was the industry, role, and responsibilities to your work in QEUH/RHC estates?

**A.** Estates L8 Technician Plumber at IRH.

28. Did you have any formal training or qualifications in respect of:

a) Water

**A.** Yes, full plumbing apprenticeship (see 24). Competent Person training (Legionella L8 City and Guilds Accredited) while working at IRH.

a) Ventilation

**A.** No.

b) Infection Control

**A.** No.

29. If so, please detail any training and qualifications – when trained? When qualified? Who was the awarding body? Please describe how the training and qualifications applied to your work at QEUH.
- A.** Apprentice Plumber and Heating Engineer (Charles Kerr and Son, Greenock) from 11/10/82 to 10/10/86. City and Guilds London Institute (Craft Certificate 83/84) and (Advanced Craft 84/85). I worked on all systems Mechanical / Electrical on the QEUH Campus due to past work experience and qualifications.
30. Do you know if appropriate training was in place for new and existing staff on using the new systems and working within the QEUH? How was it ensured that staff were appropriately trained?
- A.** The training received was minimal, just a rough description of how the systems worked. Training sessions were held, and staff were told to attend as per training schedule from Brookfield and NHS.
31. Who was responsible for providing staffing? Who was responsible for ensuring staffing was maintained at sufficient levels?
- A.** GGC NHS senior management.
32. Did you ever have any specific roles or duties in relation to the water systems operation or maintenance within NHS facilities? When did you have these roles and duties?
- A.** Yes / before opening of the Hospital.

If you did:

- a) What were these responsibilities?
- A.** Water Sampling.
- b) What was the purpose of these responsibilities?
- A.** Water Quality.
- c) Were you aware of any specific legal responsibilities/ obligations relating to working with the water systems? If so, please detail.

- A.** Yes, SHTM 04-01 Part A and B (from my previous employment at IRH as a CP for water)
33. If you did not have any such roles or responsibilities in relation to the water systems operation or maintenance within NHS facilities:
- a) Who did?
- A.** Ian Powrie.
- b) What were these responsibilities?
- A.** Ian was the Senior Manager Estates which covered the whole site and ran the estates department. I am unsure what these specific responsibilities were as this was not part of my role.
- c) What did you understand the responsibilities to be?
- A.** Department Lead at QEUH Campus.
- d) Were you aware of any legal obligations/ responsibilities? If so, please detail.
- A.** Yes, SHTM 04-01 Part A and B.
34. Did you ever have any specific roles or duties in relation to the ventilation systems operation or maintenance within NHS facilities? When did you have these roles and duties?
- A.** Yes (2016 -2020 maintenance and breakdowns), 2020 AP Ventilation.
35. If you did:
- a) What were these responsibilities?
- A.** Permits to work on AHU and Ventilation Systems Post 2020.
- b) What was the purpose of these responsibilities?
- A.** Ensuring works were completed as per SHTM 03-01 parts A and B.

- c) Were you aware of any specific legal responsibilities/ obligations relating to working with the ventilation systems? If so, please detail.
- A.** SHTM 03-01 – Ventilation for healthcare premises (Part A - Design and validation) and (Part B – Operational management and performance verification).
36. If you did not have any such roles or responsibilities in relation to the ventilation systems operation or maintenance within NHS facilities:
- a) Who did?
- A.** Ian Powrie
- b) What were these responsibilities?
- A.** Ian was the Senior Manager Estates which covered the whole site and ran the estates department. I am unsure what these specific responsibilities were as this was not part of my role.
- c) What did you understand the responsibilities to be?
- A.** Department Lead at QEUH Campus.
- d) Were you aware of any legal obligations/ responsibilities? If so, please detail.
- A.** SHTM 03-01 A and B.
37. Have you ever worked on a large-scale water or ventilation system before? If so, when was this? How did this compare to working on QEUH? What was your role and duties?
- A.** Yes, IRH domestic water systems as a Plumbing Technician. From 1990 to 1998 and 2011 to 2014. They both have the same systems; however, Inverclyde Royal is a much smaller hospital and has a comparable water system.

38. What was the working environment like when QEUH opened – work life balance/ workplace culture? What issues, if any, were you aware of? What was your experience of this?
- A.** Working Environment was challenging (new hospital), long hours worked learning all the various systems, Micromanaged by Ian Powrie.
39. What were you told about who was on site to manage and assist with carrying out works relating to equipment? How did this assist workload in estates? To what extent, if any, was there a reliance on commercial third parties such as Multiplex when it came to staffing levels?
- A.** Various specialist equipment contractors were available who were on site to ensure equipment was operating correctly i.e. Swiss log. Staffing levels were and always have been on the low side for the Estates department.
40. What was your relationship like with infection control? Did you have any particular issues with infection control? If so, what issues? Did you have any issues with individuals within infection control? If so, please provide details. Please also provide details of the general relationship between the estates team and infection control.
- A.** In the beginning / opening of the hospital I had no knowledge or relationship with Infection control, however through time I have built up a good working relationship with this department. This is common when working with a new team and we now have a good open relationship with good communication.

### **Handover of the QEUH/RHC**

#### **Documents, paperwork, and processes in place as of 26<sup>th</sup> January 2015**

We know that handover of QEUH occurred on 26<sup>th</sup> January 2015:

41. What contractual documentation did you expect to see in place at handover?
- A.** Completion certificates, commissioning documentation, ppm schedules.

42. We understand that on 26 January 2015, you were an Estates Duty Manager.
- a) What was your initial instruction in respect of the state of the QEUH/RHC campus?
- A.** Initial instruction was it was fit for purpose.
- b) What relevant paperwork were you provided with relating to the QEUH/RHC Campus?
- A.** None out with my remit.
- c) What were your observations in terms of the extent of any remedial work required to the hospital?
- A.** Contractors were still working on systems and structures within the hospital once it had opened.
- d) What were your observations in terms of the team dynamics?
- A.** Overwhelmed with the size / considerable workload and a lot of stress. We Were all determined to make the hospital a welcoming and safe space for patients, visitors, and staff alike.
43. Consider the following questions:
- a) What was your initial instruction in respect of the water system at the QEUH/RHC? Who provided you with this information? Was there an official handover process? If so, who conducted this and was there paperwork involved?
- A.** Day course on the water systems (Mercury Engineering) and a lot of time spent walking around the site getting familiar with the water systems / domestic and mechanical.

- b) What was your initial instruction in respect of the ventilation system at the QEUH/RHC? Who provided you with this information? Was there an official handover process? If so, who conducted this and was there paperwork involved?
- A.** There was no instruction we done a Day course on the ventilation systems (Multiplex) and a lot of time spent walking around the site getting familiar with the equipment and its location.
- c) What was your initial instruction in respect of the infection control at the QEUH/RHC? Who provided you with this information? Was there an official handover process? If so, who conducted this and was there paperwork involved?
- A.** No knowledge that I can remember.
- d) What relevant paperwork were you provided with relating to the operation of facilities and estates at the QEUH/RHC?
- A.** None that I can remember.
44. What, if any, information were you given, or documentation did you see relating to isolation rooms and the issues pertaining to them and remedial works carried out/required?
- A.** None that I can remember.
- e) What are Pentamidine Rooms?
- A.** Negative pressure treatment room.
- f) Your understanding of the purpose of these rooms?
- A.** To treat patients who are immunosuppressive.
- g) The guidance applicable to these rooms for water and ventilation?
- A.** No guidance I know off it's a specialised design.
- h) Were you aware of any issues with the specification of these rooms in 2015?

A. No this was not within my remit.

**Refer to Estates Communications Bundle, documents 38 and 78.**

**Risk Assessments at Occupation**

45. Are you aware if a risk assessment was carried out at handover in respect of the water system at the QEUH/RHC?

A. Yes.

46. If so, when did you become aware of this risk assessment?

A. 2015.

47. What documentation have you seen in relation to this risk assessment?

A. None.

48. **DMA Canyon Reports: Refer to SHI Bundle 6 – Miscellaneous documents – documents 29 and 30.**

Have you seen these reports before?

A. Yes, however not in any detail. No, I do not have a view on this as I was not an AP until 2018

49. **2015 DMA Canyon Report**

a) When did you first become aware of this report?

A. 2015.

b) Who made you aware of this report?

A. Ian Powrie.

c) Are you aware of why a risk assessment was not undertaken prior to handover in 2015?

A. No.

d) Do you have a view on why this might have happened?

**A.** No.

e) How did you become aware of this report.

**A.** I was in a meeting with Jim Guthrie and IP David Watson and Alan someone from DMA to discuss flushing of the system. The document was on the table, and I saw it at the meeting but was not given sight of it. I know DMA give IP 3 copies of it at some point because chatting with David, he mentioned it. I didn't see it until 2018. I didn't know what action was taken or recommended in the report. There was a DMA report of 2017 were you aware of the report and what was in it. Thomas Romeo had asked them to produce this report which was described as a gap report. It wasn't in my remit to act on any recommendations in this report. I dealt with reactive works that came to me on the system and I would give these to my people or get a contractor. That was my remit.

f) The report makes several recommendations; do you know what was done to follow up on these recommendations between 2015 and 2017?

**A.** No as a shift manager was out with my remit.

g) Do you know if/when the works suggested in the 2015 report were actioned?

**A.** No again out with my remit.

h) What is your own view of the findings of the 2015 report? Do you agree with them? Please explain your reasons.

**A.** I cannot recall seeing the document at that time.

i) The 2015 report highlights several actions required to be taken. Are you aware how these actions were managed by estates? If so, please provide details of the management of the recommended actions.

**A.** No as I was not an authorised person for water at this time and cannot comment.

50. **2017 DMA Canyon Report**

a) When did you first become aware of this report?

**A.** 2018 – 2019.

b) Who made you aware of this report?

**A.** Colin Purdon.

c) Do you know what works, if any, recommended in the DMA Canyon report of 2015 were carried out prior to the 2017 report?

**A.** No.

d) What was the impact, if any, of the failure to implement the 2015 recommendations on patient safety?

**A.** I was not an AP water until 2018.

e) We understand that Infection Control were only advised about the 2015 DMA Canyon Report in 2018. Do you know why were they not told sooner?

**A.** No.

f) What actions did you or other take in relation to the report's recommendations?

**A.** I was not an AP water until 2018.

g) Was the approach taken by Estates compliant with all relevant guidance and legislation at that time?

**A.** I was not an AP water until 2018.

h) Do you have any concerns about the way in which the water system was managed?

**A.** I was not an AP water until 2018.

51. What risk assessments have been undertaken in respect of the water system since the DMA Canyon Reports? Please provide details.
- A.** 2018 / 2022 / 2023 and 2024 RA.
52. Following the DMA Canyon Reports, what water maintenance strategies were put in place? Please provide details of any applicable strategies which were put in place.
- A.** I was not an AP water until 2018.
53. Are you aware if a risk assessment was carried out at handover in respect of the ventilation system at the QEUH/RHC?
- A.** No was not put through AP ventilation training until late 2020.
54. If so, when did you become aware of this risk assessment?
- A.** See question 47.
55. What documentation have you seen in relation to this risk assessment?
- A.** None.

### **Design Requirements for Specialist Wards**

56. What is your experience in design requirements for specialist wards within a hospital?
- A.** Guidance from SHTM 03-01.
57. Are you aware of what consideration was given to design requirements for specialist wards within the QEUH/RHC?
- A.** No, before my time and not within my remit.
58. Are you aware of what the specific design requirements were for the specialist wards in the QEUH/RHC?
- A.** No .

59. Who would have been responsible for ensuring such design requirements were in place?
- A.** Multiplex /Vent System Designer / NHS Build and Commissioning Team.

### **HEPA filters**

60. Are you aware if HEPA filters were installed in the relevant rooms at handover (January 2015)?

**A.** No.

61. What issues, if any, were there with HEPA filters after handover?

**A.** Not aware of any issues.

62. What information were you given about the use of HEPA filters, their installation, and any previous issues surrounding their use?

**A.** None.

- a) What is the impact of HEPA filters not being installed?

**A.** Patient safety in high-risk patients.

63. **Refer to IMT Bundle – Document 58**

There are discussions here about sourcing HEPA filters: why was there a lack of HEPA filters?

**A.** No idea.

- b) Why were they required?

**A.** See 56a.

64. Can you explain the circumstances leading up to this?

**A.** **Refer to IMT Bundle re. HEPA filters: Documents 57 to 69**

No.

65. **Refer to Document 59:**

Particle counts in Ward 6A came back higher than expected especially with the HEPA filter at maximum, as a result of mould in the showers and water leaking. In this regard:

a) How effective are HEPA filters in managing infection control?

**A.** It is my understanding Hepa filters are for a higher level of filtration.

b) What, if anything, was being done to address the issue of mould and leaks in the showers?

**A.** As far as I am aware these issues were addressed when they were raised by staff on FM first.

c) Who was responsible for the maintenance and upkeep of the showers? when were these issues actioned? If they were not actioned, why not?

**A.** Estates were responsible for maintenance and Facilities responsible for cleaning. I do not know when these rectifications took place.

### **Chilled beams**

66. What are chilled beams?

**A.** A chilled beam is a type of radiation / convection HVAC system designed to heat and cool large buildings using water and ventilation.

67. Do you have experience of working with chilled beams?

**A.** Yes.

68. Are you aware of any circumstances/environments where chilled beams should not be used?
- A.** Areas of high humidity, hospitals / clinical areas / theatres.
- a) Can you recall any specific events in relation to chilled beams at the QEUH/RHC? Refer to IMT Bundle to assist.
- A.** No. I have no recollection of chilled beams dripping on to patients.

For example: condensation/leaking/growth of bacteria/mould

Cleaning of Chilled Beams

Air Sampling/water sampling

Showers in 6A

Action Plan

Patient Placement

Biocide Dosing

**SBAR prepared by Dr Christine Peters: Bundle 4, document 37.**

For each relevant event, please tell us:

- a) What was the issue?
- b) The impact on the hospital (include wards/areas) and its patients (if applicable)
- c) Who was involved?
- d) What was the escalation process?
- e) Were any external organisations approached to support and advise?

- f) If so, what was the advice?
- g) Was there opposing advice and by whom, and what was the advice?
- h) What remedial action was decided on and who made the decision?
- i) Was the issue resolved – consider any ongoing aftercare/support/monitoring.
- j) Any ongoing concerns the witness had himself or others advised him of?
- k) Was there any documentation referenced during or created after the event.  
For example, an incident report?
- l) Did anyone sign off to say the work had been completed and issue resolved/area safe.

Write your answers above in the relevant section.

**A.** I have no previous knowledge of this incident.

69. **At Page 166 of Bundle 4**, Dr Peters lists reasons why chilled beams should not be used in neutropenic settings due to the infection risks associated with them, including the build-up of dust and there being a water source from condensation, leaks, and dripping water:

Do you agree with this? If so, can you explain why?

If not, can you explain why?

**A.** This is not my field of expertise.

## **Combined Heating and Power Unit**

70. What is the purpose of the CHP?

**A.** System that generates electricity and captures the heat that would otherwise be wasted to provide useful thermal energy for space heating and hot water.

71. Were you advised of the condition of the CHP at handover?

**A.** No.

72. What information do you have to support your view on the CHP's condition?

**A.** NA.

73. Are you aware if commissioning and validation of the CHP was carried out prior to handover?

**A.** No.

a) What, if any, commissioning, and validation documentation did you see?

**A.** None.

### **Refer to Estates Communications Bundle, document 90.**

b) Who was/is responsible for ensuring that the commissioning and validation documentation was in place?

**A.** Main Contractor (Multiplex) and Capital Planning (NHS).

c) Where were/are the records of the commissioning and validation for the CHP kept?

**A.** Zutec.

74. Who was/is responsible for ensuring that the CHP was operating correctly?

**A.** Capital Planning was responsible during build commissioning / validation. Now the responsibility is joint between Edina (manufacturer) and NHS Estates.

75. If the CHP was not operating correctly, could this impact patients? If so, how? Refer to Estates Communications Bundle, document 101.
- A.** No. Boilers will come on as the backup system.
76. Have any further issues arisen during your time in estates? If so, please provide details.
- A.** Yes, dates and times cannot be recalled. Heat rejection not working properly, CHP only running at 50% and electrical issues (not my expertise).

## **The Water System**

### **Water Guidance and Obligations**

77. Was a pre-occupation water test carried prior to occupation? **Refer to Estates Communications Bundle, documents 14, 14.1, 14.2:**
- A.** Yes.
- a) Who carried this out?
- A.** H&V Commissioning and NHS Estates
- b) What was the result of the test?
- A.** I did not see the results for H&V but seen the results for the NHS which were passed to Ian Powrie for actioning.
- c) If this was not done, should it have been done and why?
- A.** My understanding was that this had been carried out.
- d) What are the consequences of not carrying out such a test?
- A.** No way of knowing the condition of the water systems.
- e) Are you aware of the post occupation water testing regime at QEUH? What was it?
- A.** Yes, Legionella / Pseudomonas and Potable.

- f) Was this carried out?  
**A.** Yes.
- g) Are you aware of who carried out testing?  
**A.** Estates collected samples (as per Ian Powrie instructions) submitted to Alcontrol lab.
- h) If so, how frequent was testing carried out?  
**A.** Rolling program covering different areas as per Ian Powrie s instruction.
- i) Did any such testing comply with L8 and SHTM 04-01 guidance? If not, why not?  
**A.** Sampling carried out per Ian Powrie s Instructions
- j) What happened to the results?  
**A.** Sent to myself and Ian Powrie. Thereafter Ian Powrie instructed on remedial and resampling.
- k) Where were the results stored?  
**A.** Ian Powrie s responsibility.
- l) What, if any, action was taken in response to results?  
**A.** Cannot remember.
- m) Was there an escalation process? Please provide details.  
**A.** Cannot remember – this is out of my remit as it would not have come to me for action, however, Ian P would have instructed any actions to be completed. I have not been involved with DMA once I took on the shift post when the hospital opened.

- n) Why were you partly involved in these results?
- A.** IP asked me to get sampling done I was told what areas and points to test which I did. I would drop these at the testing centre who would send results to both me and IP after that anything that needed to be done IP would get it actioned it was never me, I never got any of the actions completed. I was only asked to do the sampling and was never involved in any further action after that. I wasn't an AP for water it wasn't part of my remit.
78. Commissioning of water system prior to handover/ patient migration to QEUH:
- a) What details, if any, were you provided with relating to the commissioning of the water system upon commencement of your role?
- A.** None.
- b) Who was or would you expect to be responsible for the water system requirements?
- A.** The Responsible Person as per SHTM 04-01. Not appointed that I am aware of.
- c) Are you aware of what, if any, checks were carried out to ensure that the water system had been commissioned appropriately? What checks would you have expected to have been undertaken? What information were you provided with about the water commissioning process at the outset of your role(s)? Refer to Estates Communications Bundle, document 132.
- A.** No, this was not under my remit.
- d) Do you know which teams (such as infection control) were involved in the water system sign off, and who would have signed it off on behalf of those teams?
- A.** No, this was not in my remit.
- e) Are you aware if the L8 testing requirements complied with?
- A.** Complied with what? I am unsure of this question.

f) Are you aware if there were any Legionella concerns at handover? If so, what were the nature of any such concerns, and what, if anything, was done to deal with these concerns?

**A.** I was not aware of any concerns.

g) Are you aware of any issues with the testing of the water system? Please provide details of any such issues.

**A.** No.

h) What was your understanding at the time of the SHTM 04-01 guidance in respect of water?

**A.** The SHTM's give guidance on how to design and maintain the water system in a healthcare environment.

i) Was the QEUH/ RHC water system SHTM 04-01 compliant at the date of handover – if not, what was outstanding? Who was responsible to ensure that the water system complied with SHTM? What, if any, actions were taken to ensure compliance?

**A.** This was not in my remit.

79. What guidance applies to water? How did you/others ensure that such guidance was complied with? What contractual documents, if any, would you consult to ensure that the guidance was complied with?

**A.** SHTM 04-01 parts A to G, however I was not involved with the water management at handover as I was a duty estates shift manager. I only became an AP for water in mid-2018 so have no idea how this was compiled with. I have never seen any contractual documents.

80. What is SHTM 04-01? Please provide details of any issues with QEUH/RHC in this regard.
- A.** SHTM 04-01 is a series of comprehensive advice and guidance to healthcare management, design engineers, estates managers and operational managers on the requirements, design applications, maintenance and operation of hot and cold-water supply, storage, and distribution systems in all types of health care environments.
81. Who was responsible for ensuring a safe water supply following handover?
- A.** Water safety group (WSG) led by the Responsible Person (RP) on behalf of the Duty Holder.
82. What was your knowledge and understanding of the Health and Safety regulations on control of Legionella at the time of handover?
- A.** I was not responsible for water management however I had knowledge of HSG274 and SHTM 04-01 due to my role as a plumbing technician at IRH.
83. Are you aware of what, if any, Legionella training was provided to all maintenance staff, estate officers and contractors? If not, what training would you expect them to have been provided with?
- A.** I am not aware of any training until I became an AP for water in 2018. I would expect them to have completed the following 'management AP training' 'technician and contractors CPtraining for Legionella L8 accredited course'
84. Are you aware of what, if any, water borne pathogens (other than Legionella) training was provided to maintenance staff, estate officers and contractors? If not, what training would you expect them to have been provided with?
- A.** No training that I was aware of.
85. Do you know who was the Duty holder at the time of handover? Are you aware of the role/responsibilities of the Duty holder?
- A.** At the time I did not know who or what the role of the Duty holder was.

## **Water - Commissioning and Validation (C&V)**

86. What commissioning and validation documentation did you see in respect of the pre- handover in 2015? Who would have had sight of any such documentation at the pre-handover in 2015?

**A.** Not in my remit.

87. Where is the commissioning and validation documentation (“C&V”) stored generally on the hospital system?

**A.** Zutec.

88. What is the purpose of C&V? What are the consequences of it not being carried out?

**A.** Testing the system to ensure soundness / watertight and operating correctly as per design. May not operate as designed.

89. Were records kept of the cleaning and testing regime? Where were the records kept and what was the retention policy? What concerns, if any, did you have about record keeping and retention?

**A.** Not in my remit.

90. Describe the same in respect of verification and the cold-water supply system.

**A.** Not in my remit.

91. What C&V of the water system was carried out post-handover?

**A.** Not in my remit other than facilitating sampling as described previously under Ian Powrie’s instruction.

a) Who was responsible?

**A.** NA.

b) How was the C&V recorded?

**A.** NA.

c) Any concerns arising from post-handover C&V? If so, why did these concerns arise?

**A.** NA.

### **Water system - general**

92. Please provide details of your role as Authorised Person (AP) for Water, including: When you commenced this role? How you came to take on this role? What your responsibilities were? Any specific issues which arose during your time as AP for Water? Any actions you took in response to any such issues?

**A.** Appointed AP Water in 2018 so had no responsibility prior to this date.

93. To what extent were you consulted or briefed about the specifications of the water system of the hospital before it opened – perhaps by attending meetings or workshops run by the contractors or being sent or shown plans or specifications for particular wards?

**A.** None.

94. Can you provide details of the Hardgate Road Water Supply which was in place between 2014-2016? Were there any issues with the supply? If so, please provide details including whether these issues were reported, when, to whom and by whom.

**A.** The supply was connected from Hardgate road water main to after the booster pumps set supplying the hospital, bypassing the filtration units and water tanks. The issue was reported by me and James Guthrie to Ian Powrie on a Friday afternoon (cannot remember date). The pipe work between the two water mains was removed by someone but don't know who did this work.

95. You mention having reported bypass to IP and the pipework between the water mains was removed by someone . Would you be aware of any further action by IP was this removed by his instigation?

**A.** I wouldn't be able to say that. I know when I came to work after the Friday I checked, and the pipework had been removed. IP must have this actioned this.

96. What testing and maintenance protocols and regimes were in place at handover in 2015? What should have been in place? What remedial actions were taken? When were any such remedial actions taken? By whom were any such remedial actions ordered?

**A.** Not in my remit.

97. What concerns, if any, were there at handover about the temperature and movement within the water system? Please provide details of any such concerns. How were these concerns recorded and measured? Who was responsible for this?

**A.** James Guthrie and I were concerned that there was not enough flushing of the water systems by Facilities and Mercury. This point was raised to Ian Powrie.

98. What concerns, if any, did you have at handover about testing and stagnant water being in the system following testing? Please describe and provide information on how this was dealt with.

**A.** See answer to question 94. It was raised with Ian Powrie and not aware of how this was dealt with.

99. Did you have any concerns at handover about dead ends in the system?

**A.** Not in my remit.

100. To what extent could the water system in QEUH/RHC have been more comprehensive?

**A.** Not in my remit.

101. If the water system as installed had been operated correctly, would it have achieved the system objectives? In your answer set out what the system objectives were and how these were/ could have been met.

**A.** I am not a design engineer.

102. Describe any ward/area specific water systems used?

a) Detail the individual ward water specification?

b) What were/ are your thoughts about this?

c) Why, if applicable, did certain wards have different water systems?

d) Was there a standard protocol for sanitising water systems?

**A.** Not in my remit at that time.

103. To what extent were the standard protocols for sanitising water systems appropriate for a system of the size and complexity of QUEH/RHC?

**A.** Not responsible for disinfection and sanitisation of the systems at that time.

104. Were consultants brought in to advise on sterilisation of the water systems?

a) Who were they?

b) When were they brought in?

c) Had you worked with them before?

d) Describe and comment on the methodology that they used.

e) Was that methodology accepted?

- f) Did it work?
  - g) What paperwork or records were kept in relation to their installation, maintenance, or flushing?
  - h) Were these kept on paper or electronically?
  - i) What equipment was used for recording work by employees doing day to day tasks?
  - j) How was the work carried out reported back and checked? By whom was it checked?
- A.** Not in my remit.

### **Water Maintenance**

105. What was your involvement in relation to the discovery and build-up of biofilm in the water system? What actions were taken to address this? Who was responsible for carrying out these actions?
- A.** No knowledge of Biofilm in the system.
106. Were you involved in the swabbing/sampling of the biofilm/drains/water system? If so, who instructed you to do this, and what were the results?
- A.** No.
107. Explain the cleaning and maintenance of the water system, taps, drains, shower heads etc. When doing so consider:
- A.** None of the below were in my remit.

- a) What was the cleaning regime?  
**A.** None of the below were in my remit.
- b) What was the importance of this?  
**A.** None of the below were in my remit.
- c) What responsibilities did you have?  
**A.** None of the below were in my remit.
- d) What did you do to ensure these responsibilities were executed?  
**A.** None of the below were in my remit.
- e) What issues, if any, did you have in fulfilling these responsibilities?  
**A.** None of the below were in my remit.
- f) Are you aware if concerns were raised about cleaning practices? **IMT bundle, document 22.** Detail these concerns.  
**A.** None of the below were in my remit.
- g) What, if any, matters regarding the maintenance of the water system were escalated? If so, were they escalated BICC or AICC? Who were they escalated to? What was the outcome of any such escalation?  
**A.** None of the below were in my remit.
- h) What is dosing?  
**A.** None of the below were in my remit.
- i) When and why was any dosing carried out to the water system? What was used in any dosing? **IMT bundle, document 30.**  
**A.** None of the below were in my remit.
- j) What was the result of any such dosing?  
**A.** None of the below were in my remit.

- k) **Refer to Estates Communications Bundle pg. 919** – what was this email about?
- A.** None of the below were in my remit.
- l) Are you aware if routine drain cleaning was not carried out? If not, why not?
- A.** None of the below were in my remit.
- m) Was this normal practice for a building/property of this size?
- A.** None of the below were in my remit.
- n) Clearing of drains in June 2018 following water incident. What was the relevance and purpose of this? **IMT bundle document 27.**
- A.** None of the below were in my remit.
- o) Are you aware if the actions taken resolved the issue? **IMT bundle, document 38?**
- A.** None of the below were in my remit.
- p) Do you know if expert advice was required? If so, why and from whom was it sought?
- A.** None of the below were in my remit.
- q) What happened in response to concerns about on-going maintenance and cleaning? What further action did you take personally?
- A.** None of the below were in my remit.
- r) What, if any, further steps should have been undertaken? Why?
- A.** None of the below were in my remit.
108. Were you involved in the decision to proceed with any drain surveys? If so, can you explain your role in this decision? What was the purpose of the drain survey?
- A.** I was not involved in drain surveys.

109. What were the results of the drain survey?
- A.** NA.
110. Debris, including sponges, were found in the water tanks. What is the significance of this, if any, in relation to the wider issue of water contamination?
- A.** Possible contamination, however, these were found in the raw water tanks which are before the filtration units. The purpose of the filtration unit is to remove any micro-organisms to 0.2 microns in this case the water would be safe
111. Concerns have been raised regarding the hospital design and the increased risk of water contamination. What is your view on the increased risk of water contamination in relation to the following:
- a) Having a single barrier approach water system, resulting in fluctuating water temperatures
- A.** Unsure of the meaning of “single barrier approach.”
- b) Ensuite bathrooms attached to each room.
- A.** If patient is bed bound, possibility of non-movement of the water system in the on-suit. Higher maintenance costs.
- c) Overprovision of water outlets leading to sink removals?
- A.** Not aware of this.
112. Were you in the decision to use point of use filters? If so, how?
- A.** No.
113. Who was responsible for the effective management of and installation of the point of use filters?
- A.** DMA Canyon installed these under Ian Powrie's instruction.

114. Did the point of use filters meet the water regulation requirements? Did they have an effective gap between the water level and the filter to prevent contamination?

**A.** No.

115. Why were the point of use filters not introduced earlier?

**A.** Not under my remit.

116. How often were you aware of the filters being changed? Were the manufacturer's recommendations followed?

**A.** Not under my remit.

117. How involved were you in decisions relating to water testing?

**A.** Not in my remit.

118. If not, who was responsible?

**A.** Ian Powrie and Teresa Inkster.

119. What do you understand about the management of water testing? What do you understand about decisions on when water testing should be undertaken?

**A.** Follow the L8 and SHTM for guidance on management and testing of water systems.

120. In her statement Dr Teresa Inkster states *'there was a direction from Mary Anne Kane, who was at senior director level, not to give microbiologists access to water testing results'*:

a) What is your reaction to this statement?

**A.** Not in my remit.

- b) Why did estates direct that microbiologists should not have access to water testing results?  
**A.** Not in my remit.
- c) Have you ever been advised not to contact someone/ not to provide water testing information? If so, when? By whom? And why?  
**A.** No.
- d) Have you ever refused, or directed others to refuse to provide water testing information requested by microbiologists or infection control? If so, why? Provide as much information for your rationale and the consequences of withholding information.  
**A.** No.
- e) Provide information on how you dealt with requests for water testing results from microbiologists and infection control – was all the information requested provided? If so, what was provided? If not, why was paperwork not provided?  
**A.** Don't remember ever being asked to send results to any other party.
- f) Who was responsible for dealing with these requests for information?  
**A.** Don't know.
- g) What was your role in dealing with these requests for information?  
**A.** NA.
- h) How were these requests for information managed by estates? What steps did you take?  
**A.** NA.
- i) What concerns, if any, did you have with how matters were being handled? If so, what steps did you take in response to these concerns?  
**A.** NA.

## February 2016 – Sinks – Ward 2A

In early 2016, a PAG took place regarding the '*Contamination of aseptic pharmacy unit at RHC water supply with Cupriavidus pauculus*' (**Bundle 2, document 3**), a subsequent investigation linked the infection to sink within the Aseptic Pharmacy Unit:

121. Are you aware of this incident? If so, when did you become aware of it? How did you become aware of it?
- A.** Yes, around 2018, can't remember details of how I found this out.
122. What information, if any, were you provided with in respect of this incident? When were you provided with any such information?
- A.** Was not provided with any information at the time.
123. What was your understanding of this incident? Why were the sinks replaced at this stage?
- A.** Was not provided with any information at this time.
124. What, if any, action was taken in relation to this incident? By whom was it taken? When?
- A.** Do not know.
125. Do you recall any further issues in relation to sinks? If so please discuss, describing your involvement and any action taken in response to any issues.
- A.** Not to my recollection.

## Water incident 2018

126. Please provide details of the concerns as they emerged in 2017 into 2018 in respect of the water issues. Initially focus on your recollection of events as they happened. In relation to the concerns:

**A.** I was not an AP for water until mid-2018. This incident had already occurred and was not part of my remit at that time.

a) When did the concern arise?

b) Nature of concerns?

c) Possible cause of concerns?

d) What actions were taken in response to the concerns?

e) In your view, how sufficient were these actions?

**A.** Not my remit.

The following IMTs have been highlighted to assist with this: **IMT Bundle Documents 16-18, 21,24, 26-29, 31-32.**

**P. Taps**

127. The use of Horne Taps was discussed in the IMTs relative to the water incident. **Refer to IMT Bundle document 18.**

Please confirm:

a) Your understanding of use and function of Horne taps? Are you aware of any issues with these types of taps?

**A.** TMT with mixed hot and cold water and single cold-water levers. No issues that I am aware of.

b) Who authorised the use of Horne taps? Where were Horne taps used?

**A.** Part of the design (not in my remit). Through the hospital at clinical outlets.

c) Why were Horne taps selected?

**A.** Not in my remit.

128. Flow straighteners: when did you become aware that they were non-compliant with SHTM 04-01 guidance? Do you know if they were non-compliant at handover?

**A.** Not my remit however SHTM 04-01 Part A Page 65 Note 15 state “Rosettes, flow straighteners and aerators have been found to be heavily colonised with biofilm, but their removal can create turbulent flow at increased pressure resulting in splashing of surrounding surfaces and flooring. Current advice is that they should be removed but this should be subject to risk assessment. (With regard to the requirement for plugs, see also the section on baths, sinks, showers, and taps in DEFRA’s (1999) guidance document to the Regulations.)” I would not be able to comment if they were compliant at handover. There was a rolling programme to replace these regularly which is carried out by DMA Canyon.

129. Were new taps replaced in January 2019? If so, why were they replaced? Where were they replaced? What were they replaced with? Was the replacement related to dosing with chlorine dioxide?

**A.** Yes, decision made by WTG in relation to ward 2A RHC, Markwik 21. Not that I am aware of.

### **Water Technical Group (WTG)**

130. What was the purpose of the WTG?

**A.** To review and assess water related hazards / incidents and to advice on suitable control measures and remedial actions.

131. What issue/ event prompted the setting up of the WTG?
- A.** Not involved in the setup of this group.
132. What was your involvement with the WTG?
- A.** Minimal, only attended on the request of Ian Powrie. I did not give any input to this group . Is it right you got requests from IP to take greater input in these meetings. He asked me to attend but this was 2018 -2019 when I became aware of this group. I was taken off shift s April 2018 started day shifts and did my training to become AP. I was only at these meetings for experience
133. Detail specific work which you carried out in respect of your involvement with WTG, why did you carry out this work, what was the impact?
- A.** Do not recall any action I was asked to complete.
134. Who was in the WTG, what were their names and their roles within WTG?
- A.** Unsure.
135. What issues came to light as a result and what action was taken? What were the concerns of the WTG and how did this impact on patients?
- A.** NA.
136. How did clinical staff and estates get along at these meetings? What, if any, were the points of contention between these groups?
- A.** NA.

**Review of Issues Relating to Hospital Water Systems' Risk Assessment 26<sup>th</sup>  
September 2018**

**Refer to Estates Communications Bundle, document 134.**

137. Please provide details of your role as AP for of Legionella Control, including: When you commenced this role? How you came to take on this role? What your responsibilities were? Any specific issues which arose during your time as AP? Any actions you took in response to any such issues?

**A.** AP Water 2018, I was removed from shift work as a Duty Estates Manager and given the role of AP Water once qualified (summer 2018). Part of the management team of the domestic water systems at the QEUH campus. No specific issues that I can remember, and no actions taken.

138. Have you seen this document before? Are you aware of who commissioned this document? What issues prompted the instruction of this report?

**A.** Yes, not sure who commissioned this document, no idea.

139. What concerns, if any, did you have about the water system? When did they arise?

**A.** I was aware of concerns around wards 2A and 2B however I was not responsible for any works in relation to this. I believe they changed the horn taps after independent reports that was retained more than of others. These were change to Markwik taps. They also removed the WC cisterns and replaced with direct flushing valves, and I think although not certain that this was if they leaked behind the panels, it may cause mould. This was Capital Planning

140. Did you raise these concerns? If so, with whom? When? Did others have concerns? If so, who?

**A.** NA.

141. What was the impact of this on patients?

A. Not clinically trained to answer this question.

142. What works, if any, were carried out in response to any findings in this report? What was the result of any such works?

A. Was aware of works being carried out by Ian Powrie and Capital projects, however had minimal involvement with these projects unless requested by Ian Powrie.

### **Tap Water- Ward 3C – 2019**

143. What were the issues in relation to tap water in Ward 3C?

A. No recollection of any issues.

144. What was your understanding and involvement with these issues?

A. None.

145. What action was taken?

A. Unknown.

146. How were matters resolved?

A. Unknown.

### **Dr Susanne Lee**

#### **Refer to Estates Bundle, Document 131, and Page 930**

147. Have you seen this document before? If so, when?

A. No.

148. What was your involvement, if any, with Dr Lee?

A. None I am aware of.

149. What are your views on the recommendations set out in this action plan?

A. This is the first I have seen this document.

150. Do you know if these recommendations were followed and to what extent they were implemented?

A. No.

151. Who was responsible for implementing these recommendations?

A. Don't know.

### **Other water incidents**

152. What other specific events do you recall in relation to water? Do you have any recollection of debris in the water tanks? Refer to IMT Bundle, Document 45 as starting point.

If so, please explain:

a) What the issue was.

b) The impact on the hospital (include wards/areas) and its patients (if applicable).

c) Who was involved.

d) What was the escalation process.

e) What was the result of any escalation.

f) Were any external organisations approached to support and advise.

g) Detail the role and function of HPS and HFS, advise if they were involved and any reports prepared by them.

- h) Detail advice given from external organisations; what was the advice, did you agree with it, how was any advice managed/ communicated with others in your team and your superiors?
- i) Was there opposing advice and by whom.
- j) What remedial action was decided on and who made the decision.
- k) Was the issue resolved – consider any ongoing aftercare/support/monitoring.
- l) Detail any ongoing concerns you had, or which you were made aware of.
- m) Was there any documentation referenced during or created after the event?
- n) I.e. an SBAR/ minutes from a meeting – use the bundle provided to assist.
- o) Did anyone sign off to say the work had been completed and issue resolved/area safe? If so, who signed off on the work?

**A.** I was aware debris were found and sent off for analysis by Ian Powrie. DME Canyon went in and cleaned the tanks on Ian's instructions

153. What were the NHS procedures for raising concerns about water or water infections?

a) How were these dealt with by you?

**A.** Water infections are not my area of expertise, however any concerns raised would have been documented in the water incidents report forms which were started in August 2018.

b) How was it confirmed that they had been dealt with?

**A.** Completed water incident form with sign off from person carrying out the actions.

c) Do you recall specific incidents, and in particular any that gave you concern?

**A.** No.

## **Ventilation**

### **Ventilation - Commissioning and Validation**

154. Describe the commissioning and validation process in respect of the ventilation system in the QEUH/RHC.

A. Not in my remit.

a) Who was this carried out by?

A. Not in my remit

b) Who signed off on it?

A. Not in my remit.

c) What commission and validation documentation did you see?

A. Not in my remit.

d) Was there anything from the commission and validation documentation that you have seen which gave rise to any concerns? If so, what were those concerns?

A. Not in my remit.

### **Ventilation system – general**

155. To what extent were you consulted or briefed about the specifications of the ventilation system of the hospital before it opened – perhaps by attending meetings or workshops run by the contractors or being sent or shown plans or specifications for particular wards?

A. Not in my remit.

156. What are thermal wheels?  
**A.** Heat recovery system.
157. Are you familiar with thermal wheels?  
**A.** Yes.
158. What is the purpose of thermal wheels in the ventilation system?  
**A.** Thermal wheels are a rotary heat recovery system situated between the supply and extract systems within an AHU. It is used to recover heat energy.
159. What testing and maintenance protocols and regimes were in place for the ventilation system at handover?  
**A.** Not in my remit.
160. Was it possible to incorporate a comprehensive ventilation system into the QEUH/RHC?  
**A.** Not in my remit / I am not a design engineer.
161. Describe any ward/area specific ventilation systems used?  
**A.** Not in my remit.
162. What are your thoughts about these ventilation systems that were used?  
**A.** Not in my remit.
163. Please provide details of your role as Authorised Person (AP) for Ventilation, including: When you commenced this role? How you came to take on this role? What your responsibilities were? Any specific issues which arose during your time as AP? Any actions you took in response to any such issues?  
**A.** AP Ventilation course completed on 17th January 2020, Appointed on

## **Specific events in relation to the ventilation system**

164. Can you recall any specific events in relation to ventilation?

For example:

a) Issues with the air change rates in Ward 2A?

**A.** Not in my remit.

b) The Ventilation Group and difficulties establishing this?

**A.** Not in my remit.

c) Birds Roosting in Plant Rooms?

**A.** Yes. PR41 in the RHC and PR 121 Adults Hospital. However, I was never involved with any discussions or works in relation to this issue.

d) Smell of Sewage within Theatres and remedial works?

**A.** Not in my remit, however it's a reminder that the hospital was built beside a sewage plant (Scottish Water). There is a regular smell from the sewage plant which permeates throughout the whole site

In providing your answer, please provide details of:

a) What the issue was?

b) The impact on the hospital (include wards/areas) and its patients (if applicable)

c) Who was involved?

d) What was the escalation process?

e) What was the result of any escalation?

f) Were any external organisations approached to support and advice?

- g) What was the advice?
  - h) Was there opposing advice and by whom?
  - i) What remedial action was decided on and who made the decision?
  - j) Was the issue resolved – consider any ongoing aftercare/support/monitoring?
  - k) Any ongoing concerns witness had himself or others advised him of?
  - l) Was there any documentation referenced during or created after the event?  
For example, an incident report?
  - m) Did anyone sign off to say the work had been completed and issue resolved/area safe? If so, who signed off on the work?
165. Throughout your time at the QEUH, what work was undertaken in respect of ventilation and why?
- A.** Not in my remit.

### **Specific Incidents**

#### **Ward 4B**

161. **Refer to Estates Communications Bundle document 62:**

- a) What is this document?  
**A.** Ventilation report.
- b) Have you seen it before? If so, when?  
**A.** No.

c) Do you know what the purpose was of carrying out a ventilation report in October 2015?

A. No, not in my remit.

d) Are you aware of any issues arising from this report? What, if any, actions were taken following this report? By whom were these actions ordered? By whom were they carried out? What was the result of any such actions being undertaken?

A. No, not in my remit.

e) **Refer to Estates Communications Bundle, document 87** – Do you know why NSS was involved in the issues? Actions taken in response, your involvement.

A. No, not in my remit.

#### **Decision to close wards 2A/B and move to 6A and 4B**

162. Discuss the issues surrounding and leading up to the decant of patients from Ward 2A in 2018.

a) What was your involvement?

A. None.

b) What risk assessment and additional measures were put in place to ensure patient safety?

A. I had no involvement in this procedure.

c) What concerns, if any, did you have about where the patient cohort was being moved to? If so, why?

A. NA.

d) Discuss and detail the works done to Ward 2A/B. What was required to be done and why? What was done and when was the work completed? Please include details of your involvement.

**A.** Not part of my remit. This was works completed by Capital Projects.

e) Any other relevant information.

**A.** None.

166. Discuss the issues surrounding the ward 2A patients when in occupation of ward 6A. In particular, your views in respect of:

a) Chilled beams

b) Gram Negative Bacteraemia

c) Water filters

d) Ventilation

e) issues/ testing/ escalation/ response/ IMTs/SBARs impact on patients

f) Patient communication

g) Internal escalation - HAIIT scoring

h) External escalation

**A.** See Q134 – I have no other knowledge than being aware patients were moved to Ward 6A. I had no involvement with Ward 6A.

#### **AA. IMT 30 April 2021 – Serratia Colonisation in NICU, RHC**

167. **Please refer to SHI Bundle 1, IMT Meeting Minutes, p 445).**

a) What do you recall about this incident?

- A.** Discuss Serratia Colonisation in NICU.
- b) What was your involvement?
- A.** Working as part of the Estates team.
- c) When and how did concerns first arise?
- A.** Not in my remit.
- d) What Investigations were done?
- A.** Not in my remit.
- e) Was there a hypothesis?
- A.** No idea as this was not within my remit.
- f) If so, was it borne out?
- A.** No idea as this was not within my remit. This would be clinical and IPC
- g) Were any interventions recommended? If so, were they sufficient?
- A.** Not in my remit.
- h) **You are noted at page 451** as confirming that when rooms were being HPV cleaned the vents and drainage system were also cleaned. What is HPV cleaning? Why were the vents and drainage system also cleaned? What is the significance of that action being taken?
- A.** Hydrogen peroxide vapour (HPV) cleaning, Vents and drainage were cleaned as requested by Infection Control. Cleaning the vents / drains and a full HPV clean was to ensure that the ward area was completely clear of any contamination.
- i) Did you consider the confirmed action plan to be sufficient? If not, why not?
- A.** Not in my remit.

- j) What was your view about communication in respect of this incident?  
**A.** Clear and informative.

**IMT 24 May 2021 – Serratia Colonisation in NICU, RHC**

168. **Please refer to SHI Bundle 1, IMT Meeting Minutes, p 474).**

- a) What was the purpose of this meeting?  
**A.** Discuss Serratia Colonisation in NICU.
- b) What was your involvement?  
**A.** Working as part of the Estates team.
- c) What was your view regarding the report to be prepared by Kerr Clarkson?  
**A.** Not my remit.
- d) You are noted at page 477 as stating that the trap should not be moved away from the outlet of a wash hand basin as it could become infected. Why is this? Why was it suggested that the traps be moved? How was your statement received at the IMT?  
**A.** I have no recollection why the question arose regarding the trap being moved away from the WHB, I presume that it was because of the possibility of microorganisms within the WHB outlet and trap. My statement was received well.
- e) You are noted at page 478 as confirming that the drains were cleaned when the HPV was complete and new traps were installed. Please provide details of the HPV. Please provide details of why new traps were installed and where they were installed.  
**A.** HPV was explained in question 163 (H), New traps were installed as it was easier than cleaning the old ones, they were installed in the original position of the old traps (direct replacements).

f) Did you consider the agreed action plan to be sufficient? If not, why not?

A. In my experience yes.

g) What was your view about communication in respect of this incident?

A. Clear and Informative.

### **IMT 2 June 2021 – Serratia Colonisation in NICU, RHC**

169. **Please refer to SHI Bundle 1, IMT Meeting Minutes, p 487).**

a) What was the purpose of this meeting?

**A.** Discuss Serratia Colonisation in NICU.

b) What was your involvement?

**A.** Working as part of the Estates team under instruction by IPC and Ian with regards to allocating jobs to technicians for altering the drainage system, replacing the TMT taps and completely sealing the internals of the IPS panels.

c) What was your view regarding the discussion at page 489 concerning the cleaning regime for the unit? Were there sufficient resources? Was the proposed plan sustainable?

**A.** Not my remit.

e) You are noted at page 491 it is noted that you prepared a report on the drains. Why did you prepare this report? You noted that the actions, from an estate's perspective, had been completed. Were you satisfied that everything which required to be done had been? If not, what else do you consider should have been done and why?

**A.** I prepared a report on the drains regarding codes and practises for the installation of drainage systems within a building. I was sharing my knowledge and experience to the group. Yes, I was satisfied, everything that was required to be done was completed.

e) You are noted at page 491 that installation of a heat sanitising drain should not be done. Who had suggested that a heat sanitising drain be installed? Why? Why were you of the view that it should not be installed?

**A.** I cannot remember who suggested a heat sanitisation drain be installed, however my view of not installing one was the possibility of making the drainage system more susceptible to the growth of harmful bacteria and microorganisms.

f) Did you consider the agreed action plan to be sufficient? If not, why not?

**A.** In my experience yes.

g) What was your view about communication in respect of this incident?

**A.** Clear and informative.

### **Anything Further**

170. Is there anything further that you want to add that you feel could be of assistance to the Inquiry?

**A.** No.

## **Declaration**

171. I believe that the facts stated in this witness statement are true. I understand that proceedings for contempt of court may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief in its truth.
172. The witness was provided the following Scottish Hospital Inquiry documents for reference when they completed their questionnaire statement. These are contained within Appendix A

## **Appendix A**

A43299519 – Bundle 4 – SBAR Documentation

A43293438 – Bundle 6 – Miscellaneous Documents

A43255563 – Bundle 1 – Incident Management Team Meeting Minutes (IMT  
Minutes)

A47069198 – Bundle 12 – Estates Communications

A43144419 – Bundle 2 – Problem Assessment Group Meeting Minutes