Scottish Hospitals Inquiry
Witness Statement of
David Brattey

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

1. Name, qualifications, chronological professional history, specialism etc – please provide an up-to-date CV to assist with answering this question.

A David Brattey.

HNC Electrical & Electronic Engineering 1989

HNC Management Studies 1991

Became a member of the Institute of Hospital Engineering now (IHEEM) and was registered with the Engineering Council as Incorporated Engineer IEng 1994

BA Degree Majoring in Business Administration & Human Resource Management 2003

City & Guilds Certificate in Sterilzer Testing Technology 2005

1973 - 1977 Apprentice Electrician Western Regional Hospital Board
1977 - 1990 Approved Electrician Argyll & Clyde Health Board
1990 - 2010 Estates Officer responsible for all engineering day-to-day maintenance and minor capital work across 5 hospitals, 10 health centers and office buildings in the primary care sector.

From 2005 I was responsible for maintaining all 90 benchtop steam sterilisers across the whole of Inverclyde and Renfrewshire Health Centers and Clinics.

In 2009 I became Authorised Person for (MGPS) at the Royal Alexandra Hospital in Paisley so as to provide backup to the AP already in post.

2010 - 2014 I was initially seconded to the Royal Alexandra Hospital for 3 months to assist the Estates Project Manager with a large amount of upgrade work across the site. This was extended for another 3 months as more money became available to carry out additional upgrades.

My secondment became permanent and I took over as Estates Project Manager in April 2011 managing a number of high value projects.

In June 2014 I was seconded to the Southern General Hospital for 1 year as Senior Estates Manager responsible for all engineering and building day-to-day maintenance across the site.

I April 2015 I took up my post at the QEUH/RHC as Senior Estates Manager responsible for all engineering and building day-to-day maintenance across the site including duties as Authorised Person (MGPS).

I retired in March 2018.

Professional Background

2. Professional role(s) within the NHS.

A Estates Officer, Project Officer, Transport Manager, Project Manager, Senior Estates Manager, Authorised Person (MGPS).

3. Professional role (s) at QEUH/RHC, including dates when role(s) was occupied.

A Senior Estates Manager for QEUH/RHC from April 2015.

4. Area(s) of the hospital in which you worked/work.

A QEUH/RHC, The retained estate including Neurosurgery, Neurosciences, Maternity, Care of the Elderly and Laboratory Building.

5. Role and responsibilities within the above area(s)

A Senior Estates Manager carrying out Theatre Validation and Verification on an annual basis. Carrying out my role as Authorised Person for Medical Gas Pipeline Systems (MGPS). Managing the Autoclave contract and associated maintenance.

6. Who did you report to? Did the person(s) you reported to change over time? If so, how and when did it change?

A I reported to the Sector Estates Manager for the first 2 years or so, then to the new Site Manager who was appointed around the middle of 2017.

7. Who selected you for your role(s)? When were you selected for your role(s)? Please describe the selection process for appointment to this/these roles?

A I was interviewed for the post of Senior Estates Manager in December 2014 by the Sector Manager of the SGH and Sector Manager of QEUH/RHC.

6. Had you worked with any of your QEUH/RHC estates, project team or management colleagues prior your role(s) at QEUH/RHC? If so, who had you worked with before this current role? When did you work with this/these colleague(s)? What role were you in when you worked with this/these colleague(s)? How long were you colleagues in this/ these previous role(s)?

A I had worked with some of my QEUH/RHC colleagues in the Southern General Estates team on my year long secondment from the Royal Alexandra Hospital in Paisley. I was Senior Estates Manager. These colleagues had been at the SGH for some time.

Specific role(s) at QEUH/ RHC

9. Describe your role and responsibilities (including day to day) at QEUH/RHC post January 2015 when the hospital was handed over from Brookfield Multiplex to NHS GGC.

A I didn't have any roles or responsibilities until I took up my post in April 2015.

10. How did your role change following handover of the QEUH/RHC in or around January 2015?

A It didn't change. I was still working at the SGH as it was still fully operational until it closed.

11. Describe your relationship with your supervisor in this role.

A I got on well with my supervisor.

12. In January 2015, how many people worked in Estates? Did the number of people working in Estates change during your time at QEUH, if so, how so?

A Approximately 20-25 people worked in Estates in January 2015. In April2015 that increased to approximately 50 people.

13. How did hard and soft facilities management operate on a daily basis? How were the operations managed? Was responsibility shared between different teams? If so, to what extent was responsibility shared?

A As two distinct teams. They had their work to do and estates had theirs. Both teams worked well together when required. My soft FM colleague and I attended the management huddle every weekday morning where in some instances issues would require both of our inputs. No.

14. How was communication between you and your colleagues? What communication issues, if any, arose?

A The communication was good. We all got on well together and I can't think of any issues that arose during my time there.

15. How did you keep a record of work delegated?

A I generally kept a note in my desk diary.

16. How was delegated work supervised?

A didn't need to supervise as such. I would only delegate to Estates Managers and Supervisors. I would check in with them to see how things were going, However they would normally get back to me to let me know the work had been completed.

17. Which other QEUH teams or departments, if any, did you work closely with?

A Most of them, but more closely with Adult and Children's Theatre Managers and The Infection Control Team.

18. Please describe your working relationship with these QEUH teams or departments (including areas of hospital work on).

A I had a very good working relationship with every department. It was generally first names all round. I don't think I crossed swords with anyone.

19. What concerns, if any, did you have about any member of staff? If so, please describe these concerns. What action, if any, did you take in relation to these concerns?

A There was one individual who transferred from another hospital who clearly didn't want to be here. I didn't know any history of this person until he started working at the QEUH/RHC. It was not long before he started taking sick leave, initially short bouts of sick leave running into longer periods. When he was at work he could only be given basic tasks relating to his trade as the Duty Managers had serious doubts about his ability to do his job. In fact they wanted to get him on a course to assess his level of competence. They tried to get him on a course but every time he had an excuse not to attend. As the

department attempted to force the issue, he went on long term sick leave. He was happy to be paid the Technician rate but was in our opinion unable to carry work of a Technician. We followed procedure regarding his sick leave with help from HR. When I left the NHS he was still there.

20. What concerns, if any, were ever raised about management/ managers? If so, please describe these concerns. What action, if any, did you take in relation to these concerns?

A I don't think any concerns were raised about managers that worked for me. There was one case where an individual went to his shop steward to report that I had raised my voice and was heavy handed with him for not agreeing to send him on a course that he wanted to go on. His shop steward contacted my General Manager and voiced his concerns about my behaviour towards his union member. My General Manager was astonished to hear these accusations and after a brief discussion with me he asked to meet with the shop steward. The outcome was that the accusations were withdrawn and the matter was closed. I didn't need to raise my voice or be heavy handed to any member of staff to get things done. I explained to this Technician that he was already qualified and the course he wanted to go on was aimed at Maintenance Assistants who had very little knowledge of the topic. This Technician at the outset did not want to be here but I stressed to him at that time that I wanted him here and to be part of the team. I told him his future was at this hospital and I really encouraged him get his head down and to stick with it. I was shocked to learn that he needed to go to his shop steward regarding this matter.

Training

21. What formal training or qualifications do you have in of the following:

a) Water

A None.

b) Ventilation

A None.

c) Infection Control

A None.

If so, can you go into more depth about any training and qualifications? – (When trained? When qualified? Who was the awarding body?) Please describe how the training and qualifications were relevant to your work at QEUH.

22. What specific roles or duties within the Project team have you had in water systems operation or maintenance? How long did you have these roles and duties?

A I didn't have any specific roles within the Project team as I was not part of the Project team.

23. How aware were you of any specific legal responsibilities/ obligations when working with the water systems. If so, please provide additional information.

A I was aware of the SHTM and The Approved Code of Practice Guidance.

24. If you did not have any roles or responsibilities in relation to the water systems operation or maintenance:

a) Who did?

A I don't know.

b) What were these responsibilities?

A I don't know

c) What did you understand the responsibilities to be?

A For the implementation procedures to ensure reliable hot and cold water supply, storage and distribution systems operate within the organisation.

d) How aware were you of any specific legal obligations/ responsibilities? If so, please provide additional information.

A I was aware that we had to comply with the SHTM and L8 guidance. To ensure that a written scheme of examination was in place in respect of controlling legionella in water systems. To provide an adequate supply of hot and cold water of suitable quality. To carry out a risk assessment for the water services so as to identify potential problems in the system, such as excess storage capacity, temperature distribution problems, low water usage and the use of inappropriate materials etc.

25. What specific roles and duties did you have in the ventilation systems operation or maintenance?

A I didn't have any.

a) If you did not have any roles and responsibilities in the ventilation systems operation or maintenance, who did?

A I don't know.

b) What were these responsibilities?

A To ensure that all ventilation systems were being maintained as per the PPM scheduling and complying with the SHTM guidance.

c) What did you understand the responsibilities to be?

A To ensure that the ventilation systems are inspected, serviced and maintenance of all activities are carried out safely without hazard to staff, patients or members of the public To keep an inventory of all ventilation systems.

d) How aware were you of any specific legal obligations/ responsibilities? If so, please provide additional information.

A I know we had to comply with the SHTM guidance which states that critical ventilation systems will be inspected quarterly and verified at least annually.

26. What large scale water systems had you worked on before the QEUH? What large scale ventilation systems had you worked on before the QEUH? If so, when? How did the size of those systems compare to working on the QEUH? What was your role and duties? I hadn't worked on any large scale water or ventilation systems prior to working at the QEUH/

A RHC.

Documents, paperwork and processes in place as at 26th January 2015

We know that handover of QEUH occurred on 26th January 2015:

27. Describe the site when QEUH/RHC at handover in January 2015.

A It was still a building site as far as I was concerned.

28. How long did Multiplex remain on site? How was this managed, and were records kept of Multiplex staff being on site, if so, who was responsible for this and where were such records kept? What concerns, if any, did you have?

A They remained on site for 2 years. They had two Portable cabins sited near Neurosurgery. I don't know how it was managed and if records were kept. I didn't have any concerns.

29. Operating systems at handover:

a) How many staff were allocated to maintaining operating systems and how was this determined?

A I don't know how many staff were allocated.

b) What training was put in place for maintaining the operating systems?

A I don’t know what training was put in place other than a session showing how to use Zutec and chilled water systems training.

c) Who carried out the training? Refer to Estates Communication Bundle document 5 ‘ –Brookfield Multiplex Client Training & Familiarisation Register for Ventilation’.

A Brookfield Multiplex. In reference to the above document Brookfield Multiplex carried out training on Chilled Water, however I was not aware of this and did not participate.

d) To what extent, if any, were Multiplex involved in the training?

A I was aware that Brookfield Multiplex carried out training but don’t know how this was agreed.

e) How extensive was the training provided to allow staff to operate the systems?

A I don’t know because I was not involved in this.

f) Please list the manuals/ documents that were handed over.

A I do not know what documents were handed over as I had no involvement.

30. Looking at the defects referred to in the completion certificate documents 3 above: Look also at Estates Communication Bundle, document 4 – ‘Capita NEC3 Supervisor's Report (No 46)’:

a) What are these defects?

A I had no active part as a maintenance manager with the completion certificate defects detailed on this document and as such cannot comment on them.

b) What was the impact of these defects?

A See above answer.

c) Why two years to deal with the defects?

A I was not involved but was aware that there was a 2 year warranty which may explain this time period.

d) Who decided that it was appropriate to accept handover with outstanding defects?

A The Project Director who had overall control.

e) How common is this practice in the construction industry?

A I have no idea if this is common practice in the construction industry.

31. Refer to Estates Communication Bundle, document 8 ' –Programme for handover to start of migration':

a) Do you know what this is?

A I don't know what this document is about.

b) Have you seen it before?

A No.

c) What are the numerous defects?

A N/A.

d) What is the purpose of this document?

A N/A.

e) What comments, if any, do you have regarding the number of defects?

A I haven't seen this type of document before so can't comment on it.

f) To what extent were you aware of this document at handover?

A I wasn't aware.

g) If not, should you have been aware of this document at handover?

A As Estates Manager I don't think it would have come down to my level. Certain roles specific aspects may have been passed to me to have a look at.

32. To what extent did Multiplex retain responsibility for the build following handover? Did Multiplex give any warranties? What were the terms of any warranty relating to Multiplex's work? How long was the warranty period following handover in January 2015?

A 2 years. I don't know and had no part in the terms of any warranty.

33. How many companies have on-going responsibility following handover? If so, describe the responsibilities of the companies. How long post-handover were the other companies involved for?

A I don't know how many companies have on-going responsibility following handover.

34. What concerns, if any, did you have about the opening of the hospital after handover? Refer to Estates Communication Bundle, documents 19 and 21 and 21.1 when answering.

A I didn't have any concerns as I was not involved.

a) What, if anything, was missing that you thought should have been constructed/ installed? If so, please describe what was missing.

A I don't know if anything was missing that I thought should have been constructed.

b) What concerns, if any, did you have about areas of the hospital at handover?

A I had no concerns as I was not in post at that time.

c) What time was allowed between handover and patient occupation? How much time was required post-handover? What concerns, if any, did you have? To whom did you raise any concerns?

A Approximately 3 months was the time between handover and patient occupation. I didn't have any concerns so there was no need to raise any.

d) if you answered no to the above, why was the opening not delayed? What were the possible consequences of delaying the opening?

A N/A

35. Refer to Estates Communication Bundle, document 22 at the point of patient migration Mhairi Lloyd states that there were rooms/ areas 'not yet fit for purpose': Look also to Estates Communication Bundle, document 19:

a) Detail your understanding of the concerns – namely what the concerns were any why?

A From the document I can see there were concerns regarding the rooms, however I was not involved in these e-mail discussions and can't make any further comment.

b) Which team was responsible for addressing these concerns and ensuring that the rooms and areas were 'fit for purpose'?

A This was during Brookfield Multiplex warranty period, and it was still their responsibility.

c) What was your involvement in dealing with any concerns?

A I wasn't involved.

d) If so, how were matters resolved before to patient migration?

A I don't know as I wasn't involved.

e) Who signed off before patient migration?

A I don't know.

36. Detail the snagging process, refer to Estates Communication Bundle, documents 90 and 91 when considering your answer detail:

a) What happened

b) How long were Multiplex on site following handover

c) Main areas for snagging

d) Records of works carried out

e) Sign off – who as responsible and when signed off.

f) How satisfied were you with the snagging process?

A After patient migration Estates including me would meet with David Wilson from Brookfield Multiplex more or less on a weekly basis. This was to resolve outstanding snagging issues as detailed in the document above. Brookfield Multiplex had a 2 year warranty period and snagging was listed in a traffic light system for action and repair. There wasn't always agreement in who was going to carry out the repairs even though Brookfield had the responsibility. It was more like a tennis match with it going back and forth before either Brookfield Multiplex or Estates agreed to carry out the repair.

There were no specific areas of snagging, Site wide across Both hospitals and the lab block. Completed work was agreed and then signed off by both parties and recorded in the register. Sign off was completed by David Wilson and Ian Powrie.

From my perspective the snagging process was competent but difficult to agree.

Asset Tagging

37. Describe and detail asset tagging:

a) What is this?

A A method to label or tag all assets throughout the hospital. Asset tagging makes it possible for the Estates team to look up an asset from an asset inventory and check the maintenance history of that asset.

b) Why is this important?

A So as to identify each asset with a unique number, it's location, area that or what it serves.

c) Who was responsible?

A Brookfield Multiplex.

d) What was the impact if this was not done?

A The impact would be that you would not know where all assets were located and whether they were being maintained.

e) What concerns, if any, did you have about this?

A I didn't have any.

f) How did you escalate these concerns? If not, why not?

A I didn't have the need to escalate any concerns.

g) What actions, if any, did you take to address any asset tagging issues?

A I didn't have actions to take to address any asset tagging issues.

38. The Inquiry understands that there was a CAMF system in place at QEUH/RHC.

a) What is the purpose of CAMF, and who was responsible for providing this?

A See answer to (b). FM First software firm.

b) How does ZUTEC differ from CAMF?

A Zutec is a database of all the assets. CAFM is a Computer Aided Facilities Management Tool that enables Facilities Managers to plan, execute and monitor all activities involved in reactive and Planned Preventative Maintenance (PPM).

c) What must be provided at handover?

A A full register of assets complete with ID tagging of each asset, along with a full planned maintenance programme of works.

(i) Who was responsible for ensuring provision of CAMF and ZUTEC?

A NHS GG&C and Brookfield Multiplex.

(ii) What were the consequences of these not being provided?

A Assets not being known, or their location and maintenance scheduling and PPM not being carried out.

(iii) What action was taken to remedy matters? Were Multiplex contacted?

A I don't know what matters required to be remedied.

39. Provide information on any issues in relation to CAMF and ZUTEC .

a) Operation

A I was not aware of any CAFM issues, but ZUTEC had a massive amount of equipment data, I believe well in excess of a million entries. Although the training made it look quite straight forward to navigate through, I found that it was not the case when I needed to use it.

b) User suitability

A I thought it was difficult to navigate through when trying to find a piece of equipment. I would enter a generic term (compressor) for the system then to say no compressors found. I felt you had to be very specific to get what you were looking for.

c) Any other matters

A I can't think of anything else.

In your answer provide details of who this was reported to, what action was taken to remedy matters.

40. Who was responsible for developing a system for asset registration? when and how long did it take following handover.

A My understanding was that Brookfield Multiplex was responsible for developing a system for asset registration.

HEPA Filters

41. To what extent, if any, were HEPA filters installed in the relevant rooms at handover (January 2015)?

A I don't know as I took up my post in April 2015.

42. What issues, if any, were there with HEPA filters? Refer to Estates Communication Bundle, document 22.

A I was not aware of issues with Hepa filters.

43. If so, what issues were you aware of?

A I didn't know of any issues as I took up my post in April 2015

44. Dr Gibson in her statement refers to HEPA filters not being in place at the point of handover in wards 2A/B.

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

A Areas and/or rooms not fit for purpose and most likely unsafe to use.

b) What was done to resolve any HEPA filter issues?

A I don't know as I took up my post in April 2015.

c) What filters should have been installed at handover?

A Hepa Filters.

d) Who was responsible for providing HEPA filters and ensuring that they were installed during the build?

A Brookfield Multiplex.

45. To what extent were HEPA filters missing from any other wards following handover?

A I don't know as I took up my post in April 2015.

a) What actions were taken to address missing HEPA filters?

A I don't know as I took up my post in April 2015.

Chilled Beams & Thermal Wheels

46. How does SHTM guidance apply to the use of chilled beams in healthcare settings?

A The SHTM guidance is non-specific and gives little guidance as to the suitability of chilled beam technology within healthcare premises.

47. To what extent, if any, is the use of chilled beams in areas housing immune compromised patients compliant with SHTM guidance?

A Incompatible due the possibility of condensation and the regular cleaning required to keep the chilled beam working efficiently.

48. If you have answered no to the above, what was the potential patient impact?

A See answer above.

49. Why were chilled beams selected for use in QEUH/RHC? What comments, if any, do you have about the decision to use chilled beams in QEUH/RHC?

A I don't know why chilled beams were selected. Possibly due to being deemed low maintenance and have no moving parts and quieter than conventional HVAC systems.

50. Describe your understanding at the time of the cleaning regimes in place for chilled beams? To what extent were you involved in the cleaning regimes for chilled beams?

A There was a PPM schedule in place I think this was for annual cleaning, however I think that frequency was too long and had to be reduced as the chilled beams right across the hospital were becoming dirtier more quickly. I wasn't directly involved but was aware of the need for a HAI Scribe document to be in place, issues of getting access to patients rooms.

51. What specific events do you remember in relation to chilled beams?

A I recall a dripping chilled beam in Ward 2a due to a faulty coupling between the pipe work and the coil causing water to dip onto a ceiling tile and through onto the floor.

For example:

a) Dripping chilled beams in critical care refer to Estates Communication Bundle, document 63.

A I was not aware with any incidents in critical care.

b) Issues with dew point controls refer to Estates Communication Bundle, document 65.

A Dew point control was not present.

c) Ward 2A cubicles 8-11 refer to Estates Communication Bundle, document 106, in particular page 821. In particular consider the issues with dust collecting on the chilled beam units, the PPM actioned in response and the work that you carried out in response to the issues, was it effective, was it timely? Do you consider the PPM to have been reactive rather than proactive? How was your working relationship with infection control colleagues in dealing with this situation.

A I think initially the PPM was reactive as there so many chilled beams to be cleaned. I got on very well with Infection Control Colleagues in dealing with this situation.

d) Water samples being taken from chilled beams in Ward 6A refer to IMT Bundle, document 73.

A I had left the organisation in March 2018.

e) Dripping condensation panels and chilled beams Estates Communications Bundle, document 153.

A In reference to document 153, I've no knowledge as to what caused this but could confirm that estates rectified these issues as soon as we could.

f) Any other issues/ incidents not mentioned above.

A Not that I can recall.

For each 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) What, if any, external organisations were 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) How was the issue resolved – consider any ongoing aftercare/support/monitoring.

j) Any ongoing concerns witness had herself or others advised her of?

k) Was there any documentation referenced during or created after the event. For example an incident report?

l) Who, if anyone, signed off the work to confirm it had been completed and the issue resolved/area safe.

52. Tell me about the use of thermal wheels in areas where immune compromised patients are treated:

A They should not be installed where immune compromised patients are being treated.

53. How was your level of knowledge of the SHTM guidance applicable to the use of thermal wheels in healthcare settings?

A My level of knowledge of the SHTM guidance applicable to the use of thermal wheels in healthcare settings is that they were permissible for general wards.

54. To what extent, if any, was the use of thermal wheels in areas housing immune compromised patients compliant with SHTM guidance?

A The installation was not compliant.

55. If you have answered no to the above, what was the potential patient impact?

A Possibility of Contaminated Air circulating within the Ward

56. What specific events do you remember in relation to thermal wheels?

A I don't remember any specific issue.

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) How was the issue resolved – consider any ongoing aftercare/support/ monitoring.

j) Any ongoing concerns witness had herself or others advised her 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.

A see answer above.

57. Refer to Estates Communication Bundle document 113:

a) What is this?

A I haven't seen this document before.

b) Why was it issued in 2017 and not earlier?

A I don't know.

c) At page 855 there is reference to the Estates' meetings regarding the supervisors report, was all the work carried out? At close what, if any, works remain outstanding?

A I recall being at the meetings and can confirm numerous work and repairs were carried out as this was a work in progress and continual. As I said earlier, we operated a traffic light system and have no doubt any repair in red would have been rectified as soon as practical. With regards to anything remaining outstanding I can't answer.

Water Guidance and Obligations

58. What guidance applies to water? How did you/others ensure that guidance was complied with?

A SHTM 04-01 and L8 Approved Code of Practice.

59. Who was responsible for ensuring a safe water supply following handover?

A Brookfield Multiplex.

60. What water safety training was provided to all maintenance staff, estates officers and contractors?

A I don't know.

61. What was your knowledge and understanding of Health and Safety regulations on control of legionella at the time?

A Keep hot water above 50dc and cold water below 20dc. Legionella would not be present if these temperatures were maintained. Have in place a maintenance regime of testing of taps, shower heads and water temperatures.

62. What legionella training was provided to all maintenance staff, estate officers and contractors?

A I don't know.

63. What water borne pathogens (other than legionella) training was provided to all maintenance staff, estate officers and contractors?

A I don't know.

64. Who was the Dutyholder?

A The Chief Executive / Management Team Accountable for Operational Policy.

65. How aware were you of obligations to appoint an authorised person or the like to discharge water supply safety? If so, who was appointed? When, for what period? If not, why not?

A Not initially but became aware that an authorised person would require to be appointed.

66. What skills, knowledge or experience would be required of a person filling this role?

A A thorough knowledge of the site, plant and equipment.

67. During any period where it was unfilled, what happened as a result?

A I don't recall anything happening as a result.

68. What concerns did you have, if any, about specific roles not being filled? If you held concerns did you escalate these, if so to whom?

A Initially I did not have any concerns. I was busy dealing all the issues that came my way with regards to the maintenance of the hospitals.

69. What was your understanding at the time of the SHTM guidance, particularly SHTM 2027 and SHTM 04-01, in respect of water?

A To comply with it.

70. How compliant was the QEUH/ RHC water system with SHTM 2027 and SHTM 04-01 at the date of handover – if not, what was outstanding? Who was responsible to ensure that the water system complied with SHTM guidance? What team was in place to regulate compliance? If so, please explain your knowledge, understanding and role within that team:

A I don't know how compliant was the QEUH/RHC water system with the guidance at the date of handover nor if what was outstanding. I would think it would be Brookfield Multiplex. I don't know if there was a team in place to regulate compliance.

Water - Commissioning and Validation (C&V)

71. What commissioning and validation documentation did you see before handover in 2015 – if not, who would have had sight of this?

A I didn't see any Commissioning and Validation documentation before handover in 2015 as I was not in post at that time. Possibly the Project Director or Director of Facilities.

72. Where is this commissioning and validation documentation ("C&V") stored generally on the hospital system?

A It is stored in hard copy file within the Estates Office and electronically on the NHS GG&C shared drive.

73. What is the purpose of C&V?

A The purpose is to make sure the system is fit for purpose.

74. What are the consequences of it not being carried out?

A Is the system safe to use? Could there be any unacceptable microbial contamination introduced into the system during installation? Would such contamination pose a hazard to patients, staff and members of the public?

75. How many records were 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 I don't know how many records were kept and what the retention policy was at that time. I didn't have any concerns about record keeping and retention.

76. What concerns, if any, would you have If the water system were to have no C&V before handover in 2015? Why were you concerned?

A I wouldn't have the confidence it was safe to use or that it was compliant with the relevant guidance. My main concerns would be, Have we taken on a fit for purpose water system and how sure can I be that there are no contaminates within the system.

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

A Is it safe and potable and below 20dc.

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

A I don't know.

a) Who was responsible?

A I don't know who was responsible.

b) How was the C&V recorded?

A I don't know how it was recorded.

c) What concerns, if any, arose post-handover about C&V? If so, why did these concerns arise?

A I don't know of any concerns that arose post-handover.

Water system – testing and maintenance

79. What testing and maintenance protocols and regimes were in place? What should have been in place. If it wasn't, why wasn't it? What did you do about that?

A The testing and maintenance protocols and regimes were in place as per the SHTM 2027 and 04-01 e.g., Calorifiers, Taps, Showers, etc at the recommended frequency, e.g., Monthly, Quarterly, 6 Monthly and Annually. The hot and cold water temperatures are monitored 24/7 through the BMS.

80. What concerns, if any, did you have about the temperature and movement within the water system? How was this recorded and measured? Who was responsible for this? If Schnieder did these were these reports forwarded to yourself or other GGC employees? How were these reports responded to, what did they tell you? How were issues flagged in these reports dealt with/ resolved?

A I didn't have any concerns about the temperature and movement. The temperatures were being monitored on the BMS. The hospitals had capacity for 1350 beds and with all the other departments, I was confident that the movement of water was healthy, e.g. it was being used allowing the water to flow and return continually at the correct temperatures.

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

A I'm not sure if that situation ever crossed my mind.

82. What concerns, if any, did you have about dead ends/ legs in the system? Please describe and provide information on how this was dealt with.

A I wasn't concerned because there should have been no dead ends/legs within a new system.

83. Refer to Estates Communication Bundle, document 10 explain the cleaning and maintenance of the water system, taps, drains, shower heads etc. When doing so consider:

a) What is the cleaning regime?

A Draining and cleaning of calorifiers, and apparatus. Taps and shower heads were removed and cleaned in solution and thereafter hot water flush.

b) What is the importance of this?

A To maintain an efficient system and be free of any bacteria.

c) What responsibilities did you have a result of this?

A To ensure that all cleaning was carried out,

d) What did you do to ensure these responsibilities were executed?

A I would have regular checks with my Supervisors to ensure work was carried out.

e) What issues, if any, did you have fulfilling these responsibilities?

A I didn't have any issues as I had full confidence in my Supervisors.

f) What concerns if any were raised about cleaning practices? IMT bundle, document 23. Detail these concerns. Refer to NHS GGC SBAR Bundle, page 112 when providing your answer.

A I had no involvement as I had left the NHS in March 2018.

g) What, if any, matters regarding the maintenance of the water system were escalated? If so, were they escalated BICC or AICC?

A I don't know.

h) What is dosing, and why was chlorine dioxide used in the cleaning regime. IMT bundle, document 30.

A I wasn't present but know that dosing with chlorine dioxide removes bacteria within the system.

i) Clearing of drains in June 2018 following water incident -relevance and purpose. IMT bundle document 27. To what extent, if any, did this resolve the issue? IMT bundle, document 38 why was expert advice required?

A I had no involvement as I left the NHS in March 2018.

j) What happened in response to concerns about on-going maintenance and cleaning? What further action did you take personally?

A N/A.

k) What further steps could have been undertaken?

A N/A.

84. What was found in the water tanks; what if anything significant was found in the water tanks? To what extent would anything found result in a wider issue of water contamination?

A I was not aware of anything found in the water tanks. A wider issue could result if there was something found in the tanks, although there were filters on the outgoing side of the tanks prior to the pumps to stop any debris getting into the distribution pipework.

85. 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 I'm not sure what this is and can't find reference to it.

b) Ensuite bathrooms attached to each room

A Having en-suite bathrooms attached to each room means that you have 2 wash hand basins within close proximity of each other. This will lead to one being used more than the other, leading to possible stagnant water in the tap body. Ward and cleaning staff will have to make sure all taps are turned on to run the water through to prevent any stagnant water issues.

c) Overprovision of water outlets leading to sink removals

A Overprovision will mean less use of some sinks which could lead to stagnant water and dead end/ legs and will have to be removed including all the pipe work back to the main distribution lines.

86. Describe the water flushing regime at handover, describe your involvement, the recording process, why is it important? What is the impact if it is not carried out?

A I don't know to what extent the flushing regime was at Hand-over. I had no involvement and did not know the recording process. It is important to have a flushing regime in place whilst the buildings are empty. There was a period of 3 months from handover to patient migration. I'm sure there would have been a flushing regime in place carried out by the contractors and in house staff. If this was not in place, then issues with water quality, dead legs at taps leading to harbouring of legionella bacteria.

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

A I don't know how the water system could have been more comprehensive.

88. To what extent could the water system have achieved the system objectives if operated correctly? In your answer set out what the system objectives were and how these were/ could have been met.

A I don't know what the system objectives were. I assume the objectives were to supply hot and cold water to all outlets continuously at the correct temperatures and flow rates. To continually monitor the temperatures through the Building Management System.

89. 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?

e) If so, what was the standard protocol?

A I'm not sure if any ward/area specific water system were in use.

90. To what extent were the standard protocols for sanitising water systems used on a system of the size and complexity of this one?

A don't know what the standard protocols were, however I knew they were carried out by an external contractor specialising in dosing of water systems.

91. Who, if anyone, was contacted to advise on sterilisation of the water systems?

a) Who were they?

b) Had you worked with them before?

c) Describe and comment on the methodology used.

d) Who decided to accept it or not.

e) Did it work?

f) What paperwork or records were kept in relation to their installation; maintenance or flushing?

g) How were these kept on paper or electronically?

h) What equipment for recording work was used by employees doing day to day tasks?

i) How was that then reported back and checked?

A I think H&V were the specialised contractor.

Drains

94. Clearing of drains in June 2018 following water incident -relevance and purpose. IMT bundle document 27. Did this resolve the issue? IMT bundle, document 38 why was expert advice required?

A N/A

95. To what extent were you involved in the decision to proceed with a drain survey? If so, can you explain your role in this decision? What was the purpose of the drain survey?

A N/A

96. What were the results of the drain survey?

A I was not involved with clearing of drains in June 2018, nor the survey or the results of the survey as I left the NHS in March 2018.

Taps

97. Describe your involvement, if any, to use Horne Taps in QEUH/RHC, refer to SBAR Bundle, document 1. In doing so confirm:

a) Your understanding of use of Horne taps.

b) Who authorised the use of Horne taps?

c) Why were Horne taps selected?

A I had no involvement as this was part of the design specification.

98. What is your recollection of the use of Horne taps.

A I don't have a recollection of the use of Horne Taps.

a) At the time, how aware were you of the incidents in Northern Ireland concerning Horne Taps? What was your level of knowledge of the incidents in Northern Ireland and the decision to use Horne Taps in QEUH/ RHC?

A I wasn't aware of the incidents in Northern Ireland concerning Horne Taps. I had no knowledge of the incidents in Northern Ireland and the decision to use Horne Taps in QEUH/RHC.

b) Flow straighteners – when did you become aware that they were non-compliant with SHTM 2027 and SHTM 04-01 guidance? To what extent were they noncompliant at handover? IMT Bundle, document 27.

A I wasn't aware that they were non-compliant.

c) How involved were you with testing in high risk areas?

A I wasn't really involved. Work would be issued to the Maintenance Technician (Plumbing) to test/clean all taps in both hospitals including high risk areas.

d) What if any, new taps were replaced in January 2019? If so, why were they replaced? To what extent was the replacement related to the use of chlorine dioxide? IMT Bundle, documents 29 & 30.

A I have no knowledge if any, new taps were replaced in January 2019 as I had left the NHS in March 2018 but from the document taps were being replaced because the flow straighteners were non-compliant.

99. How involved were you in the decision to use point of use filters?

A I was aware of the decision to use Point of use Filters.

a) Who was responsible for the effective management of and installation of the point of use filters?

A The Sector Estates Manager took the lead in this with regards to the installation of the point of use filters.

b) To what extent, if any, did the point of use filters meet the water regulation requirements? How effective was the gap between the water level and the filter to prevent contamination?

A I would have assumed the point of use filters met the water regulation requirement. I don't know how effective was the gap between the water level and the filter but would hope that it be sufficient to prevent contamination.

c) Why were the point of use filters not introduced earlier? What are the possible consequences of not having point of use filters?

A I don't know why the point of use filters had not been introduced earlier. The consequences of not having point of use filters could be that contaminates could be drawn into the waste hand basin.

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

A I was not aware how often the filters were being changed however I've heard the 30 day period of change. I would hope that the manufacturers recommendations on changing filters were followed.

100. What was your involvement in the cleaning and maintenance of taps; what was the cleaning regime, how was it recorded, who was responsible; any issues or concerns, if any, you had around the cleaning of taps?

A I did not have any direct involvement in the cleaning and maintenance of taps. The supervisor would issue a work schedule to the Maintenance Technician (Plumbing), through his PDA or a worksheet of the area with the number of taps to be cleaned. The technician would carry out the work as per the guidance and would record the results and report back to the supervisor. If any issues required to be escalated, then the supervisor would raise with the Duty Manager, who would then raise if required with me (Senior Estates Manager) and if I felt my boss required to be notified, I would bring the issue to his attention. I didn't have any issues around the cleaning of the taps other than the sheer number of them. I was involved in creating a facility in Plant Room 33 in the adult hospital so as to be able to clean 3-4 sets of Thermostatic Mixer Taps in one cycle. The area was to consist of a deep sink with a pipe arrangement to allow the fitting of taps to it. These taps would be fed with water at 60 dc for specified period. Once the taps were cleaned and tested, they would be stored in the facility ready to be used. This work started late 2017 and was almost complete by the time I left the NHS in March 2018.

Communication regarding cleaning and maintenance - Water

101. Have you ever been advised not to contact someone/ not to provide water testing information? If so, when? By whom? and why?

A No.

102. 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.

103. 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*'. Further the Inquiries investigations have lead to the findings that [redacted], Dr Redding and Dr Peters expressed concerns regarding test results not being available or forthcoming.
What is your reaction to this?

A Amazed, don't understand why this would be the case.

104. Describe how you dealt with requests for water testing results from microbiologists and infection control - what requested information did you provide? If not, why was paperwork not provided?

A I don't remember whether a request came to me directly. I do know that I was in the Microbiology Department fairly regularly and do remember giving a proforma sheet of results personally to Dr Inkster.

DMA Canyon Reports

Refer to Bundle 6 - Miscellaneous documents – documents 29 and 30

105. Was this the DMA Canyon 2015 report (document 29)?

A Yes.

106. Who ordered this?

A The Sector Estates Manager.

107. Who signed off on payment?

A I don't know who signed off on payment.

108. How was this signed off or payment processed?

A I don't know.

109. Who was the report sent to?

A Mr Ian Powrie, Sector Estates Manager.

110. At the bottom of page 2 of the report it states that '*The findings included within the report have been communicated throughout the assessment process by Allan McRobbie and David Watson of DMA Water Treatment Ltd to NHS Estates staff (Ian Powrie and Jim Guthrie) verbally in both formal and informal meetings and via email.*'

a) To what extent were you aware of these formal and information meetings? If so, what was discussed at these formal and informal meetings? When did these meetings take place?

A I was aware of them but was not part of them.

b) When did you receive the emailed copy of the report?

A Soon after Ian Powrie received it.

c) If you did not attend the meetings referred to in a), when did you first become aware of the DMA Canyon 2015 report?

A Soon after Ian Powrie received it.

d) What was the purpose of the report?

A It was a Pre-Occupancy L8 Risk Assessment to establish any issues within the water system.

e) Who had the report?

A Ian Powrie, Sector Estates Manager.

111. Our investigations indicate that you attended a meeting with DMA Canyon, Ian Powrie and James Guthrie following Ian Powrie's receipt of the DMA Canyon 2015.

(i) When did you attend this meeting?

A I don't know the exact date, but it must have been soon after the report was received.

(ii) What was discussed at this meeting?

A The DMA Canyon Report.

(iii) What actions or tasks were allocated to you at the meeting in relation to the 2015 DMA Canyon Report?

A I don't know what action or tasks that were allocated to me.

(iv) In respect of the DMA Canyon meeting with Ian Powrie and Jim Guthrie, did you have a responsibility to develop an action plan?

A I don't think so.

(v) What, if any, actions or tasks were allocated to others at this meeting? if so, to whom and what actions were they allocated?

A I don't know whether any actions or tasks were allocated to others.

(vi) What, if any, action plan was prepared following this meeting? If so, by whom? If so, what actions were to be undertaken and who was responsible for supervising these actions?

A I can't remember if an action plan was created.

(vii) If an action plan was prepared, what did you do with the action plan? What specific steps did you take with the action plan? and where was the action plan stored?

A If I was given an action plan, I would have carried out the works detailed and recorded actions taken and kept on file within the Estates Office.

(viii) If an action plan was prepared, when were the work(s) detailed in the action plan carried out, and by whom? How was the work carried out recorded, and where would these records be stored?

A If an action plan was prepared, the works would be carried out in timeous manner by Technician staff. It would be recorded on a log sheet or electronically on the NHS GG&C shared drive.

(ix) What works, if any, do you recall carrying out in respect of the recommendation is contained in the DMA Canyon 2015 report?

A I don't recall being asked to carry out any works in 2015, however I've seen minutes of a meeting in November 2017 where it states that I (DB) is developing a written scheme of examination for the QEUH with the help of DMA Canyon. I think at this point my boss was looking to create a board wide template.

(x) The Inquiry understand that you gave verbal feedback to Ian Powrie that the works were being carried out? Do you agree with this? If so what works were carried out by and when in respect of the 2015 report?

A I don't recall what piece of work I was asked to do. However if I Powrie said I gave him verbal feedback, then I must have done so.

(xi) What was your understanding, if any, of the importance of carrying out the work recommended by DMA Canyon in the 2015 report/? At any time between 2015 and 2017 were you informed of the importance of carrying out the aforementioned work, and if so, by whom?

A Estates having commissioned an external contractor to provide a report of the water systems, then surely it would be prudent to carry out any recommendations that are highlighted in the report. I think the Estates Team knew the importance of carrying out the work but can't explain why the recommendations were not carried out timeously.

112. How often were DMA Canyon present at QEUH/RHC site between 2015 and 2018?

A They were in on a regular basis but can't say the exact amount.

113. What, if anything, did DMA Canyon say about the report during their time on site between 2015 and 2018? If so, when and what was mentioned?

A I can't remember.

114. When were the works suggested in the 2015 report actioned?

A I don't know.

115. What is your own view of the findings of the 2015 report? To what extent do you agree with it or not? Explain your rationale.

A It was an accurate report of the condition and issues with the water system. I wasn't going to disagree with it as it was an external expert report.

a) Given that you stated that the DMA Canyon 2015 report *was* 'an accurate report of the condition and issues with the water system' Do you think that failing to act on the recommendations of the 2015 report impacted the condition of the water system at QEUH/ RHC? Please explain your answer.

A I don't know whether failing to act on the recommendations of the 2015 report impacted the condition of the water system.

116. DMA Canyon prepared another report in 2017 (Bundle 6 – Miscellaneous documents , document 30). What works, if any, recommended in the 2015 were carried out prior to the 2017 report?

A I can't recall what work was done.

117. What happened with DMA Canyon in 2017 – tell me as much detail as possible. Who dealt with matters, what was your role and when did you become involved? Who sanctioned the works in 2017 report?

A I don't know what happened to it. I was involved in 2017 to get a workshop built within plant room 33 to test Thermostatic Mixing Taps on masse.

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

A I don't think there was any impact.

119. We understand that Infection Control were only advised about the 2015 DMA Canyon Report in 2018. Why were they not told sooner? What happened?

A I don't know why they were only advised of the 2015 DMA Canyon Report in 2018. I thought they would have known about it sooner as they attended meetings within the estates office on a regular basis.

120. Whose responsibility was it to be satisfied that the risk assessment had been carried out? Explain how you were satisfied that the appropriate risk assessment had been carried out prior to patient migration to QEUH.

A The Project Director. I didn't see or was shown the appropriate risk assessment carried out prior to patient migration.

121. Dr Christine Peters also states that she asked for '*asked for risk assessments for waterborne infection in the QEUH and they were not forthcoming from the Project Management Team, Estates, or Mary Anne Kane.*'
What information, if any were you asked for relating to the risk assessments for waterborne infection in the QEUH? What requested information did you provide? If so when and by what means? If not why not?

A I don't recall being asked to provide any information relating to risk assessments for waterborne infection at the QEUH.

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*' a subsequent investigation linked the infection to sink within the Aseptic Pharmacy Unit:

122. What was your understanding of this incident?

A I don't recall this incident.

123. What was your involvement with this matter?

A I don't think I was involved.

124. What action, if any, was taken?

A I don't know.

125. What further issues, if any, arose in relation to sinks? If so please discuss, confirming your involvement and action taken in response to any issues.

A I don't recall any further incidents.

Water Incident 2018

126. Walk through 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) When did the concern arise?

b) Nature of concern?

c) Possible cause of concern?

d) Action taken in response to concern?

e) What actions were taken in response to concern?

f) How sufficient were these actions?

A I don't recall this incident.

127. The following IMTs have been highlighted to assist with this. If you are also able to respond to the questions raised in respect of the IMTs below when considering your recollection of events.

a) Refer to IMT bundle, document 13: Cupriavidus bacteraemia in ward 2A at the end of January 2018

(i) what do you recall of this incident/ issue?

A I don't recall this incident as I was in a phased retirement and during March I was in only a handful of days.

(ii) When did it begin?

A N/A

(iii) How did it come to light? Who first reported the incident?

A N/A

(iv) What was your involvement?

A I had no involvement.

(v) What enquires, if any, did you make about replacing all the taps within Ward 2A? What did you do? Did you discuss this with anyone else? What was the outcome?

A I had no involvement.

b) Refer to IMT bundle, document 16:

A Multiple positive results Cupriavidus and now Stenotrophomonas, Dr Inkster states that the test results are from taps which have not been replaced in rooms 15 and 26. Shower head in room 12. At that IMT no cause for patient concern.

(i) What was done as result of this meeting and why?

A I wasn't present and can't comment.

c) Refer to IMT bundle, document 17:

(i) Your involvement and what measures were taken?

A I wasn't present and can't comment.

(ii) What was discussed with David Loudon if anything?

A N/A. during my 3 year period as Estates Manager only met David Loudon a few times.

(iii) What do you recall about how matters were managed?

A I don't recall.

(iv) How were costs managed?

A It wasn't my responsibility.

(v) Who carried out the work?

A I don't know.

(vi) How was this reported and managed?

A I don't know.

(xii) How involved were you in the decision to use bottled water for handwashing and drinking? Discuss your knowledge and involvement surrounding this matter.

A I was aware of it but had no involvement.

d) Refer to IMT bundle, document 18:

(i) As above, what was the outcome of this IMT, your involvement, actions and how you followed it up.

A I had no involvement.

(ii) What concerns, if any, did you have about Stenotrophomonas impacting patient safety at this point?

A I wasn't aware of this.

(iii) Refer to Estates Communication Bundle, document 121; how does this link to the IMT? Was this as a result of what was being discussed? What happened following this email?

A I had no involvement in this.

e) Refer to IMT bundle, document 19:

(i) As above - the fitting of water filter – discuss – why were these filters not on the taps initially? What are the possible consequences of water filter not having been fitted earlier?

A I had no involvement as I was in my last week of employment.

(ii) What knowledge do you have of dosing the system with silver nitrate? How did this discussion come about?

A I don't have any knowledge of dosing the water system with silver nitrate.

f) Refer to IMT bundle, document 20:

(i) This was scored HAIIT red – why?

A I was not involved as I was in my last week of employment.

(ii) What were the concerns?

A N/A.

(iii) To what extent do you recall any request for historical water results during the commissioning of QEUH/RHC? If so, what did you find out as a result? What concerns, if any, did the historical water results raise?

A I don't recall any request for historical water results during commissioning of QEUH/RHC.

128. Refer to Estates Communication Bundle, documents 125 and 133 what was the relevance of these document to the water incident?

A I had no involvement as I was in my last week before retirement.

129. Tell me about any other issues or matters arising from the water incident:

A N/A.

Taps

130. The use of Horne Taps was discussed in the IMTs relative to the water incident. IMT Bundle.

Please confirm:

a) Your understanding of use of Horne taps.

A For me a tap is a tap, however Horne make and supply mixer taps for hospital installations.

b) Who authorised the use of Horne taps?

A I don't know.

c) Why were Horne taps selected?

A I don't know.

d) How involved were you in the decision to use Horne Taps - SBAR Bundle, document 1 - please discuss your involvement and understanding.

A I wasn't involved.

e) What is your recollection of the use of Horne taps.

A They are mixer taps widely used in NHS properties.

f) At the time, how aware were you of the incidents in Northern Ireland concerning Horne Taps?

A I was not aware of the incidents in Northern Ireland concerning Horne Taps.

g) If so, why did you decided to proceed with the installation of these throughout QEUH/RCH? What was the deciding factor?

A It was not my decision to proceed with the installation as I was not involved in the decision.

h) Discuss Estates Communication Bundle, document 121 explain the situation and your involvement.

A I wasn't aware of the situation as I was in my last week before retirement.

i) Refer to Estates Communication Bundle, documents 127 and 128 explain the situation and your involvement.

A I had no involvement as I had retired on 30th March 2018.

j) Flow straighteners – when did you become aware that they were non-compliant with SHTM 2027 and SHTM 04-01 guidance? To what extent were they noncompliant at handover? IMT Bundle, document 27.

A I don't recall anyone informing me that they were non-compliant.

k) How involved were you with testing in high risk areas?

A I wasn't involved.

l) What if any, new taps were replaced in January 2019? If so, why were they replaced? To what extent was the replacement related to the use of chlorine dioxide? IMT Bundle, documents 29 & 30.

A I don't know as I had left the NHS in March 2018.

131. What was your involvement in the cleaning and maintenance of taps; what was the cleaning regime, how was it recorded, who was responsible; any issues or concerns, if any, you had around the cleaning of taps?

A I had no direct involvement This task was carried out by a Technician under the direction of their supervisor. I didn't have any concerns.

Board Water Group

132. Refer to the Water Safety Group Bundle:

a) What is the purpose of WSG?

A The purpose of the WSG is to commission and develop a water safety policy and water safety plan which includes a risk assessment.

b) Why was the WSG set up?

A To oversee all water related issues that may arise and report them to the Board Water Group.

c) What was your involvement with the WSG?

A I had no involvement with the WSG.

d) Who was in the WSG, what were their names and their roles within WSG?

A Mary Anne Kane, Deputy Director of Facilities. Billy Hunter, General Manager Facilities, Alan Gallagher Sector Estates Manager, Microbiologist, Dr Inkster. Sector Estates Manager, Ian Powrie. Lead Infection Control Nurse, Pamela Joannidis. John Green Health and Safety Manager.

e) What qualifications were required in order to be in the WSG?

A Senior management and Senior clinical positions.

f) Look through the Water Safety Group Bundle – explain any issues discussed, your involvement and any action taken by you, and why, in response to issues raised at the WSG meeting.

A From my time at the QEUH/RHC I noted discussions around water safety plans, written schemes and audits. Legionella sampling Ward 7b bacteria within the shower heads and 2 patients with blood stream infections in RHC Ward 2a. There were discussions around the selection and training of Ap's and Cp's.

g) To what extent, if any was this within your remit within estates?

A It wasn't within my remit within estates however I became aware through discussions with Ian Powrie, Sector Estates Manager. I do recall meeting with Veolla along with Ian regarding a new water plant for Renal Dialysis and also meeting a representative from one of the shower head companies. I believe we did purchase a batch of disposable shower heads.

h) How did clinical staff and estates get along at these meetings?

A I don't know as I never attended a water safety group meeting.

Review of Issues Relating to Hospital Water Systems' Risk Assessment 26th September 2018

Refer to Estates Communication Bundle, document 134.

133. Who commissioned/ordered the report? What issues prompted the instruction of this report?

A I had no involvement as I was retired at this point.

134. What interviews, if any, were in connection with the report?

A N/A.

135. What views, if any, did you express to the author of the report?

A I don't have any knowledge of the review of issues relating to hospital water systems risk assessment 26th September 2018 as I had left the NHS in March 2018.

Tap Water – Ward 3C - 2019

136. What were the issues in relation to tap water?

A I don't have any knowledge of Tap Water - Ward 3C - 2019 as I had left the NHS in March 2018.

A What was your level of knowledge and involvement with these issues? N/A.

138. What action was taken?

A N/A.

139. How were matters resolved?

A N/A.

Other Water Incidents

140. What other specific events do you recall in relation to water? For example do you have any recollection of debris in the water tanks and the cleaning of water tanks, 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 escalation process;

e) Were any external organisations approached to support and advise;

f) Detail role and function of HPS and HFS, advise if they were involved and any reports prepared by them;

g) 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?;

h) Was there opposing advice and by whom;

i) What remedial action was decided on and who made the decision;

j) How was the issue resolved? – consider any ongoing aftercare/support/ monitoring;

k) Detail any ongoing concerns you had, or which you were made aware of;

l) Was there any documentation referenced during or created after the event? i.e. an SBAR/ minutes from a meeting – use the bundle provided to assist.

m) Did anyone sign off to say the work had been completed and issue resolved/area safe? If so, who?

A I don't recall any other specific incident in relation to water.

141. What were the NHS procedures for raising concerns about water issues or water infections.

a) How were these dealt with by you?

A Water issues would be raised through supervisors to duty managers then to me. I would raise them with my line manager. Water infections would be raised with the microbiology team as soon as it was confirmed.

b) How was it confirmed they had been dealt with.

A Work would be set up straight away to rectify the water issue and sampling carried out/sanitising the water system to eradicate contaminates from the system. We would liase with microbiology to let them know.

c) What water issues or water infections were you concerned about?

A I was concerned about the number of taps and shower heads that required to be maintained.

Ventilation - Guidance and Obligations

142. What was your understanding at handover in January 2015 of water guidance and regulations specifically SHTM guidance?

a) What is the purpose of the guidance?

A The purpose of the guidance was to make sure the installation complied with it.

b) What are the possible consequences of non-compliance with the guidance?

A Possible infections resulting from non-compliant systems.

c) To what extent was the ventilation system in compliance with the guidance at handover/ when you started at QEUH/RHC?

A I don't know. I would have thought it have been in total compliance as it was a brand new installation.

d) How satisfied were you of the compliance?

A I didn't know at that time how compliant it was.

e) What documentation did you see that satisfied you? Where was that documentation stored? How often were you able to access the stored documentation?

A I didn't see any documentation.

f) How was this matter escalated? If so, to whom? To what extent, if any, was the ventilation systems non-compliance discussed with any colleagues? What further action, if any, was taken to ensure that the ventilation system complied with the guidance? Who was responsible to regulate compliance, if so, please explain your knowledge, understanding and role within that team:

A I don't know.

150. Describe the role of Authorised Person for ventilation, who held the position, responsibilities, consequence of not having an Authorised Person.

A The role of the Authorised Person for ventilation is to ensure that the system operates safely and efficiently in accordance with the statutory requirements of SHTM 03-01. I don't know who held the position.

151. What is your general view of NHS GGC's compliance in respect of ventilation at QEUH/ RHC:

A My view is that NHS GGC's compliance in respect of ventilation at QEUH/RHC was good. The PPM was being done at the correct intervals, Verification on critical systems being carried out. Filters being changed as and when required. Records kept and service contracts in place and records kept.

Ventilation - Commissioning and Validation

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

A I don't know what the commissioning and validation process was in respect of the ventilation system in the QEUH/RHC.

a) Who was this carried out by?

A I think it was H &V.

b) Who signed off?

A I don't know.

c) To what extent, if any, did infection control have input prior to sign off? Refer to Estates Communication Bundle, document 22. For reference in this email Christine Peter's states that Craig (Williams) has not seen anything in writing about the ventilation.

A I don't know to what extent, if any, did infection control have input prior to sign off. I don't know.

(i) If so, who did have input?

A N/A.

(ii) When should this have been done?
I would think prior to handover/ patient migration. (iii) Were you involved?

A No.

d) How aware were you of any concerns raised at any point about the ventilation system and its commissioning?

A I was not aware of any concerns raised at any point about the ventilation system and its commissioning.

e) What commissioning and validation documentation did you have sight of that related to the period before handover in 2015?

A I didn't have sight of any validation documentation related to the period before handover in 2015.

(i) If not, who would have seen commissioning and validation documentation?

A I don't know, maybe the Project Director or the Director of Facilities or Sector Estates Manager.

f) How does commissioning differ to validation?

A Commissioning is a rigorous, systematic and documented process to ensure a new system complies with the design. Validation is a meticulous process designed to assess whether the ventilation system meet the standards laid down by SHTM 03-01 Guidance.

153. Have you seen the validation documentation for the ventilation system as at handover (Jan 2015)?

A No.

a) If yes – who carried this out, who signed off, who authorised?

A N/A.

b) If no – should you not have sought this? Who is responsible for ensuring it is in place? Who should have chased this up?

A The Project Director.

154. Where would the paperwork have been stored/ Who would have been responsible for it?

A On file within the Estates Office and NHS GG&C shared drive.

155. If validation was not in place at handover, how did the hospital open? Who would have had the authority to allow the hospital to open without validation in place?

A I don't know.

156. What concerns, if any, would you have if there were no C&V of the ventilation system?

A Is it fit for purpose, will it run efficiently, are the correct filters installed.

157. Why would no C&V of the ventilation system give rise to these specific concerns?

A I would not be confident in its ability to provide the right standards of ventilation.

158. Was the ventilation system verified or not prior to handover? If not, should this have been done? What are the consequences of the ventilation system not having been verified? What obligations, if any, did you hae to seek verification in respect of the ventilation system?

A I don't know.

Verification - Ventilation System

159. What is verification?

Verification is a physical assessment of the existing heating, ventilation and air conditioning (HVAC) infrastructure.

160. What is the purpose of verification?

A The purpose of verification is to ensure that the system achieves minimum standards specific to the application and is operating to an acceptable performance level and remains fit for purpose.

161. How often should verification be carried out? Who was responsible for carrying out verification?

A Annually, I was responsible for carrying out verification.

162. Described the wards and areas of the hospital that required verification?

A Adult and Children's Theatres and Isolation Rooms.

163. What issues or concerns, if any, did you have in respect of verification at QEUH/RHC?

A Hepa Filters in the Ultra Clean Theatres were dirty after 1 year of use. These filters had a life span of 5 years but had to be replaced after year 1. These filters had to be ordered and couriered up to Glasgow. This did not happen overnight and meant the theatre could not go back into service at the agreed time. This put pressure on the theatre staff now that a theatre is out of service for longer than planned.

164. What would the consequences of verification not being carried out have been?

A You would not know if the plant was working as effectively as that of commissioning.

165. If verification was not being carried out, who else in your team would have been aware? What action, if any, was taken?

A Verification was being carried out.

Testing - Ventilation

165. What testing and maintenance protocols and regimes were in place?

A A PPM schedule was in place for the correct frequency of inspection and testing.

166. Refer to Estates Communication Bundle, document 47 page 5/18 of document: This states that air permeability tests were not carried out to 36 isolation rooms:

a) Were you aware of this? If you were not aware, who would have been aware?

A No. The Project Director.

b) What was the consequence of this?

A The rooms would be deemed not fit for use by the type of patient that would be cared for in these rooms.

c) Why did handover take place in these circumstances?

A I don't know.

d) What happened following this report?

A I don't know.

e) What concerns, if any, did the contents of the report give you? Why did the report give rise to these specific concerns?

A N/A.

Have regard to the following emails when considering your answers to the above Estates Communication Bundle, documents 64, 67 and 68.

167. What concerns, if any, did you have about the ventilation system at the point of patient migration to QEUH?

A I only had just taken up my post, so didn't have any concerns.

168. What concerns, if any, did you have relating to the ventilation? What concerns, if any, did you have relating to the water temperature? What concerns, if any, did you have relating to the movement within the water system? Refer to Estates Bundle, document 123.

A I didn't have any concerns.

169. How achievable was it to incorporate a comprehensive ventilation system into the QEUH/RHC?

A I don't know.

170. Describe any ward/area specific ventilation systems used?

A AHU's and Thermal Wheels.

171. What comments, if any, do you wish to make about the ventilation systems that were used?

A Thermal Wheels to be used only in non-critical areas.

172. Refer to Estates Communication Bundle, document 48. Explain your concerns and actions taken.

A I had no involvement in this area as it was more design and installation.

173. Explain your involvement, if any, with a review of specialised ventilation areas.

A I had no involvement.

174. Dr Teresa Inkster tells us that there was little progress with this matter. To what extent, if any, is this statement accurate?

A I had no involvement with this.

Specific events in relation to ventilation system

175. Can you recall any specific events in relation to ventilation? For example:

a) In 2015 prior to patient migration there were checks to the ventilation in Ward 2A in particular, with there being issues in relation to breaches around the trunking, ceiling lights etc with the extract grills not being compliant with SHPN

A I don't recall any specific events.

b) Lack of HEPA filters and general concerns ward 2A/B refer to Estates Bundle, documents 35 and 37. Detail how the issues managed, what was your responsibility, outcome. Highlight any concerns you had with regards to work/ testing being carried out.

A I'm not included of any of these e-mails and have no knowledge of this.

c) Dr Brenda Gibson raises there concerns refer to Estates Communication Bundle, documents 17 & 18. Describe your involvement and any actions taken in respect of this matter.

A N/A.

d) Air permeability tests not carried out refer to Estates Communication Bundle, document 47 Capita NEC3 Supervisor's Report (No 53) - dated September 2015.

A I had no involvement in this.

e) Issues with rooms 18 & 19 Ward 2A Estates Communication Bundle, documents 46, 67 and 68.

A It was a faulty controller and required to be replaced. AHU fans to be run on hand and room pressures to be monitored every 2 hours.

f) Refer to Estates Communications Bundle, documents 53 and 54 describe the issues which lead to the smoke testing being required – what was the purpose? Why was this necessary/ what were the issues which lead to this? Page 419 – did you meet with Jackie Barmanroy – what was the purpose of this meeting. What was the actions taken in response – describe the working relationship between you and infection control colleagues with this matter – where was the work required recorded?

A I attended Schiehallion with a Brookfield Representative to witness the smoke testing in these rooms. This was to ensure the rooms were sealed and fit for purpose. I may have but don't recall this meeting.

g) Dr Christine Peters raised issues with the air change rates in Ward 2A.

A I don't recall Dr Christine Peters raising this issue with me. If she had I would have investigated and reported back to her.

h) In December 2015 you emailed David Wilson, Brookfield Multiplex stating that the '*pressure in the isolation rooms presenting an unacceptable risk to the vulnerable patients present within these protective environments.*'

i) How aware were you of these concerns

A I knew the room pressures required to be at a certain level. I'm not sure of the exact figures, but obviously the rooms were not maintaining these pressures.

ii) If so, detail the issues

A Low room pressures.

iii) Potential patient impact

A I'm not sure of exactly what the impact would be for the patient. iv) what was done to resolve matters and your involvement.

I contacted David Wilson who by this time I knew quite well and was always helpful. I'm sure he met with me on site to discuss. I don't remember exactly what was done to bring the pressures back to normal, but I'm sure the issue was resolved.

i) In February 2016 Ian Powrie prepared a report regarding the action plan for proposed increase of extract in the ensuite rooms in the Schiehallion ward refer to Estates Communication Bundle, document 93:

i) Explain your knowledge of the issues

A This was conducted by my line manager and so I have no knowledge of this.

ii) Detail the issues

A N/A.

iii) Potential patient impact

A I don't know

.

iv) what was done to resolve matters and the extent of your involvement.

A I had no involvement.

j) Issues in respect of the safety of the PPVL rooms and adequacy for isolating infectious or immunosuppressed patients:

A I had no involvement.

k) Issues detailed in Estates Communication Bundle documents 94, 95 and 96.

A I had no involvement.

l) Issues detailed in Estates Communication Bundle, document 104.

A I had no involvement.

m) Fungal growths in a number of rooms in ward 2A.

A I had no involvement

n) Any other issues/ incidents not mentioned above.

A N/A.

In providing your answer 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) Which external organisations, if any, were approached to support and advise?

f) What was the advice?

g) Was there opposing advice and by whom?

h) What remedial action was decided on and who made the decision?

i) How was the issue resolved – consider any ongoing aftercare/support/ monitoring?

j) Any ongoing concerns witness had herself or others advised her of?

k) What documentation referenced during or created after the event was there. For example an incident report?

l) Who, if anyone, signed off to confirm the work had been completed and issue resolved/area safe?

176. What level of awareness should an Estates Manager and Authorised Person for ventilation have of the ventilation issues?

A Estates Managers and Authorised Persons will have a good awareness for ventilation issues as they arise be able to direct staff in the appropriate course of action to repair.

Isolation Rooms

177. In the Stage 3 Sectional Completion Certificate Estates Communication Bundle, document 3 on 29th January 2015, HEPA filters in isolation rooms were listed as incomplete Estates Communication Bundle, document 3, page 25:

a) What was missing?

A I don't know as I wasn't in post at that time.

b) Why was the completion certificate signed when there were incomplete works to the isolation rooms?

A I don't know.

c) How was this discussed with other members of staff? If so, who?

A I don't know.

d) How was this issue escalated to Board level? If so, to whom and who escalated matters?

A I don't as this was above the position I held.

e) Explain what works were carried out to resolve this matter, your involvement and when matters were resolved

A I don't know.

178. What was the issued referred to in the email at Estates Communication Bundle, document 34? How did this happen?

A Ward 4B. Commissioning data.

179. Discuss the air permeability testing carried out in respect of the isolation rooms Estates Communication Bundle, documents 37 & 41:

a) why was this work carried out?

A I had no involvement with this.

b) What was the result of this work?

A N/A.

c) What was your involvement in the work?

A N/A.

d) What if any issues arose?

A N/A.

e) Refer to Estates Communication Bundle, document 47 Capita NEC3 Supervisor's Report (No 53) - dated September 2015. Estates Communication Bundle, documents 51 & 55.1. to assist with your answer.

A I don’t recall this.

i) Were patients in these isolation rooms at this time?

A I don’t know.

ii) Potential impact on patients?

A I don’t know.

iii) Your involvement with the HAI Scribe

A I had no involvement.

180. Refer to Estates Communication Bundle, document 26 Christine Peters states that Ian Powrie was dealing with sealing light fittings:

a) What was the issue?

A The light fittings were not sealed which they should have been.

b) What was the potential impact on patients?

A Possibility of contaminated air being brought into the room.

c) What did you do to resolve this matter?

A Ian Powrie dealt with this issue.

181. There were issues in August 2015 with isolation rooms refer to Estates Communication Bundle, documents 44 & 45:

a) Detail your understanding of the issues.

A I understand the issues with regards to the rooms, e.g. breaches around the ceiling spaces and impact on achieving the correct level of ventilation, however I was not involved in this.

b) To what extent were the affected wards/ areas complaint with the relevant guidance at the time?

A If this was the case they would not be compliant. To be compliant the room must be completely sealed to reach the required level.

c) Your understanding of whether the affected areas/ wards had been built to contractual specification at the time.

A I don't know. I was not involved on the design and construction.

d) Your involvement in carrying out/ instructing work to remedy any issues.

A I was not involved with this.

e) Whether there were patients in the affected wards/ areas at the time

A I don't know.

f) Your understanding of the potential impact on patients

A If room is not then sealed it would have a detrimental affect in patient health as air from the ceiling void can be contaminated and enter the room.

182. There remained issues regarding testing in September 2015 refer Estates Communication Bundle, document 61:

a) Explain the issues.

A Some rooms had still to be sealed and air permeability tests carried out.

b) Your involvement

A I wasn't involved.

c) Work carried out to resolve any issues.

A I wasn't involved.

d) Potential patient impact

A If the room was not sealed it would have a detrimental affect on patient health and air from the ceiling void can be contaminated and enter the room.

183. Refer to Estates Communications Bundle, document 67 right to page 523:

a) Explain the issues.

A There was a faulty controller.

b) Your involvement

A I was part of the group to monitor room pressures and report back to Ian Powrie of any issues.

c) Work carried out to resolve any issues

A A new controller was fitted.

d) Potential patient impact

A No impact on patient if pressures stayed within the acceptable range which was monitored every 2 hours.

184. Discuss the issue with the manual controller in isolation rooms in ward 2A Estates Communication Bundle, document 83:

a) Your understanding and involvement

A Ward 2a ventilation control failure with loss of positive pressure.

b) work carried out

A I wasn't involved in this but was aware that Schneider were dealing with this issue.

c) Potential patient impact

A If agreed control measures are in place there should be no impact on patient health.

Ward 4B

185. What was the intended purpose of Ward 4B?

A I don't know what the intended purpose of Ward 4B was.

186. How did this change, if at all, prior to January 2015? If so, what changes were made?

A I don't know how it changed.

187. What, if any, changes were required to the ventilation system? Why were they made?

A I don't know if any changes were required to the ventilation system.

188. How involved were you with the changes?

A I wasn't involved.

189. There were issues with Ward 4B though almost straight away with an SBAR being prepared on around 7th June 2015:

a) Discuss the concerns about Ward 4B. Refer Estate Communication Bundle, document 30 - What was the purpose of the SBAR? Refer to Estates Communications Bundle documents 30, 31, 32 to assist with your answer,

A Ward 4B accommodation was not fit for purpose.

190. In her statement Dr Teresa Inkster discusses concerns regarding Ward 4B:

a) What commissioning and validation data did you have in June and July 2015?

A I don't know that I received any validation data.

b) What commissioning and validation data, if any, did you provide to Dr Teresa Inkster?

A I don't recall Dr Inkster asking me for C&V data in relation to Ward 4B. if she had and I had it, I would have given it to her.

c) What commissioning and validation data, if any, did you provide to Dr Teresa Inkster?

A See answer above.

191. How long after migration to ward 4B were patients decanted back to the Beatson?

A I don't know.

192. To what extent were issues raised in the SBAR from June 2015 present at the point of NHS GGC taking occupation in January 2015, and when Ward 4B was handed over to NHSGCC?

A I don't know.

193. How could these issues arise immediately between handover and patient migration when the Ward was signed off and handover accepted?

A I don't know.

194. Refer to Estates Communication Bundle document 62:

a) what is this document?

A H &V ventilation report.

b) Have you seen it before? If so, when?

A I haven't seen it before.

c) What was the purpose of carrying out a ventilation report in October 2015?

A The ventilation report would have been commissioned to establish compliance and any issues that would need rectified.

d) What issues, if any, arose from this report?

A No issues were reported.

e) How involved were you?

A I wasn't involved.

f) What matters, if any, did you escalate arising from this report? If so, to whom and why?

A I had no involvement in the report.

195. In respect of Ward 4B describe the works carried out, why, your involvement and when. Use the below to assist and detail issues you were aware of in respect of Ward 4B, your involvement and any remedial works – works done and why.

A I wasn't involved at this stage.

Refer to the following when answering, if relevant to your involvement:

a) Estates Communication Bundle, document 71

b) Estates Communication Bundle, document 72

c) Estates Communication Bundle, document 97

d) Estates Communication Bundle, document 115 - why was there 'pre-start' meeting – what was the issue with this?

196. Involvement and knowledge to HAISCRIBE – what was this and what was the issue – refer Estates Communication Bundle, documents 117 and 118 and 119.

A I knew the importance of preparing the HAISCRIBE document for this project. I had prepared a number of these scribes previously. the Ward was split into 2 sections. 1 for patients and the other for the work area. ceiling tiles in single rooms were to be changed to solid ceiling with hatches for access to heating controls. work was carried out over 5-6 weeks as far the contract required. It was then validated by H&V Ventilation. patients were in the separated section of the Ward. The HAI SCRIBE was completed and submitted to Infection Control before any work started.

a) You were tasked with carrying out works in respect of ceiling tiles

b) Describe situation

c) Action taken

d) Whether this issue was resolved

e) Was this linked to the overall works being carried out in 4B – was there patients in at the time, what happened in response to the HAI Scribe.

197. Ward 4B:

a) When were Ward 4B patients decanted from Ward 4B back to the Beatson?

A I don't know, I had no involvement with the decantment of patients.

b) Why did this happen?

A I don't know.

c) When patients initially transferred from the Beatson to Ward 4B was the specification of Ward 4B the same spec as the Beatson?

A I don't know.

d) If not, then why were patients transferred from the Beatson initially if the specification?

A I don't know.

e) What works were carried out to Ward 4B during this time? Why, Was it an issue when the ward initially started taking patients? who signed off on the works? how did it become known that the works were required.

A I don't know.

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

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

a) What was the lead up and background to this refer to Estates Communication Bundle, document 133.

A I was not involved as I had left the NHS in March 2018.

b) What was your involvement.

A N/A.

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

A N/A.

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

A N/A.

e) Discuss and detail the works done to Ward 2A/B what was required to be done and why, what has been done and when the work was completed. Please include details of your involvement. Reference IMT Bundle to assist.

A N/A.

f) Any other relevant information, for example mould behind the IPS panels in Ward 2A, the plasterboard used in the en-suites in 2A/B.

A N/A.

199. Discuss the issues surrounding the ward 2A patients when in occupation of ward 6A. In particular, views you may have in respect of:

a) Chilled beams;

A I don’t know.

b) Gram Negative Bacteraemia

A I don't know.

c) Water filters

A I don't know.

d) Ventilation, including HEPA filters

A I don't know.

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

A I don't know.

f) Patient communication

A I don't know.

g) Internal escalation - HAIIT scoring

A I don't know.

h) External escalation

A I don't know.

Reports prepared by Innovated Design Solutions October 2018

200. Refer to Bundle 6 – Miscellaneous Documents – Documents 33 and 34. These documents are feasibility studies regarding increasing ventilation air change rates within Wards 2A and 2B by Innovated Design Solutions.

a) Were you ever contacted in connection with these reports?

A I was not involved as I had left the NHS in March 2018.

b) What was your involvement, if any?

A I wasn't involved as I had left the NHS in March 2018.

Cryptococcus

201. Recall your understanding of the Cryptococcus infections in 2018:

a) What is Cryptococcus?

A Cryptococcus is a fungi that is found in soil and is usually associated with bird droppings.

b) What issues, is any, do you recall in respect of pigeons either nesting, leaving droppings or otherwise at QEUH/RHC? If you recall any such issues, what action did you take, or what action was taken? Did the action taken resolve the issue(s)?

A Pigeons were nesting and leaving droppings all over the site including roof top plant rooms and the loading bay of the Laboratory Building. This was ongoing a daily occurrence. I arranged for Pest Protection to clean the plant rooms, catch and remove the pigeons. A week later it was as bad as ever, so it became a routine task for the company.

c) What were the issues with Cryptococcus at QEUH? When did you first become aware of these issues? What happened in response to these issues? Who, if anyone, did you report these issues to?

A I think the issue came to light after I had left the NHS in March 2018.

d) Describe any visits you made to the plant rooms? When did you go, why did you go at that time, what did you see? What cleaning, if any, took place before the visit – if so why – what was evidence prior to the cleaning?

A I was in the plant rooms almost every day. I saw pigeons flying about. They knew how to get in but not how to get out. There was evidence of droppings on equipment and the floor. Some pigeons would end up dead and they would be removed by Pest Protection and the plant room would be cleaned.

e) Do you recall seeing photos relating to pigeons at QEUH/RHC, if so, what did they show?

A I don’t recall seeing photos relating to pigeons at QEUH/RHC. Everybody on site knew they were there.

Staffing and Working Environment

202. What were the staffing levels like in estates at the point of handover? Where did the staff come from – were they mainly transferred from old site?

A The staffing levels in Estates at handover consisted of The Sector Estates Manager, A Senior Estates Manager, 5 Duty Managers on a rotating shift basis, 1 Manager on Day Duty, 4 Supervisors and approximately 40 - 50 Technicians, Trades staff and Maintenance Assistants. They came from The Victoria Infirmary, The hospital for sick children at Yorkhill and The Southern General.

203. Concerns if any about staffing following handover – to what extent did the staffing levels manage the workload? Refer to Bundle 8, document 40.

A I wasn't in post at handover.

204. Was appropriate training in place for new and existing staff on using new systems and working within the QEUH? How did you ensure that new and current staff were appropriately trained? Refer to Estates Communication Bundle, document 5 - what was this and what was the training like? How did this assist you and staff with working at QEUH – was it equipment focus, asset focused please describe.

A I was not in post at this time however I can see from the document that training was given and signed off.

205. Who was responsible for providing staffing? Who was responsible for ensuring staffing was maintained at sufficient levels?

A Initially Human Resource Management, Estates General Manager and Sector Estates Manager were responsible for providing staffing.

206. What concerns did you have regarding staffing levels?

A I didn't have any concerns at the outset. I thought the complement of staff would be sufficient to manage the workload.

207. What was the working environment like when QEUH opened – work life balance/ workplace culture? What issues, if any, did you have? If so, what concerns did you raise? Who did you raise these concerns with?

A It was full on and as time progressed it became hectic. I regularly found that I was working long hours and aware others were doing the same.

208. Who was on site to manage and assist with carrying out works relating to equipment? How did this assist your 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 Specialised contractors relating to equipment. It didn't really help as it was their equipment and they had the knowledge to repair, test etc. In my view there was no reliance on commercial third parties such as Multiplex when it came to staffing levels.

209. Generally – discuss the workplace environment and culture – What concerns, if any, did you have?

A The workplace environment was good. All managers, Supervisors and most of the Technicians, Trade Staff worked well together. The culture was good also, everybody keen to do a good job maintaining this wonderful new facility. I didn't have any concerns at the outset.

210. Describe the handover process – did it run smoothly or not? What concerns, if any, did you have in the run up to handover? What matters did you feel went to plan and what, if any, matters, had not gone to plan?

A I was not involved in the handover process.

211. GGC took handover from Multiplex earlier than initially contracted for – what did you think about this? Why did it happen? What was the rationale for the early handover?

A I didn't know that was the case and why it happened. I've no idea of the rationale of an early handover.

212. What concerns, if any, were raised by infection control colleagues regarding the general build of QEUH/RHC taken seriously? What action, if any, did you take in response to these concerns, not already mentioned in your answers?

A I was not aware of this issue.

213. Dr Teresa Inkster tells us in her statement that she raised concerns regarding the cleaning in NICU, PICU and haematology wards in 2016 and again raised concerns to you and Mary Anne Kane in 2018 raising concerns in relation to level 4 QEUH, Ward 2A, RHCG, PICU and Ward 3C, with further issues in relation to Ward 4C cleaning being raised in 2018:
What were the concerns raised and what action did you take?

A I don't recall Dr Inkster raising these concerns with me. That said her concerns were likely to be that she could see that the ventilation grills were dirty and that they required to be cleaned. I would have taken this issue up with my duty manager and supervisor to check when these areas were due to be cleaned and to see if we could bring forward the programme. I would have gone back to Dr Inkster with an update.

214. To what extent is Dr Inkster's statement that the *'response was reactive rather than proactive'* an accurate statement?

A Dr Inkster may have thought that. However cleaning of high risk areas was a challenge for estates. The staff needed to know when we are due to come to the area to clean so that they can clear the area, vacate rooms etc to allow us access. I think estates is generally proactive, but if the programme slips for whatever reason, then it could be seen as being reactive.

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

A I have nothing further to add.

Declaration

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.

The witness was provided the following Scottish Hospital Inquiry documents for reference when they completed their questionnaire statement.

Appendix A

A43255563 – Bundle 1 - Incident Management Team Meeting Minutes (IMT Minutes)
A43299519 – Bundle 4 - NHS Greater Glasgow and Clyde: BAR Documentation
A43955371 – Bundle 8 - Supplementary Documents
A43293438 – Bundle 6 - Miscellaneous Documents
A47175206 – Bundle 9 - QEUH Cryptococcus Sub-Group Minutes
A47395429 – Bundle 10 - Water Technical Group / Water Review Group Minutes
A47390519 – Bundle 11 - Water Safety Group
A47069198 – Bundle 12 - Estates Communications