Scottish Hospitals Inquiry
Witness Statement of Questions and Responses
Alan Gallacher

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.

Given the seniority of the role that you hold and held at the time within Estates, relevant to the terms of Reference for the Inquiry, it would be of great assistance to the Inquiry if you were able to give as full answers as possible to the questions being asked of you.

Personal Details

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

A See attached CV – **Attachment 1**

Professional Background

2. Professional role(s) within the NHS.

A Jan 2006 – September 2011 – NHS Tayside – Engineering maintenance Manager; September 2011 – NHSGG&C – Sector Estates Manager (Clyde)

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

A See question 9 below

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

A See question 9 below

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

A See question 9 below

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 Mary-Anne Kane who was the Assistant Director of Estates & Facilities

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 This is all detailed below between questions 10 to 26

8. Had you worked with any of your QEUH/RHC estates and management colleagues before your current role? 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 This is all detailed below between questions 10 to 26

<u>Specific Role(s) at QEUH/ RHC</u>

9. Describe your role(s) at QEUH; job title and responsibilities including day to day responsibilities, and details of staff who reported to you, who you worked alongside and who you reported to. Please fully describe where the role was in the hierarchy of the organisational structure.

A Prior to August 2015, I was the Sector Estates Manager (Clyde) based at RAH Paisley. In Aug 2015 I was promoted to the position of General Manager (Estates) for NHSGG&C and did not have a QEUH specific role. My role covered NHSGG&C as a whole. My job responsibilities covered Net Zero,

Compliance, Asbestos Management, Minor Works & Asset Management. I was also a supportive/advisory role for the Sector Estates Managers although I had no direct responsibilities to manage them. When I initially took up this role it was a 'new position'. The only staff who were in place in 2015 were 3 energy managers who carried out the Net Zero Carbon roles. I recruited the remainder of the team over a period of time.

10. Describe when you first became involved with QEUH/RHC, what was your role and involvement?

A I got involved with the QEUH/RHC in my role as General Manager (Estates) from August 2015 onwards as my role was a board wide responsibility although initially there was very little if any work associated with the QEUH as it had only recently been handed over to NHSGG&C]. I covered Energy Management/Net Zero, Minor Projects, Asbestos Management, Planned Maintenance of Assets and was tasked to form a new compliance team]

11. When did you start your current role?

A I started my current role in 2020

12. How many people worked within QEUH hard facilities management when you started?

A Not aware of staffing levels at that time

13. How many people worked within QEUH soft facilities management when you started?

A Not aware of staffing levels at that time

14. Did the number of people working at QEUH change during your time there? If so, how many people changed in soft facilities management? If so, how many people changed in hard facilities management?

A I was not made aware of any of this information

15. How did Estates management operate on a daily basis? Was responsibility shared between different teams? If so, to what extent was responsibility shared?

A I was not made aware of this as this was an operational issue

16. What responsibilities, if any, did you have in overseeing the day to day management of estates? If you were not responsible, who was, and why did this responsibility fall out-with your remit as General Manager of Estates?

A I had no responsibilities over the day to day management of operational estates across NHSGG&C including QEUH. This would have been at the time as follows:

Site Manager Operational Estates - David Brattey;
Sector Estates Manager (South) - Ian Powrie
Sector Estates Manager (South) – James McFadden (for a limited time until this role was taken on by Ian Powrie]
Sector Estates Manager (South) Andy Wilson (after Ian Powrie)
Facilities Manager (QEUH) – Karen Connelly
General Manager (Facilities) – William Hunter

17. Refer to the **Estates Team Bundle, document 29** - Organograms showing the organisational structures within QUEH.

a) Does the organogram match the organisational structures of QEUH?

A This is a Board wide Organogram not specific to QEUH. From a facilities perspective the QEUH sits within the South Sector

b) If not, why not?

A It is not factually accurate as I was until 1/8/2015 the Sector Estates Manager for Clyde. I had been offered the post of GM (Estates) with a starting date of 1/8/2015. The role of Sector Estates Manager (South) was either still with Jim McFadden or the role was now with Ian Powrie. Sector Estates Manager (South & Clyde) was, in my opinion still to be ‘agreed’ as the role on 1/8/2015 was now vacant.

c) How did the structure and hierarchy operate across the different sectors?

A Each sector had a General Manager (FM). Each ‘acute’ site within the sector had a FM Site Manager and a Sector Estates Manager who reported into the Sector GM (Facilities)

18. What role did you hold in Estates?

A At that time I was the Sector Estates Manager (Clyde) until 1/8/2015

a) When were you appointed to this role?

A I was appointed into the role on 12/09/2011

b) How did you come to be appointed,?

A I was selected from an external job application and interview.

c) Who selected you?

A I was selected by the General Manager FM (Clyde) at that time.

d) what was the selection process, did you have previous working relationships with those who selected you?

A I was selected from an external job application and interview. I had not worked previously with the GM FM(Clyde)

e) Describe the role of General Manager of Estates.

A See attached Job description – **Attachment 2**

f) What were your duties in this role?

A See attached Job description

g) Who did you report to in this role? Detail superiors/superiors for this role.

A See attached Job description

h) What was your relationship like with your supervisor in this role.

A I had a good working relationship with my manager. See attached Job description

i) Provide details of staff who reported to you, and you were responsible for in this role, and your relationship with them.

A 3 Energy managers – only one of who is in the position presently. See j) below

j) Provide the name and role of any managers you worked with. Please provide their Job (s) and role responsibilities.

A This is a difficult question to answer as when I was appointed to the position of General Manager (Estates) there was only 3 managers who were my responsibility and they were Energy Managers who had boardwide responsibilities. The minor works team, compliance team, asbestos team & asset team were still to be established.

19. What were the names of the 3 managers?

A Gillian Brown, John Keenan & Samuel Selwyn

20. Detail any other roles held by you within the Estates team and provide details as referred to in a-g above.

A Sector Estates manager (Clyde) based at RAH – all staff at that time based in paisley.

21. How was work delegated in the Estates team?

A I delegated to each manager and had regular meetings on progress.

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

A Through regular progress meetings

23. How were these meetings recorded?

A Where applicable team meeting minutes/notes were taken

24. How did you check that the work delegated had been carried out?

A Through regular progress meetings

25. 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 No concerns with any direct staff member

26. What concerns, if any, did you have about management/ managers? If so, please describe these concerns. What action, if any, did you take in relation to these concerns?

A No concerns about management or managers

27. Describe the interpersonal relationships within the Estates team. How would you describe communication between you and your supervisor(s)/ superior(s)? How would you describe communication to you from those you senior to you/ supervised you?

A I have good communications between myself and my managers and also my superiors.

28. How many occasions, if any, did issues arise caused by misunderstandings or poor communication?

A None that I can recollect

Training

29. What training had you undertaken for your role(s) in estates?

A I have worked in estates management since the age of 28 for the Ministry of defence, Local Government and NHS. This is 37 years of experience where I have attended numerous technical training courses. In recent years working in healthcare I have attended training courses covering Water/Ventilation and management courses.

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

A BEng (Honours) in Engineering; Chartered Engineer with Institute of Mechanical Engineers (CEng)

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

A I was Sector Estates Manager at the Royal Alexandra Hospital in Paisley. Prior to that position I worked at NHS Tayside as an Engineering Manager. The roles differ from my current position of Head of Corporate Estates which is a boardwide role

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

a) Water

A I have attended a Responsible Persons (Water) Training Course which is a senior management course.

b) Ventilation

A I have attended a Ventilation Training Course which is a management course.

c) Infection Control

A No

If so, please detail above any training and qualifications – when trained? When qualified? Who was the awarding body? Please describe how the training and qualifications applied to your work at QEUH.

33. Have you ever had any specific roles or duties in relation to the water systems operation or maintenance within NHS facilities? When did you have these roles and duties?

A Responsible Persons (Water) Training Course

34. If you did:

a) What were these responsibilities?

A The training covered the following - Understand individual roles, responsibilities and legal obligations; Understand Growth requirements of Legionella and interactions with other microbiological species; Factors affecting the accumulation of biofilm; Effectiveness of chemical and non-chemical treatments against Legionella and biofilm; Temperature as a Legionella control method; Materials of construction, pipework installations; Water treatment, monitoring and commissioning; Design, operation, monitoring and maintenance of water systems; Other water systems such as spa baths and decorative fountains; Air conditioning system hygiene; Investigation of outbreaks and routine HSE visits; Consequences of non-compliance

b) What was the purpose of these responsibilities?

A To make senior managers who have managerial responsibility for Health and Safety, who have sufficient authority, competence and knowledge of water systems and water hygiene management, aware of water management risks and to interpret regulations such as the Approved Code of Practice L8:2013, HSG 274 parts 1-3 & SHTM04-01.

c) Were you aware of any specific legal responsibilities/ obligations relating to working with the water systems. If so, please detail.

A Approved Code of Practice L8:2013 and HSG 274 parts 1-3.

35. If you did not have any such roles or responsibilities in relation to the water systems operation or maintenance within NHS facilities:

a) Who did?

A All NHSGG&C sites have Authorised Persons (Water) & Competent Persons (Water) on the sites

b) What were these responsibilities?

A The AP's & CP's were responsible for the practical implementation and operation of Scottish Health Technical Memorandum 03-01 (Ventilation) & 04-01 (Water) for which they have been appointed

c) What did you understand the responsibilities to be?

A As above.

d) Were you aware of any legal obligations/ responsibilities? If so, please detail.

A Approved Code of Practice L8:2013 and HSG 274 parts 1-3.

36. Have you ever worked on a large scale water or ventilation system before? If so, when was this? How did this compare to working on QEUH? What was your role and duties?

A All acute hospital within the NHS have large scale water & ventilation systems where the management of them is important. As Sector Estates Manager for Clyde the Royal Alexandra Hospital (RAH) in Paisley, Inverclyde Royal Hospital (IRH) in Greenock & Vale of Leven (VoL) Hospital in Alexandria were all classed as Acute Hospitals with large scale Water & ventilation Systems.

37. How did the above roles compare to working on QEUH? What was your role and duties, and how, if at all, did this prepare you for your role at QEUH?

A Again I state that I was not operationally responsible for estates management at the QEUH. As General Manager (Estates) I had a strategic role. The move from an operational role to a strategic role meant I had to work alongside my operational colleagues and allow them to manage their site accordingly without interference as it was an operational responsibility to manage the QEUH after handover.

Documents, Paperwork and Processes in Place as at 26th January 2015

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

37. What contractual documentation would you expect to see in place at handover?

A I was not part of the handover team so I do not know what was put in place

38. Who was part of the handover team and would have had responsibility for ensuring that the contractual documentation was in place at handover?

A I do not know who this was

39. Describe the process for handover of QEUH:

A I was not part of the handover team so I do not know what was put in place.

a) What contractual documentation was in place?

A I was not part of the handover team so I do not know what was put in place.

b) How was the relevant paperwork handed over to QEUH?

A I was not part of the handover team so I do not know what was put in place.

40. Was the building of the QEUH complete at handover – if not, what was incomplete? Was QEUH ready at handover? If not, why was it not ready at handover? Refer to **Estates Team Bundle, document 3 – 'Stage 3 Adult and Children's Hospital Completion Certificate'** defects noted therein when considering this question.

A I was not based at the site when it was handed over so I cannot respond.

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

A I was not based at the site when it was handed over so I cannot respond.

42. Please describe the site when you were appointed in August 2015.

A I was appointed in August 2015 but did not move to the QEUH from the RAH in Paisley until November 2015 as there was no appropriate space. Eventually I moved across from the RAH with my 3 energy Managers and moved into the QEUH Office Block. The QEUH site at that time, as I recall, was clear of contractors and most of the new hospital (that I am aware of) was occupied.

43. 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? Did you have any concerns?

A I was not based at the site when it was handed over so I cannot respond.

44. Were Multiplex still on site when you were appointed in August 2015?

A As I recall they were no longer on site and were working from offices out with the QEUH Campus.

45. At handover who was responsible for ensuring that paperwork was produced to confirm contractual compliance?

A I was not part of the handover team so I do not know what was put in place.

a) Paperwork

A As above

b) O&M Manuals

A As above

c) M&E Clarifications Log

A As above

d) Others paperwork as per the contract

A As above

Provide as much detail as possible – was anything missing? If so, how was this managed?

46. What commissioning and validation documentation for the water system did you see at handover? What commissioning and validation documentation for the ventilation system did you see at handover?

A I was not part of the handover team so I cannot respond.

a) What documentation would you expect to be available for both the water and ventilation systems?

A As above

b) As Estates Manager, what would you have expected to have been in place? What responsibility, if any, did you have to review the documentation upon commencing your role in August 2015?

A A suite of Operation & Maintenance (O&M) Manuals should have been handed over and within that there should have been the following as a minimum;

<u>Water</u>

- Full set of ‘as fitted’ drawings of the water installation;
- Commissioning information;
- Asset information;
- Maintenance Schedules;

- Manufacturers Parts Literature

Ventilation

- Full set of ‘as fitted’ drawings of the ventilation installation;
- Commissioning & Validation (C&V) information;
- Asset information;
- Maintenance Schedules;
- Manufacturers Parts Literature

There should also be a snagging list which would be agreed at handover and would be actioned by the contractor over a small period of time (which would be agreed between the contractor and NHSGG&C]

This would be the responsibility of the project handover board to manage.

c) Who was responsible for this documentation?

A As above

d) While you were not part of the handover team who was responsible for the documentation?

A I do not know who personally would be responsible as I was not part of the project or handover teams, however the project handover board would be responsible.

Note for a contract/project of this size and complexity I am positive that this would have been outsourced to a specialist company to ensure all documentation was in place.

e) What was your role?

A As above

f) Were you ever aware of commissioning and validation having been carried out?

A As above

g) Upon commencement of your role in August 2015, what commissioning and validation document, if any, did you have sight of pertaining to handover? How did you assure yourself when you started in August 2015 that the appropriate commissioning and validation had been carried out at handover?

A None. This was not part of my role. This was the responsibility of the project & handover team.

h) If not, why were you not aware of commissioning and validation having been carried out?

A As above

47. Was any other paperwork missing at handover? If so, would you consider this missing paperwork to be of importance?

A As above

48. Operating systems at handover:

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

A I was not made aware of this information

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

A I was not made aware of this information

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

A I was not made aware of this information

d) Were Multiplex involved in the training?

A I was not made aware of this information

e) Was sufficient training provided to allow staff to operate the systems?

A I was not made aware of this information

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

A I was not made aware of this information

49. What was your involvement/ role in the handover process? How did you manage this?

A I was not part of the handover process so I cannot answer this

50. Who signed the completion certificates?

A I was not part of the handover process so I cannot answer this

51. Who was the person with the responsibility to sign the completion certificates under the contract?

A I was not part of the handover process so I cannot answer this

52. **Estates Team Bundle, document 3 – 'Stage 3 Adult and Children's Hospital Completion Certificate':**

a) What is this?

A I was not part of the handover process so I cannot answer this

b) Have you seen it before?

A I was not part of the handover process so I cannot answer this

c) Have you seen other such certificates?

A I was not part of the handover process so I cannot answer this

d) Who signed off these certificates?

A I was not part of the handover process so I cannot answer this

e) What checks were carried out prior to sign off?

A I was not part of the handover process so I cannot answer this

f) What was your role/ responsibility?

A I was not part of the handover process so I cannot answer this

g) Looking at the defects referred to in the completion certificate **documents 3 above:** Look also at **Estates Team Bundle, document 4 – 'Capita NEC3 Supervisor's Report (No 46)':**

(i) What are these defects?

A I was not part of the handover process so I cannot answer this

(ii) **Please refer to Estates Communications Bundle, document 47** – 'Capita NEC3 Supervisor's Report (No 53) dated September 2015'

A Looking at the defects certification within the report, please explain what are these defects? The is a monthly defects report and is self-explanatory. It highlights progress through an already agreed defects list. Looking at this report it shown many of the actions are progressing and does not highlight any major issues. A defect list of this size would be the norm on a project of this scale. None of the issues on this list would, it appears, impact on the safe operation of the hospital if as it states they have either been actioned or are progressing.

(iii) What was the impact of these defects?

A I was not part of the handover process so I cannot answer this.

(iv) Again looking at Please refer to Estates Communications Bundle, document 47 **– 'Capita NEC3 Supervisor's Report (No 53) dated September 2015'** What was the impact of these defects?

A See above response

(v) Why two years to deal with the defects?

A I was not part of the handover process so I cannot answer this

(vi) The two year period to address defects was in place when you commenced your role in August 2015, what information, if any, were you provided about this?

A I was not supplied with any information around defects.

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

A I was not part of the handover process so I cannot answer this

(viii) Is this usual practice in the construction industry?

A I was not part of the handover process so I cannot answer this

(ix) In your experience was it usual practice to accept handover with level of defects set out in Estates Communications Bundle, documents 4 and 47 **–**

A Yes, for a project of this size and complexity

53. Refer to **Estates Team Bundle, document 8 – 'Programme for handover to start of migration':**

a) Do you know what this is?

A This is a Gant Chart showing programme of works to handover which is the norm in the construction industry

b) Have you seen it before?

A No

c) What are the numerous defects?

A I was not involved in the handover process

d) Please describe the defects in the above document.

A These would be defects identified during NEC3 inspectors/supervisor visits to the areas identified by the contractor as complete and ready for handover.

d) What is your understanding of the purpose of this document?

A As c above It is a plan produced by the contractor to allow ‘close out’ of the project in a phased approach

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

A As c above

(i) While you were not involved in handover, what view if any, having regard to your experience within estates, and estates management do you have regarding the number of defects?

A This would not have been unexpected given the size, scale and complexity of the project.

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

A As c above

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

A As c) above

54. What did the contract say about retention of certain parts at handover? Was this enforced and why?

A I was not part of the handover process so I cannot answer this

55. 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 I was not part of the handover process so I cannot answer this

56. 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 was not part of the handover process so I cannot answer this

57. From the point of commencing your role in August 2015, 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 cannot answer this as I do not have the information. This would be the responsibility of the project/handover Board.

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

A I was not part of the handover process so I cannot answer this. I was not part of any of the communication held in documents 19, 21 & 21.1

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

A I was not part of the handover process so I cannot answer this

(b) What other concerns did you have about areas of the hospital at handover?

A I was not part of the handover process so I cannot answer this

59. Refer to **Estates Team 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 Team Bundle, document 19:**

a) Tell me about your understanding of the concerns – namely what the concerns were any why?

A I was not part of the patient migration process so I cannot answer this

b) Your involvement with the dealing with any concerns?

A I was not part of the patient migration process so I cannot answer this

c) If so, how matters were resolved prior to patient migration?

A I was not part of the patient migration process so I cannot answer this

d) Who signed off prior to patient migration?

A I was not part of the patient migration process so I cannot answer this

60. Tell me about the snagging process, refer to **Estates Team 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.

A I was not part of the handover or snagging process so I cannot answer the above questions

61. Refer to **Estates Team Bundle, document 132** with the benefit of hindsight do you agree with Frances Wrath's comments that all area were commissioned in line with Employer's Requirements?

A I was not part of the handover or commissioning process so I cannot answer this

62. With the benefit of hindsight, do you agree with the above, notwithstanding not commencing your role until August 2015?

A I still cannot answer the question as 'hindsight' is, in my opinion, something we should not be responding to. Facts are the most important.]

Wards and Hospital Occupation from January 2015

63. At the point of taking occupation of QEUH/RHC on 26th January 2015 please confirm whether the following wards were fully handed over from Multiplex to NHS GGC:

Ward 2A/2B
Ward 4B
Ward 4C
Ward 6A
Ward 6C

A I was not part of the handover process so I cannot answer the above questions

64. Please also confirm your understanding of the ward specification and patient cohort to be located in each ward?

A I was not part of the design team

65. If a ward or wards were not handed over on 26th January 2015, or were partially handed over, please confirm:

a) Why they were held back?

A I was not part of the handover process

b) Any financial consequence to both Multiplex and NHS GGC of the ward(s) being held back?

A I was not part of the handover process

c) What works were carried out in order to allow this ward(s) to be handed over the NHS GGC?

A I was not part of the handover process

66. Were any other wards, aside from those referred to above, retained? Answer as above?

A I was not part of the handover process

67. What was the position when you were appointed in August 2015?

A I cannot answer this as I was not aware of the position

68. We know that the energy centre was retained by Multiplex

a) Why was the energy centre retained?

A I was not part of the handover process

69**.** As at August 2015 the Inquiry is aware that the energy centre was still retained by Multiplex. What understanding, if any, as Estates Manager did you have during your time at QEUH, as to why the energy centre had been retained by Multiplex?

A I was not aware that the Energy Centre had been retained by Multiplex

b) What financial consequences, if any, arose for either Multiplex or NHS GGC if the energy centre was retained?

A I was not part of the handover process

c) As at August 2015 the Inquiry was aware that the energy centre was still retained by Multiplex. What understanding, if any, as Estates Manager of financial consequences, if any, arose for either Multiplex or NHS GGC if the energy centre was retained?

A See Q64 I was also not made privy of any financial consequences if the energy centre was retained

d) What works were carried out to allow hand over of the energy centre to NHS GGC?

A I was not part of the handover process

e) The Inquiry is aware that energy centre was handover in around 2017, what works were carried out in order to allow this to happen?

A I am not aware of the works required.

70. Were any other parts of the hospital retained by Multiplex pending works being carried out? Why? What works required to be carried out prior to them being handed over?

A I was not part of the handover process

71. As at August 2015, were you aware of any other parts of the hospital being retained by Multiplex pending works being carried out? Why? What works required to be carried out prior to them being handed over?

A No, I was not aware of any parts of the hospital being retained by Multiplex

72. At the point of handover on 26th January 2015 how satisfied were you that all areas accepted by NHS GGC were designed to the intended specification and suitable for the intended patient cohort, meeting all the relevant guidance requirements?

A I was not part of the design team

73. If not, why were the wards handed over? Were any issues escalated to more senior management/ Board level? Please confirm.

A As above

<u>Asset Tagging</u>

74. Describe and detail asset tagging:

a) What is this?

A Process to give each asset a unique number to identify each so as to track maintenance data/history

b) Why is this important?

A It allows a history of maintenance/repairs of that asset to be recorded and tracked

c) Who was responsible?

A Main Contractor of any project is responsible to ensure this is carried out.

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

A Maintenance & repairs cannot be accurately carried out or recorded

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

A If the assets were not identified then this would be a concern although I was not involved at handover

f) From August 2015, what concerns, if any, did you have?

A I was concerned that if asset tagging had not taken place then there could be an issue with;

(a) The accuracy of any asset list which had been passed onto NHSGG&C as this could mean assets were not being maintained;

(b) Location of all assets is not known;

(c) What PPM (if any) was actually being carried out by either NHSGG&C, Multiplex or specialist contractors to support the hospital(s);

(d) What remedial works was being recorded against assets?

(e) Were there PPM schedules associated to assets put in place?

g) What concerns, if any, were escalated? If not, why not?

A These were escalated by Ian Powrie I believe, at that time

h) Tell me about any issues regarding asset tagging and how you managed this?

A There was no asset tagging in the QEUH/RHC hospitals. There were numerous meetings with representatives of Brookfield many months later to

try and resolve this. There was probably a gap of approx. 2 years before meetings were held with the contractor in an effort to address this issue.

75. Was there a contractual requirement to provide CAMF?

A I am not aware of the contractual details around this

a) What is the purpose of CAMF?

A CaFM System is a software platform to allow the management of planned and reactive maintenance of assets.

b) How does ZUTEC differ from CAMF?

A ZUTEC is a document library whilst a CaFM System is a software platform to allow the management of planned and reactive maintenance of assets.

c) Should both CAMF and ZUTEC have been provided at handover?

A In my opinion yes, however I was not privy to the contractual requirements

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

A I was not aware of the contractual requirements

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

A I was not aware of the contractual requirements

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

A I was not aware of the contractual requirements

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

a) Operation

A I was not aware of the contractual requirements

b) User suitability

A I was not aware of the contractual requirements

c) Any other matters

A I was not aware of the contractual requirements

Who was this reported to, what action was taken to remedy matters?

A I was not aware of the contractual requirements

77. Did your team or NHS IT develop a system for asset registration?

A Yes, FMFirst was used as it was currently being used across a number of other sites within NHSGG&C

a) If so, when and how long did it take following handover.

A This probably took in the region of 3.5/4 years after handover to implement

HEPA Filters

78. Were HEPA filters installed in the relevant rooms at handover (January 2015)?

A I was not aware of the design requirements

79. What issues, if any, were there with HEPA filters? **Refer to Estates Team Bundle, document 22.**

A I was not aware of the design requirements

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

A See 68 above

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

a) To what extent, if any, do you agree with Dr Gibson's statement above concerning HEPA filters?

A I was not aware of the design requirements

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

A I was not aware of the design requirements

c) What was the potential patient impact of the absence of HEPA filters?

A I was not aware of the design requirements

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

A I was not aware what was done as I was not part of the handover process

e) What filters should have been installed at handover?

A I was not aware of the design requirements

f) Dr Penelope Redding tells us in her statement that you said there was 'no request for HEPA filters to be inserted in Ward 2A':Is To what extent is Dr Redding's statement accurate? Explain your understanding of the position relating to insertion of HEPA filters in Ward 2A:

A This was not me as I was not aware of the design requirements

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

A I was not aware of the design requirements

h) Who signed off handover without HEPA filters being installed?

A I was not part of the handover board

i) Were infection control doctors and nurses consulted? If so, who?

A I was not part of the handover board

j) Why was handover signed off without HEPA filters?

A I was not part of the handover board

82. How many HEPA filters were missing, if any, from any other wards following handover?

A I was not part of the handover board

a) Discuss how this was managed follow Q55 above.

A I was not part of the handover board

Chilled Beams & Thermal Wheels

83. Tell me about your understanding of the use of chilled beams in areas where immune compromised patients are treated:

A A chilled beam is a convection heating & cooling system. These were installed throughout the new QEUH Adult & Children's Hospital. They were used to control the environment within a ward/single room area.

84. Tell me about your understanding at the time of the cleaning regimes in place for chilled beams? If you were not involved, with the benefit of hindsight should you have been?

A I was not involved as this was an operational estates task. I was not part of the operational management team so rightly I was not involved.

85. Can the witness recall any specific events in relation to chilled beams?

A I was aware that there were potential leaks from chilled beams due to operational issues which affected due points etc. I have attached the action plan from a Ward 6A IMT (dated 29/7/2019) – **Attachment 3** which refers to leaks from chilled beam which may help.

For example:

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

A I was not involved with this at that time so unaware.

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

A I was not involved with this at that time so unaware. However at a later stage I became made aware of situations which caused high condensation on pipework supplying the chilled beams which eventually leaked down into patient spaces. This was overcome by Darryl Conner (Estates Manager) working with Schneider controls around modification of dew point settings.

c) Ward 2A cubicles 8-11 refer to **Estates Team Bundle, document 106.**

A I was not involved with this at that time so unaware.

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

A I understand that these were taken to allow analysis of the ‘make up’ of the water within the Chilled Beam installation given there were leaks into a patient area. This was to ensure the chilled water was not contaminated

e) Leakage chilled beams Ward 6A refer to **Estates Team Bundle, document 138.**

A Darryl Connor was addressing these issues within operational estates and schneider controls (see 74b) above

f) Leakage chilled beams Ward 6A refer to **Estates Team Bundle, document 139.**

A A log of where and when there was leaks at the chilled beams was to be created by Darryl Connor.

g) Leakage chilled beams Ward 6A refer to **Estates Team Bundle, document 142.**

A I was aware that Darryl Connor was addressing these issues within operational estates and schneider controls (see 74b) above.

h) Any other issues/ incidents not mentioned above.

A Not that I am aware of or recollect

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) Were any external organisations approached to support and advise?

f) If so, what was the advice?

g) Was there opposing advice and by whom, and what was the advice?

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

i) Was the issue resolved – consider any ongoing aftercare/support/monitoring;

j) Any ongoing concerns 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.

Write your answers above in the relevant section.

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

A A Thermal Wheel is used within a ventilation system to pre-heat (or pre-cool) fresh air thereby also reducing energy consumption. This was a means of environmental control or comfort heating for patients]

87. To what extent can you recall any specific events in relation to thermal wheels?

A I cannot think of any specific event regarding a Thermal Wheel. There has been the conversation around whether a Thermal Wheel should be used in healthcare system due to the possibility of cross contamination through ‘leakage’ and this was shared with the AE(V). However, the AE(Ventilation), at

that time, shared information and evidence with the QEUH estates team that this was a very low risk and that it was probably unlikely and a very low risk that any ‘cross contamination’ would occur.

a) What was the issue?

A I understand the discussion was around potential ‘cross contamination’

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

A Given that there are thousands of Thermal Wheels with the QEUH/RHC Hospitals this could have been a significant issue

c) Who was involved?

A Discussions tool place, I believe, with Operational Estates Managers & Authorising Engineer (Ventilation)

d) What was the escalation process?

A There was no escalation as I understand the guidance given by the AE(V) de-escalated the issue

e) Were any external organisations approached to support and advise

A The Authorising Engineer (Ventilation) was approached for advice on thermal Wheels in ventilation systems

f) If so, what was the advice?

A See Q76 above

g) Was there opposing advice and by whom, and what was the advice?

A I understand there was no opposing advice

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

A There was no remedial action required to the existing Thermal wheel installation as the Authorising Engineer (Ventilation) gave guidance which de-escalated the issue.

i) Was the issue resolved – consider any ongoing aftercare/support/monitoring;

A See Q76 above

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

A Not that I am aware of

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

A Not that I am aware of

l) Did anyone sign off to say the work had been completed and issue resolved/area safe.

A Not that I am aware of

<u>Combined Heating and Power Unit</u>

88. Describe the Combined Heating and Power Unit (CHP)

A 3 x gas fired CHP Generators which generate electricity and waste heat to support the QEUH Campus

a) What is the purpose of the CHP?

A To generate electricity from gas through a turbine which will allow NHSGG&C to reduce the electricity consumption for the QEUH Campus from the grid. It also utilises the waste heat bi-product as part of the boilers heating regime.

b) What condition was the CHP in at handover?

A I was not part of the handover process so I cannot comment

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

A I was not part of the handover process so I cannot comment

89. Was commissioning and validation of the CHP carried out prior to handover?

A I was not part of the handover process so I cannot comment

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

A I was not part of the handover process so I cannot comment

Refer to **Estates Team Bundle, document p90**

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

A I was not part of the handover process so I cannot answer this question

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

A I was not part of the handover process so I cannot answer this question

90. Who was responsible for ensuring that the CHP was operating correctly?

A I was not part of the handover process so I cannot answer this question

91. To what extent could patients be impacted if the CHP was not operating correctly? If so, how? Refer to Estates Team Bundle, document p101

A There should be minimal impact as resilience is in place. Electricity would be drawn from the grid seamlessly and the boilers would provide sufficient heating & hot water.

92. What concerns, if any, did you raise about the CHP? If so, to whom, and what action was taken?

A I was not part of the handover process so I cannot answer this question

93. **Estates Team Bundle, document 17:**

d) What is meant by labs flushing?

A My interpretation of this was that the Lab Block water system had a flushing regime in place to ensure a continual movement of after through the system. This was a safeguard before the Lab Block Heating & DHWS Systems were connected to the QEUH/RHC Systems.

e) What issues, if any, arose from this?

A I am not aware of the end results

f) What is the importance of this?

A To prevent a contaminated system contaminating another

g) Discuss your knowledge of the reference to a ‘40 year old system’:

i) Explain what the 40 year system was:

A This, I understand, is a reference to connecting the INS Building (40 year old) to the Energy Centre (New)

ii) What was the issue(s)?

A The issue, as I understand, would be that there could be backward contamination of water from both the heating & dhws from the INS system back into the Energy Centre

iii) What was the potential impact?

A The potential impact is that the full heating & dhws system supplying the QEUH/RHC and Lab Block could become contaminated

iv) What actions, if any, were taken to address the issue(s)?

A I am not aware of what actions were put in place regarding connecting the INS to the Energy Centre. The only thing I am aware of is that it has, to this day, not happened.

94. What was your understanding of how the CHP should be operated?

A I don't have access to the design specification but most modern CHP's would be 'Thermal' led rather than 'Power' led.

95. Describe the difference between being thermal led and power led? What effect, if any, did that have on the operation of the CHP?

A a)Thermal Led CHP – In simplistic terms the operation is driven by the required heat of the building. This ensures that no heat is wasted and potentially exported to atmosphere.

b)Power Led CHP – In simplistic terms the CHP is driven by the energy/power requirements. Should the power requirements be less than the output of the CHP then the CHP will be controlled in a part load operation. As the CHP's at the QEUH are less than the power/energy requirements of the QEUH this will mean that they will operate at their maximum allowed load.

96. What were the cost considerations for the operation of the CHP? What considerations impacted on its operation?

A I do not have access to this information however over a period of time the control settings for the CHP were 'modified' and the CHP eventually became 'Power led' and remains so to this day

97. Please explain why the control settings were modified, what prompted this modification and who would have signed off on the modification?

A The control settings were modified to allow the CHP to become power led. This was, I believe prompted to maximise the output of the CHP and therefore minimise the amount of power NHSGG&C had to draw from the electricity grid. This would have been signed off by David Loudon.

98. How was the CHP system being operated by GGC?

A As 85 above

99. Please elaborate.

A I have answered this above as part of a clarification (90)

100. What operational issues, if any, were encountered by GGC with the CHP? Refer to Estates Team Bundle document 12.

A From recollection the return temperatures for the CHP from the hospital was too high which was impacting on the efficiency of the CHP. If the water return temperatures was high then the CHO could cut out.

101. **Refer to Estates Team Bundle document 16:**

a) Have you seen this before?

A I have seen similar documents but not this particular one

b) What is this document?

A This is a 'defect report' from NHSGG&C's CaFM system (i.e. FMFirst) around defects found at the QEUH campus

c) Column 274 – 'all CHPs cut out' – what does this mean? How would this have impacted patients?

A This statement tells me that the CHP's were not operational as all 3 CHP's had 'cut out'. This would have had no impact on patient care as electricity would have been taken from the grid (rather than generated by the CHP) automatically and seamlessly and heating would have been automatically and seamlessly taken from the boilers (rather than waste heat from the CHP

d) Refer to **Estates Team Bundle, document 36** what was the incident referred to? Were you involved? How was this matter resolved?

A I was not involved in this matter

102. **Refer to Estates Team Bundle, documents 19 & 20:**

d) Provide any information about any concerns you had in relation to the building temperature and power.

A I was not involved with the QEUH/RHC hospitals at this time

e) What was your involvement?

A As above

f) Was this recorded on Zutec?

A I am not aware what was held on Zutec

g) What was the impact of these issues on patient migration?

A I was not involved with the QEUH/RHC hospitals at this time

h) Were matters resolved? If so, how? If not, what was the consequence?

A I was not involved with the QEUH/RHC hospitals at this time

103. Refer to **Estates Team Bundle, document 91, page 754:**

a) Look at column 78 – what does debris within the AHUs mean?

A I have no idea what this means as I was not involved with the QEUH Campus at this time.

104. As estates manager you must know what debris within the AHU`s means. This part of the document pertains to July 2015, when you began your role at QEUH in August 2015 what awareness, if any, did you have of debris being found in the AHUs? What action was taken, if any, and by who to resolve this matter that you were aware of? If you had no awareness, had this issue been resolved by the time you commenced your role?

A Debris can mean many things from small particles to builders rubble which has been known to be found in ductwork. The risk here is that dirt/dust could get blown into the rooms at the end of the ductwork. In high risk areas this would be unlikely as additional filtration before entering the clinical space would provide the additional safeguard required.. I note the date is July 2015. I was not involved in this project at that time or involved in assisting to resolve any of these defects. I have not seen this list before.

a) What would you expect to see within AHUs?

A The internals to AHU's should all be spotlessly clean, especially new or unused AHU

b) What was the impact of debris on the AHUs?

A Debris can be picked up by the ventilation system and moved through ductwork. If there are no filters at the end of a ventilation system then debris will come out of external grills into the space below.

c) How was this matter resolved?

A I have no idea how this was resolved as I was not involved with the QEUH Campus at this time

105. What happened in respect of Zurich?

A Zurich were NHSGG&C's Insurance provider at that time but I have no idea what this question relates to.

106. Refer to **Estates Team Bundle document 113:**

a) What is this?

A This is a Supervisors Final Defect Certificate for the project

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

A I was not part of the project Team so I do not know.

c) What was the consequence of this?

A I was not part of the project Team so I do not know

d) On what basis did Multiplex carry out the work?

A I was not part of the project Team so I do not know

107. Refer to **Estates Team Bundle, document 135:**

a) Please explain what this email was about.

A This looks like an e-mail requesting payment of retention monies.

b) Was the money released or not?

A I was not part of the project or handover Team so I do not know

Water Guidance and Obligations

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

A Approved Code of Practice L8:2013, HSG 274 parts 1-3 & SHTM04-01. I was not part of Project Team.

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

A This would be the responsibility of Operational Estates Team

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

A At handover I was not aware of what water training had been carried out.

a) When you commenced your role in August 2015, what water safety training was provided to all maintenance staff, estates officers and contractors?

A Since 2016 onwards, with the creation of the compliance team, there has been a water compliance manager in place. One of the duties of the water compliance manager was to work with the operational estates teams across NHSGG&C to identify what training was required to support estates managers and staff who would be required to carry out their responsibilities on water management. This was predominately to support Authorised Persons (Water), Competent Person (Water) & Responsible Persons (Water). Any contractors who worked on water systems across NHSHH&C were informed about the courses they needed to attend before they could carry out work on water

systems. If contractors were awarded any work on water systems across NHSGG&C (including QEUH) then they would need to have the relevant training in place and would then be required to be assessed and appointed as a CP(Water) by the respective NHSGG&C AP(Water) for the site in question

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

A Although I was not part of the project or handover teams I fully understood the requirements for water safety to comply with Approved Code of Practice L8:2013, HSG 274 parts 1-3 & SHTM04-01.

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

A At handover I was not aware of what water training had been carried out.

a) From the point of commencing your role in August 2015 what legionella training was provided to all maintenance state, estates officers and contractors?

A See Q100A above and below.
Legionella and Water Hygiene Control within Hot & Cold Water Systems SHTM04-01 (City & Guilds Assured (WHS03))
Legionella Management for Water Systems SHTM04-01 (City & Guilds Assured (WHS01))
Legionella Control Refresher and Update (City & Guilds Assured (WH007)
Level 3 Legionella Control for Responsible Persons (RQF)

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

A At handover I was not aware of what water training had been carried out.

a) From the point of commencing your role in August 2015 what water borne pathogens (other than legionella) training was provided to all maintenance staff, estate officers and contractors?

A None

114. Who was the Dutyholder?

A I was not part of the project or handover teams. Once handed over the dutyholder would have been NHSGG&C CEO at that time

115. Were you aware 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 I am aware of these requirements however I was not part of the project or handover teams so I cannot answer who was appointed to these roles.

a) Following commencement of your role in August 2015, what appointments were occupied in respect of water, who was responsible for ensuring these appointments?

A The following AP(W) appointments have been made;

	AP Appointment by	Appointment covering period
Melville MacMillan		31/05/18 to 30/05/21
		31/05/21 to 30/05/22
	Alan Gallacher	31/05/24 to 30/05/27
Darren Hopkins		24/08/18 to 24/08/21
	Alan Gallacher	23/03/23 to 22/03/26
Kerr Clarkson		24/08/18 to 24/08/21
	Alan Gallacher	15/07/22 to 14/07/25
Frank Green	Alan Gallacher	01/02/19 to 01/02/22
Scott Macer	Alan Gallacher	15/02/19 to 14/02/22
Daniel Martin	Alan Gallacher	22/07/22 to 21/07/25
William Fenn	Alan Gallacher	22/07/22 to 21/07/25
John Hetherton	Alan Gallacher	24/08/23 to 23/08/26

Grant Bennett	Alan Gallacher	15/07/22 to 14/07/25
Ryan Ogilvie	Alan Gallacher	24/04/24 to 23/04/27

It is the responsibility of the QEUH Site Manager Operational Estates (SMOE) to nominate to the Compliance Manager (Water), any staff who are to become Authorised Persons (Water). Training is then put in place for these staff by the Compliance Manager and, after successful completion of training, are then assessed by the AE(Water) on their competence to become an AP(Water) for the site. Once successfully assessed by the AE(Water) the Compliance Manager (Water) is then informed by the AE(Water) who then informs the Head of Corporate Estates. The Head of Corporate Estates then appoints the individual in writing as an AP(Water).

b) What steps did you take to ensure that these appointments were filled?

A As above

c) What training and qualifications were required in respect of these appointments?

A See Q102A above

116. Commissioning of water system prior to handover/ patient migration to QEUH:

a) Requirements

A I was not part of the project or handover teams

b) Who was responsible for this?

A See a) above

c) What checks were carried out to ensure that the water system had been commissioned. Refer to **Estates Team Bundle, document 132.**

A I was not part of the project or handover teams

d) Was SEPA/ the Water Board involved? Describe their role and involvement.

A I was not part of the project or handover teams

e) Which teams (such as infection control) were involved in the water system sign off, Who would have signed it off on behalf of those teams?

A I was not part of the project or handover teams

f) Were L8 testing requirements complied with?

A I was not part of the project or handover teams

g) Were there any legionella concerns at handover? Is so, what was done to deal with these?

A I was not part of the project or handover teams

h) What concerns, if any, did you have about water sitting in the system before the hospital opened?

A I was not part of the project or handover teams

i) Were you aware of any issues with the testing of the water system?

A I was not part of the project or handover teams

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

A I was not part of the project or handover teams

k) 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 was not part of the project or handover teams

117. Was a pre-occupation water test done prior to occupation? **Refer to Estates Team Bundle, documents 14, 14.1, 14.2:**

A I was not part of the project or handover team, however if this question relates to a 'Pre-Occupation Water Risk Assessment then the answer is yes as this was found in 2017

a) Who carried this out?

A If a) above is yes then this was carried out by DMA

b) If this was not done, should it have been done and why?

A Yes, a pre-occupation Water Risk Assessment should have been carried out to ensure the water system was safe for patients

c) Consequences of not doing it.

A The water system could be non-compliant which would bring a risk to immunocompromised patients.

d) What risks assessments were carried out pre-occupation in respect of the water system?

A See 102 above

e) If these were not done, should they have been? What were the consequences? What further action did you take?

A Yes, a pre-occupation Water Risk Assessment should have been carried out

118. What was the post occupation water testing regime at QEUH?

a) Who carried this out?

A I was not part of the project or handover team so I cannot answer this.

b) From commencing your role in August 2015, who carried out the regular water testing? What responsibilities, if any, did you have in your role as Estates Manager, and in your role as Authorised Person to ensure that this was

carried out? How did you ensure that this was carried out to an appropriate standard? What concerns, if any, did you have regarding the water testing regime, during your time at QEUH?

A I don't know who, if anybody, carried out water testing at QEUH from 2015, however latterly DMA canyon have been involved with Operational Estates about regular water testing in areas of high risk.
The responsibilities to ensure this happened sat with the Estates Operational Team and the management in place at that time.

c) Who carried out testing?

A I was not part of the project or handover team so I cannot answer this

d) Please consider the question from the period of your appointment at QEHU.

A See 103 B b) above

e) Your involvement with the testing?

A I was not part of the project or handover team so I cannot answer this

f) Please consider the question from the period of your appointment at QEHU.

A I have no involvement in testing as this is an estates operational responsibility should it be required

g) How frequent was testing?

A I was not part of the project or handover team so I cannot answer this.

h) During your time at QEUH, how frequent was testing? What concerns, if any did you have regarding the frequency of testing?

A I have no involvement in testing as this is an estates operational responsibility should it be required

i) Did this comply with L8 and SHTM 04-01 guidance? If not, why not?

A I was not part of the project or handover team so I cannot answer this

j) Please consider the question from the period of your appointment at QEHU.

A I have no involvement in testing as this is an estates operational responsibility should it be required

k) What happened to the results?

A I was not part of the project team

l) Please consider the question from the period of your appointment at QEHU. Your role in connection with the results of water testing?

A I was not part of the project or handover team so I cannot answer this

l) Please consider the question from the period of your appointment at QEHU.

A My answer remains the same. I have no involvement in testing as this is an estates operational responsibility should it be required

m) Where were the results stored?

A I was not part of the project or handover team so I cannot answer this

n) Please consider the question from the period of your appointment at QEHU.

A My answer remains the same. I have no involvement in testing as this is an estates operational responsibility should it be required

o) What action was taken in response to results?

A I was not part of the project or handover team so I cannot answer this

p**)** Please consider the question from the period of your appointment at QEHU.

A My answer remains the same. I have no involvement in testing as this is an estates operational responsibility should it be required

q) Was there an escalation process? How was non-compliance managed?

A I was not part of the project or handover team so I cannot answer this

r) Please consider the question from the period of your appointment at QEHU.

A My answer remains the same. I have no involvement in testing as this is an estates operational responsibility should it be required

119. We understand that there were positive legionella results in Ward 2A in around June 2015.

a) What concerns did you have about the positive legionella results?

A I was not aware of this as I was still based at RAH Paisley

b) What action was taken in response to this?

A I was not aware of this as I was still based at RAH Paisley

c) Were you aware of legionella being found in any other areas of the hospital? If so, where, and what action was taken?

A I was not aware of this as I was still based at RAH Paisley

120. In around June 2015 Dr Christine Peters requested the risk assessment for waterborne infection in the QEUH from Estates, the Project Team and Mary Anne Kane. Were you aware of this request? If so, did you provide this information? If not, why not? why?

A I was not aware of this request a I was still based at RAH Paisley

121. How many positive tests, if any, came from Ward 4B? Could you recall how many positive tests at the time?

A I was not part of this project

<u>Water - Commissioning and Validation (C&V)</u>

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

A I was not part of the design team or handover process

123. In your role as Authorised Person did you ever have sight of C&V documentation pertaining to the water system at handover? If not, why not? How were you assured in August 2015 that all of the appropriate C&V had been carried out?

A I was never an Authorised Person. This question should be directed to the Project/Handover Team. Thereafter it would be the responsibility of the Estates Operational Team to ensure this was in place.

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

A ZUTEC

125. What is the purpose of C&V?

A Commissioning is required to ensure equipment is installed, tested and operated to the original design specification; Validation is to ensure the system is consistent to operate to the required healthcare documentation. In this case SHTM's

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

A The equipment/system will not perform to the required design specification or healthcare documentation

127. 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 was not made aware of this information

128. What would your reaction have been if you had found out the water system had no C&V before handover in 2015? Why were you concerned?

A I would have been concerned about the performance of the system especially as this was an acute hospital

129. Please respond to the above question in respect of verification and the cold-water supply system respectively.

A I would have been concerned about the performance of the cold water supply system especially as this was an acute hospital

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

A I was not made aware of this information

a) Who was responsible?

A I was not made aware of this information]

b) Was it within your remit as Estates Manager to ensure that regular C&V was being carried out?

A Commissioning of a water system to the design happens only once and that is at pre-handover. Water systems are not validated or verified. Only after a major change to an existing water system is it re-commissioned to the revised design.

c) How was the C&V recorded?

A I was not made aware of this information]

d) What concerns if any did you have arising from post-handover C&V? If so, why did these concerns arise?

A I was not made aware of this information

Water System – General

131. 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 I was not made aware of this information. A full commissioning & PPM schedule for water asset management should have been in place. I have no idea why it was not in place

132. 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 was not part of the project or handover team so I cannot answer this question.

133. From the point of commencing your role at QEUH 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 There were some concerns around water temperatures across the QEUH and that was flagged up in the DMA 2015 Water Risk Assessment which only came to light late 2017, however the monitoring and recording of this information was an operational responsibility of estates and schneider, I don't have the required information as to how this was monitored and reported up the management chain.

134. 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 was not part of the project or handover team so I cannot answer this question.

135. From when you became involved, did you have any concerns?

A I was not involved in this

136. 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 was not part of the project or handover team so I cannot answer this question.

137. From when you became involved, did you have any concerns?

A I cannot answer this question as I was not involved enough to know the issues.

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

A I am not a water system designer so I cannot answer this question

139. To what extent would the installed 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 was not part of the project or handover team so I cannot answer this question

140. Whilst you were not part of the project team you became involved in QEUH in around August 2015, at the time you became involved in QEUH please confirm whether the installed 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. What issues, if any, were you aware of in respect to the water system achieving its objectives?

A I did not become involved in the QEUH in August 2015. I took the boardwide position of General Manager (Estates) which had strategic boardwide responsibilities. The issues with the new QEUH still sat with the Operational Team.

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

a) Detail the individual ward water specification

b) What were/ are your thoughts about this

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

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

A I was not part of the project or handover team so I cannot answer this question

142. This question is not specific to handover, so please answer having regard to the time when you became involved at QEUH.

A I still cannot answer the question as I do not have the information. This is an Estates Operational Responsibility.

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

A I was not part of the project or handover team so I cannot answer this question.

144**.** This is not specific to handover so please consider from the point of your involvement.

A I have not been involved in the sanitisation of the QEUH Water System, however all new water systems across NHSGG&C are sanitised before taking into use by NHSGG&C. I would have expected the QEUH to be no different

145. Were consultants brought in 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 [a) Water Solutions Group b) No; c) A whole new sterilisation/disinfection system was installed at the QEUH/RHC at a significant investment of over £1.5m d) I understand this was recommended to the BWSG for approval e) Yes, I believe the water system within the QEUH/RHC is of the highest quality across NHS in UK f) All paperwork is, I believe, held by operational estates management who also have access to the maintenance contractors on-line portal so electronic copies are available. This paperwork is audited regularly G) Both paper and electronic copies are available h) This work was sub contracted to a specialist contractor. I) I understand Electronic reports are generated on a weekly/monthly requirement

<u>Water Maintenance</u>

Refer to Estates Team Bundle, document 10.

146. 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 The maintenance regime should follow SHTM04-01 Part B requirements. The cleaning regime should follow the respective healthcare cleaning regime.

b) What is the importance of this?

A This will ensure the water system is compliant to this healthcare guidance document

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

A This was the responsibility of the Operational Estates Team after handover and the major contractor prior to handover

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

A I was not part of the project team or handover Team at that time.

e) Please confirm your role, if any, from your time at QEUH to execute responsibilities in respect of cleaning and maintenance of the water system, taps, drains, shower heads etc.

A I had no responsibilities in respect of cleaning and maintenance of the water system, taps, drains, shower heads etc. this sat with Operational Estates.

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

A See d) above

g) Please consider the above question from the point your involvement began at QEUH.

A The answer supplied at e) above is still pertinent. I had no responsibilities.

h) Were there ever concerns raised about cleaning practices? IMT bundle, document 22. Detail these concerns. Refer to **NHS GGC SBAR Bundle, page 112** when providing your answer.

A I cannot recollect if any concerns were raised.

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

A I am not aware that these issues were escalated to anybody other than the WTG

j) What is dosing?

A Dosing is a means of introducing chemicals to the water system to improve quality

k) Why was chlorine dioxide used in the cleaning regime. **IMT bundle, document 30.**

A Chlorine Dioxide is a tried and tested disinfectant for this type of cleaning. It is well used within healthcare.

l) 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 The drains were cleaned but the whole nature of drains would mean that there could be further build-up of contamination even after they were cleaned.

m) What happened in response to concerns about on-going maintenance and cleaning? What further action did you take personally? For example taps, refer to **Estates Team Bundle, document 121**.

A Document 121 give little information about what the issue is so I cannot answer this question.

n**)** In general, what happened in response to concerns about on-going maintenance and cleaning? What further action did you take personally? For example taps?

A This is an Estates Operational responsibility for which I cannot answer.

o) What further steps could have been undertaken?

A See k) above

147. 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 I understand that the drain survey was agreed at either the Water Technical Group or the Board Water Safety Group, I cannot remember accurately which one.

148. What were the results of the drain survey?

A The Intertek report identified evidence of solid contamination in the drain trap from Ward 3C along with other debris (clumps of hair, piece of plastic film etc). Microbiological assessment of the debris was not deemed possible due to the expected high levels. Ward 3A on the other hand showed little or no contamination. This highlighted the non-standard potential contamination of drains across the QEUH A&C as the use of the sinks were potentially the major factor here.

149. 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 Debris and 2 sponges were found in water tanks and this was reported back in the Intertek Report dated July 2018. The debris had a large biofilm presence as did the 2 sponges. Given the size of the water system it is debatable about what impact this would have had on the water quality given that any potential contamination would have been dissipated by the volume of water in the system

150. 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 really don't have an opinion on this. So long as the water system is compliant then this should not be an issue.

b) Ensuite bathrooms attached to each room

A I really don't have an opinion on this. So long as the water system is compliant then this should not be an issue.

c) Overprovision of water outlets leading to sink removals

A There is guidance around number of water outlets against number of patients. Overprovision can result in the underutilisation of water and water outlets.

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

A This was, if I remember correctly, a decision endorsed by the Board Water Safety Group.

152. Who was responsible for the effective management of and installation of the point of use filters?

A Operational Estates along with approved contractors installed PoU Filters. This would have been overseen by Operational Estates Manager delegated to do so.

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

A The PoU Filters (i.e. PALL Filters) were the approved filter and complied with regulations

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

A As I understand it all engineering solutions were being investigated and discounted before PoUs were then introduced

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

A The PoU Filters were being replaced as per manufacturers recommendations (every 30 days). This was a strictly imposed regime that I can recollect

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

A Decisions around water testing were taken by the Board Water safety Group with significant input and agreement/advice from Infection Control & the Microbiologist Consultant.

157. If not, who was responsible for these?

A See 131 above

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

A SHTM04-01 does not recommend that water testing should be carried out. However certain circumstances within healthcare determine when testing should be carried out; i.e. failure of water temperature control; areas of a water system where historically there are low temperatures; certain parts of hospitals where there is a high risk patient group.

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

a) What is your reaction to this statement?

A I was not aware of this statement, and I am surprised that this was said given the high visibility around water at that time

b) Why did estates direct that microbiologists should not have access to water testing results?

A I have no idea why and have no recollection of this

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

A No

d) Have you ever refused, or directed others to refuse to provide water testing information requested by microbiologists or infection control? If so, why? Provide as much information for your rationale and the consequences of withholding information.

A No

e) Provide information on how you dealt with requests for water testing results from microbiologists and infection control - was all the information requested provided? If so, what was provided? If not, why was paperwork not provided?

A I was not involved operationally so I would not provide this information. That would come from others (i.e. operational estates)

f) What legal and regulation requirements must be complied with to carry out regular water testing?

A There is no legal requirement to carry out water testing that I am aware of, apart from if you were a water supplier (i.e. Scottish water)

g) What situations would water testing not be carried out?

A There is no legal requirement however testing can be carried out when requested and if required

h) What are the consequences of regular water testing being carried out?

A Water quality can be proven (good or bad) which can impact on patient safety

i) Dr Christine Peters tells us that in April 2016 water testing results or ARU2 were not available. To what extent is this accurate? If it is accurate, why were results not available, and should they have been?

A I am not aware of this

160. Both Dr Penelope Redding and [redacted] tell us that they asked for information which was not forthcoming. To what extent do you agree with their recollection of events? If you agree, why was testing information not provided to clinical staff, microbiologists and infection control?

a) Who was responsible for dealing with these requests for information?

A I was not aware of this

b) What was your role in dealing with these requests for information?

A I was not involved

c) How were these requests for information managed by your department? What steps did you take?

A See a) above

d) What concerns, if any, did you have with how matters were being handled? If so, what steps did you take in response to these concerns?

A See a) above

DMA Canyon Reports

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

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

A Yes

162. Who ordered this?

A Ian Powrie

163. Who signed off on payment?

A I understand it would have been Ian Powrie

164. How was this signed off or payment processed?

A I do not know or have this information

165. Who was the report sent to?

A I do not know or have this information

166. When did you first become aware of the DMA Cayon 2015 report?

A I was informed by Mary-Anne Kane mid 2017

167. What was the purpose of the report?

A As part of SHTM04-01 there is a requirement to produce a Pre-Occupancy Water Risk Assessment to identify any issues/non-conformances and to ensure the water system is safe for use

168. Who had the report?

A I understand this was held by Ian Powrie

169. When Were DMA Canyon present at QEUH/RHC site between 2015 and 2018?

A I am only aware of DMA canyon being on site to carry out the 2015 & 2017 Water RA's

170. 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 cannot recollect.

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

A I understand they were not actioned until a 2017 Water RA had been received which highlighted that a number of actions within the 2015 Report were still outstanding.

172. Did this come as a surprise to you? What concerns at the time, if any, did you have regarding the lack of action of the 2015 report?

A Given the individual who commissioned and received the pre- occupation Water Risk Assessment this did come as a surprise. The lack of action could potentially have an impact on water quality.

173. Were you aware of Ian Powrie creating an Action Plan?

A I was not aware of an action plan being produced

(a) If yes, when were you made aware of the Action Plan?

A See above

(b) Who was tasked with carrying out the work in the Action Plan?

A See above

(c) When was the work from the Action Plan carried out?

A See above

174. What is your own view of the findings of the 2015 report? Do you agree with it or not? Explain your rationale.

A Given that there was a 2 year window between when the 2015 Water RA was produced and when I got visibility of it, I do not have an opinion on the accuracy of the 2015 Water RA.

175. When you first became aware of the 2015 DMA Canyon Report, what action did you take (1) in terms of sharing the findings of the report, and (2) in terms of instructing that work be carried out following the report?

A (1) I did not share the report (2) I did not instruct any work as this action sat with Operational Estates Team

176. 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 do not know what works were carried out as this was an 'operational team' delivery

177. What happened with DMA Canyon in 2017 – discuss and provide 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 The actions from the 2017 Water RA would have been taken forward by the Operational Estates Team. I became involved at a much later date (2020) when I was asked to review the content of the report as there was concerns around some inaccuracies around 'risk categorisation' and some technical inaccuracies also. I was tasked to pull together a review group and review accordingly. I attach a copy of my report

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

A There were a number of recommendations within the 2015 Water RA which would need to have been assessed and if high risk should have been actioned urgently to minimise the risk to patients

179. 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 cannot answer this question as I do not know.

180. 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 I was not part of the design or handover team so I cannot answer this question.

181**.** What responsibility, if any, did you have to ensure that upon commencing your role at QEUH that the appropriate risk assessment had been carried out?

A These duties sat firmly with the Operational Estates Team. There was no compliance team in place at the time of the QEUH period of handover.

182. 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.'*
Do you recall being asked for this information? Did you provide the information requested? If so when and by what means? If not why not?

A I do not recall this being asked

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:

183. What was your understanding of this incident?

A I was not aware of this incident

184. What was your involvement with this matter?

A I was not involved in this incident

185. What action did anyone take in relation to this incident?

A I was not involved in this incident

186. Do you recall any further issues in relation to sinks? If so please discuss, confirming your involvement and action taken in response to any issues.

A I do not recall any further issues with sinks.

Water Incident 2018

187. 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 The water quality incident plan pulled together for the WTG was very detailed and looks at all areas where there was a risk associated with water quality. This only part of this plan that I am aware of which was not actioned was the 'shock dosing' as this was found not to be needed once the introduction of Chlorine Dioxide improved the water quality substantially. This is added as **Attachment 8**

188. 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 An IMT was called due to patient contracting Cupriavidus. Routine water testing identified the presence of the organism.

(ii) When did it begin?

A I understand it was end January 2018

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

A An IMT was called due to patient contracting Cupriavidus. Routine water testing thereafter identified the presence of the organism

(iv) What was your involvement?

A I was part of the IMT 3 or 4 weeks later.

(v) Please describe what you took, what role and responsibilities you had in respect of dealing this this matter? Did you have any concerns with how matters were managed at the time?

A I was involved to support the delivery of a plan around position of taps and showers in ward 2A. the IMT was pro-active in the actions being discussed.

(vi) What enquiries 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 The issue of Taps was discussed in detail at several of the IMT's for Ward 2A. As I understand it the final outcome being that all Taps within Ward 2A were changed along with other sanitary ware. This was led by Ian Powrie

b) **Refer to IMT bundle, document 16:**
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 The meeting minutes confirmed actions as follows: 1 – all shower heads to be taken to microbiology for testing; 2 – Portable Clinical Wash Hand Basins would be put in each room by the following morning (13/3/2018); 3 – A detailed plan outlining the situation of each tap and shower head would be pulled together; 4 – Once all taps had been replaced then a full chemical clean would be carried out and retesting of taps would commence.

c) **Refer to IMT bundle, document 17:**

(i) Your involvement and what measures were taken?

A As I recollect all actions were delivered by the operational estates team

(ii) Did you discuss this with David Loudon?

A I have no recollection if this was discussed with David Loudon

(iii) Do you recall anything about how matters were managed?

A I do not recall how matters were managed

(iv) How were costs managed?

A I have no recollection on how costs were managed

(v) Who carried out the work?

A I have no recollection on who carried out what works but it was managed by Operational estates Team in most cases

(vi) How was this reported and managed?

A As I recollect, everything was reported back to the IMT

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

A This would have been a joint decision made at the IMT but primarily led by Infection Control Team

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 The meeting minutes confirmed actions as follows: 1- The infection control team will look into the list of patients from Liz Chalmers currently on Ward 2A and ward 3C; 2 – Infection control measures are to stay in place until results from water outlets fitted with the filters have come back negative and Dr

Inkster is pleased that the filters are working; 3 – Dr Inkster will speak to concerned parents of patient in PICU; 4- A list of immunocompromised patients who are currently an inpatient at the RHC will be compiled so that the same control measures can be implemented for these patients throughout the hospital; 5 – Susie Dodds and Mary-Anne Kane will identify all items domestics commonly use throughout RHC and QEUH. I had no involvement in any of these actions.

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

A Being non clinical I cannot comment on this

(iii) Did you, in your role, have any concerns about Stenotrophomonas impacting patient safety?

A I did not know what Stenotrophomonas was or what impact it could have on individuals/patients.

(iv) Refer to **Estates Team 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 cannot recollect if this was linked to the IMT

(v) What was the issue that required urgent attention in respect of flow straightener? Were you aware of this at the time? If not, why not? With the benefit of hindsight, is this something that, in your role as General Manager, that you should have been aware of?

A My recollection of this was the Horne Taps fitted within Ward 2A and the flow straighteners fitted to these taps. This area was classed as ‘High Risk’ and the potential issue with having these on taps in high risk areas. I was not privy to the outcome between Mary Anne Kane and Annette Rankin that I can recollect.

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?

A Water Filters are not supplied on taps. It is expected that the water quality being supplied fully complies with legislation.

(ii) This being the case, why then were water filters fitted to the taps? Why did this responsibility fall to QEUH staff, if the water being supplied is to fully comply with legislation? What was the reason for the filters being fitted?

A Water filters were fitted to the taps because after water testing of specific water outlets it was found that the water quality had high counts of various bacteria in it. This fell to QEUH staff as the water system had been handed over to NHSGG&C.

(iii) What do you know about the dosing of the system with silver nitrate? How did this discussion come about?

A I cannot recollect as to why the system was dosed with silver nitrate and not another chemical.

f) **Refer to IMT bundle, document 20:**

(i) This was scored HAIIT red – why?

A This is a clinical decision and follows the Infection Incident Assessment Tool (HIIAT) which is used by the IPCT & HPT to assess every healthcare infection incident.

(ii) What were the concerns?

A I understand the concerns were major around public anxiety & significant media interest

(iii) You were asked to look at the historical water results during the commissioning of QEUH/RHC, what did you find out as a result? What concerns, if any, did the historical water results raise?

A This was not an action placed on myself

(iv) You were emailed on 26th March 2018 – **(see Estates Team Bundle, document 124)** by Mary Anne Kane seeking information regarding the commissioning – what response did you send? What did you do in response to this?

A I cannot recollect exactly what was sent however I do recollect that commissioning information was sent to Shiona Frew as requested

(v) What was discussed at the next IMT in relation to commissioning? If not, why not?

A I cannot recollect if this was discussed at the next IMT

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

A Document 125 was around block sinks/showers within Ward 2A and to get an understanding of how many we had within ward at any one time and whether this could contribute to water contamination. This showed that it was working out at 5 blockages a month. Document 133 was a summary e-mail about the measures we were carrying out at QEUH to manage the water incident.

190. Describe any other issues or matters arising from the water incident:

A This issues are well documented and I have nothing else to raise.

191. In her evidence Phyllis Urquart states that she was informed by you that there was a Water Safety Plan in place which reflected the entire picture of all water documentation within GG&C , but there was no sole document that she was aware of titled ‘Water Safety Plan’. Please confirm if there was such a document, who was responsible of the provision of a Water Safety Plan. If

there was no such document, why not? What was the potential impact, if any, of there not being such a document in place?

A I don't know the period you are referring to or if it is just for the QUEH, however each site across NHSGG&C has a Water Safety Plan (WSP). This is the responsibility of the Site Manager Operational Estates (SMOE) and consists of the following:

- NHSGG&C Water Safety Policy;
- Site Water Written Scheme;
- Site Water Risk Assessment;
- Site Water Schematics;
- Site Authorising Engineer Audit;
- Site Control measures (this includes testing & sampling);
- Site Water Emergency Plans;
- Board & Site Specific SoPs to support Water Safety;
- Planned Maintenance Schedules for Water;
- Site Logbooks

Prior to 2018 it is unlikely all these documents were in place

T<u>aps</u>

192. 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 Horne Taps were specified within the initial new hospital build. They are a thermostatic mixing tap which mixes hot & cold water.

b) Who authorised the use of Horne taps?

A This was included as part of the hospital design. I am aware that HFS at the time were also contacted about potential concerns (by Ian Powrie) and that they were happy with the proposed Tap

c) Why were Horne taps selected?

A See b) above

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

A I was not involved with the final decision to install Horne Taps at the QEUH/RHC

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

A I am aware that there was some early concerns raised by Ian Powrie (specifically around flow straighteners) but I'm led to believe that with the support of HFS at the time they were to be installed.

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

A No

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

A I was not aware of the NI incidents. I did not make the decision to install Horne Taps

h) In her statement Dr Teresa Inkster tells us that following the 2014 taps SBAR a meeting took place *'which was chaired by Ian Stewart from HFS and attended by Lisa Ritchie, Jimmy Walker, Ian Storer, Ian Powrie, and Alan Gallagher from the Board, is that the tap manufacturers (Angus Horne and John Horne of Horne Engineering) were allowed to be present at a meeting at*

which they were risk assessing patient safety in light of the issues with Horne Engineering's product'.

To what extent did this meeting influence the decision to use Horne Taps? Please explain you recollection of the meeting, and any actions taken following the meeting and the extent of your involvement:

A The meeting took place to get a better understanding of the Horne tap and its functionality. Discussion also took place around the requirement to chemically sanitise the water and its impact on the Horne Taps as within their literature it mentioned that the taps should not be chemically sanitised. It also allowed NHSGG&C to bring the contents of Mary Anne Kane's e-mail dated 9 April 2018 around asking questions about copper/metal outlet, heat sterilisation as against chemical sterilisation, biofilm & PoU filters. This meeting did not influence the use of Horne Taps as this had already been decided.

i) At that meeting, what risk assessment took place, what mitigation was put in place following the meeting? Describe your understanding of the issues raised with Horne taps at this meeting. What action, if any, did you take following this meeting?

A No risk assessment was carried out. Discussion also took place around the requirement to chemically sanitise the water and its impact on the Horne Taps as within their literature it mentioned that the taps should not be chemically sanitised. It also allowed NHSGG&C to bring the contents of Mary Anne Kane's e-mail dated 9 April to them. Details and answer are given in Q m) below.

j) Discuss **Estates Team Bundle, document 121** explain the situation and your involvement. Here re CP and Horne taps - check

A As General Manager (Estates) I was now required to get involved with the QEUH/RHC as it had now been handed over and there were issues appearing. Colin Purdon was the Estates Site Manager tasked to be involved. He was supplying HFS with relevant information and pictures around the Horne Taps.

k) Specifically what action did you take and why?

A Document 121 is unclear as to its content.

l) **Refer to Estates Team Bundle, documents 127 and 128** explain the situation and your involvement.

A In Mary Anne Kanes absence I stood in for her at this meeting in an effort to get more information from Horne about their taps and their specification.

m**)** Please describe the information you gained from the meeting and actions taken as a result.

A Questions asked at the meeting were as follows:

Q - Do Horne have a copper/metal tap outlet – plastic seems unsatisfactory when we know many gram negative organisms “love Plastic” ?

A - The answer to this was yes there was a ‘straight through’ flow straightener available. This was considered as a potential option across the QEUH/RHC especially in ‘high risk areas’, however, subsequently all ‘high risk areas’ now have PoU filters in place and the remainder of the QEUH/RHC have the existing flow straighteners have remained on the taps and are replaced quarterly.

Q -The potential implementation of the patent seen on Friday – would this really address the ongoing challenges on site? – don’t think hot water disinfection would address biofilm build up –

A - This was specifically around a Horne attachment for Thermal disinfection of the taps. There was concern at NHSGG&C that this could introduce a risk to the patients as it would require taps to be removed and replaced within the clinical space which could introduce an infection control risk. There was also a fear that the thermal disinfection would not completely remove any biofilm. This was subsequently not implemented.

Q - How do we address heat sterilisation in the risers separate from the taps?

A - This would need to be actioned locally by NHSGG&C as this was not part of a Tap question. The tap, in their opinion would need to be removed, thermally sterilised, and then replaced.

Q - Do we know if we have biofilm build up in the system ? How do we find out ? Obviously we know it's in the taps – that visibly obvious but what about further back in the system?
A - They could not answer this question.

Q - How long would we need to keep POU Filters in place for after we have thoroughly chemically and thermally disinfected the system ? Obviously we would be stirring this up so there will be elevated counts until that's "flushed away"
A - his was a general question and the answer, to my recollection, was that only after regular replacement of PoU filters could we get to a position where the counts were acceptable.

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

A Ian Powrie had raised concerns around the flow straighteners during construction but then a detailed Risk Assessment had been carried out with included HFS/HPS/DOH/ICT & Estates which allowed the Horne Taps with the flow straighteners continue to be installed.

o) What testing did you carry out or assist with in high risk areas?

A This statement in the IMT was more around the definition of what a High Risk Area was and not specific to testing in a high risk area

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

A Marwick 21+ taps were installed. These were replaced as after significant investigations they were found to be compliant to the SHTM.

Water Technical Group

Refer to the Water Technical Group Bundle:

193. The water technical group (WTG) sat between 2018 and 2019. **Estates Team Bundle, page 938:**

a) What is the purpose of WTG?

A The main purpose of the WTG was to look at technical issues around water & water management at the QEUH/RHC and to propose solutions which would overcome these technical issues

b) What issue/ event prompted the setting up of the WTG?

A If I recall correctly this was mainly due to a combination of water quality issues ranging from legionella results to potentially installation of PALL filters was a major driver around a WTG being set up.

c) What was your involvement with the WTG?

A I was a member of the group.

d) Detail specific work which you carried out in respect of your involvement with WTG, why did you carry out this work, what was the impact? **Estates Team Bundle, page 939**

A I was tasked to review the initial enhanced 3 state ClO2 action plan (developed by Ian Powrie) to fully dose the water system across the QUUH/RHC Hospitals should it be needed and pull together a plan to

implement across the respective wards. These documents are attached as **Attachments 4 & 5**

e) Was this within your remit within estates?

A As a senior manager I understood it to be within my remit at that time.

f) Who was in the WTG, what were their names and their roles within WTG?

A I have attached a minute from the WTG dates 21/6/2019 which lists attendees **– Attachment 6**

g) Why was the WTG set up?

A To address water issues at the QEUH/RHC Hospitals

h) What qualifications were required in order to be chair of WTG?

A No qualifications were required.

i) Discuss focus of WTG – what was the purpose – why was WTG required – what issues came to light as a result and what action was taken. What were the concerns of the WTG and how did this impact on patients? **Refer to Estates Team Bundle, document 127, 128, 129 and 130** to assist and confirm how these relate to issues before WTG.

A The WTG allowed water issues specific to the QEUH to have more focus and actions to be taken to resolve these issues. It discussed in more detail many issues around water and associated areas such as; 1- flow straighteners, 2 - Tap types; 3 – drainage issues; 4 – Sampling Outcome; 5 – Sterilisation. All of which is detailed to some extent in the WTG minutes which are attached at **Attachment 6**. It also allowed for water specialists from out with the NHS to bring to the table their expertise and support.

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

A Both groups got along okay at these meetings as there was a common objective.

k) Refer to **IMT Bundle documents 39** onward, and any other IMTs as a result of WTG. Go through and discuss issues – impact of patients – what was cause of these issues.

A This is best answered by my clinical colleagues

(i) For example, you were involved in the IMT of 28th September 2018 **IMT Bundle Document 44,** please describe your involvement, what role you played. Describe the issues being considered here, and describe your understanding of what impact, if any, the issues were having on patients. What role the water Technical Group played. Why was shock dosing required? What is the potential impact on the water system? What was actually carried out in response to this IMT? Was the report provided as requested by Dr Inkster? What was the outcome of the report?

A I was involved as the General Manager (Estates). My involvement was to ensure the estates team carried out the actions placed on them from this IMT group. The group discussed issues relating to the water & ventilation issues within Wards 2A. Also looking at any issues arising from movement of patients to Wards 6A & Ward 4 of QEUH Adult Hospital. Shock dosing to the water system was being considered if all other interventions were not successful, however this would bring a significant logistical issue and risk to the QEUH/RHC should it be required and this was what was going to be discussed at the Water Technical Group. The report requested by Dr Inkster regarding impact on wards is attachments 4 & 5 already uploaded to workspace. This action plan was not taken forward.

(ii) The IMT of 5th October 2018: **IMT Bundle, document 45:** Describe the issues, why was the matter referred to the WTG? Describe the issues, if any, were there with drains? Was individual continual dosing until for Ward 2A/B veer introduced? Why was this suggested? What were the issues leading to this suggestion being made? What was your understanding of the issues on patients in respect of this matter? Describe your involvement, role and actions taken by you.

A The WTG was the technical group where any issues relating to water from the IMT had to be discussed and actioned where required. The drain surveys had shown that there was nothing to identify that the drain designs had deviated from original design however it did identify some issues around finding components such as small toys/syringes, pump components etc being found which were causing blockages.

An Individual dosing unit to supply ward 2A/B was being considered mainly due to the timescale to install a larger system for the whole of the hospital. This would then be connected to the larger system at a later date. It was important to try and get Wards2A/2B water quality back into a complaint position and to prevent delays in patient care to allow the patient group to move back quicker

(iii) The IMT of 5th October 2018: **IMT Bundle, document 45:** describe your recollection of the microbiological criteria that was presented at the WTG.

A I cannot recollect the microbiological criteria that was presented.

(iv) Explain what the drains survey informed you? Why was it necessary?

A To eliminate the possibility of drains contributing to the contamination of the water it was considered a drain survey around the actual 'installation' would be beneficial. The drain surveys had shown that there was nothing to identify that the drain designs had deviated from original design however it did identify some issues around finding components such as small toys/syringes, pump components etc being found which were causing blockages.

(v) What was the relevance and requirement for the ventilation survey? How dis this relate the to role of the WTG?

A A ventilation survey would have identified the compliance of the installation against the initial design and also identified its compliance against SHTM03-01. The survey would also have highlighted any issues with the actual installation etc. This would have gone back to the WTG for review and consideration of any actions.

l) Refer to **Estates Team Bundle, document 129**, why were NSS involved, guidance issued, actions taken.

A NSS were involved as they were the NHS Scotland's lead organisation providing NHS Boards with technical support and guidance around SHTM's.

m) Refer to **Estates Team Bundle, document 131**, explain the background, your involvement, the purpose, guidance issued, actions taken.

A This report looked at the whole operation and management of water systems at the QEUH Campus and listed recommendations to improve their overall compliance. From this report the actions placed on myself and my team, along with the operational team, have all been actioned fully

Board Water Group

194. Refer to the **Water Safety Group Bundle:**

a) What is the purpose of WSG?

A The WSG is in place to ensure Water Safety follows the guidelines within SHTM04-01and CEL 03 (2012) around water policy, safety plans, reporting and controls. It is the main forum for water safety within NHSGG&C.

b) Why was the WSG set up?

A This is a requirement of SHTM04-01

c) What was your involvement with the WSG?

A I was a member of the WSG

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

A The membership of the WSG would vary depending on the period however the main positions were as follows:- Lead GM Facilities (Mary-Anne Kane (2012); Billy Hunter (2013); Infection Control Manager (Tom Walsh (2012; Prof Craig Williams (2013)); H&S Manager (John Green); Lead Nurse (ICT)

(Pamela Joannidis); Consultant Microbiologist (Theresa Inkster); Assist Director of Nursing (Sandra McNamee)]; Lead Sector Estates Manager (Alan Gallacher; Jim McFadden); Head of Nursing (John Stuart); Various Ward Manager Leads as required.

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

A There were no qualifications required.

c) 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 This is documented within Action plans attached **(Attachments 3, 7 & 8)**

d) Was this within your remit within estates?

A As a senior manager I was expected to action any issues

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

A Clinical staff and estates got on well as there was the same objective.

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

Refer to Estates Team Bundle, document 134.

195. Why did you commission/order the report? What issues prompted the instruction of this report?

A I did not commission the report

196. At the time were you aware of the report? Who commissioned it and why?

A Yes, I was aware of the investigations supporting this report. This was commissioned by Mary Anne Kane and was commissioned, I believe, around

concerns around the DMA2015 QEUH Pre-Occupation Water Risk Assessment and the lack of actioning the content of same.

197. What concerns, if any, did you have about the water system?

A I did not commission the report

198. What concerns, if any, at the time did you have regarding the water system? What action, if any, did you take regarding any concerns?

A When I was made aware of the existence of the DMA2015 Water RA and the lack of actions then this raised concerns with me about what non-compliances/risk could be in this system.

199. When did these concerns arise? Was anyone else in estates concerned? Why?

A I did not commission the report.

a**)** At the time was anyone else in estates concerned about the water system? If so whom, and why were they concerned? What action, if any, did you take regarding any concerns?

A I was not aware of anybody else being concerned about the QEUH Water systems at that time.

200. What was the impact on patients?

A I did not commission the report.

a) The Inquiry notes your answer that you did not commission the report, but what was your understanding, if any, of the impact on patients?

A Again, this answer would needed to be answered by my clinical colleagues.

201. Did you flag/ raise your concerns with anyone?

A I did not commission the report

202. What happened in response to the report?

A I did not commission the report

203. Did you escalate any matters arising from this report? If so, to who, and if not, why not?

A I did not commission the report

204. What works, if any, were carried out in response to any findings in this report?

A I am not aware of any actions and I did not commission the report

Tap Water- Ward 3C – 2019

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

A I do not recollect any issues with Tap water in Ward 3c during 2019

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

A I do not recollect any issues with Tap water in Ward 3c during 2019

207. What action was taken?

A I do not recollect any issues with Tap water in Ward 3c during 2019

208. How were matters resolved?

A I do not recollect any issues with Tap water in Ward 3c during 2019

a) The Inquiry understands that there was concerns regarding the tap water in Ward 3C not being fit for consumption. Please advise whether you are answer the above having this information.

A I cannot recollect these concerns.

Other Water Incidents

209. What other specific events do you recall in relation to water? For example do you have any recollection of debris in the 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) 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?

A I feel sections M & N above address all these questions

The Inquiry is not aware that you have answered the question at 179, please can you explain what other specific events do you recall in relation to water? For example do you have any recollection of debris in the water tanks. When answering have regard to appoints a-m above in your answer.

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

a) How were these dealt with by you?

A For operational water systems there are NHSGG&C standard SoPs around water quality and for reporting water samples out with spec

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

A I cannot answer this

c) Do you recall specific ones and in particular any that gave you concern.

A I do not recall specifically

211. What was your understanding at handover in January 2015 of water guidance and regulations specifically SHTM guidance (at the time being SHTM 27 and 40 and now being SHTM04-01) and L8 guidance?

a) What is the purpose of the guidance?

A These guidance documents (i.e. SHTM's) are in place to ensure patients are treated in a safe healthcare environment

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

A You will end up with non-compliant systems in a healthcare environment which will put patients at risk

c) How was the water system operating when you signed the completion certificate for stage 3? To what extent was the water system in compliance with the guidance at handover?

A I was not part of this project team

d) How satisfied were you of the compliance?

A I did not get visibility of any documentation to support compliance so I cannot comment

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 was not part of this project team

f) Why did you sign the completion certificate? How was this matter escalated? If so, to whom? Was the water systems non-compliance discussed with any colleagues? What further action, if any, was taken to ensure that the water system complied with the guidance? How did you satisfy yourself that it was appropriate to sign off on the completion certificate?

A I was not part of this project team

g) If no, with the benefit of hindsight, should you have signed off the completion certificate?

A I was not part of this project team

Ventilation – Guidance and Obligations

212. 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 These guidance documents (i.e. SHTM's) are in place to ensure patients are treated in a safe healthcare environment

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

A You will end up with non-compliant systems in a healthcare environment which will put patients at risk

c) How was the ventilation system operating when you signed the completion certificate for stage 3? To what extent was the ventilation system in compliance with the guidance at handover?

A I was not part of the Handover Team

d) How satisfied were you of the compliance?

A I was not part of the Handover Team

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 was not part of the Handover Team

l) Was this matter escalated? If so, to whom? 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? Was there a team in place to regulate compliance, if so, please explain your knowledge, understanding and role within that team:

A I was not part of the Handover Team

213. Tell me about your role and involvement in the Specialist Ventilation Group. Explain the purpose of the Specialist Ventilation Group.

A As I recollect this group only met on a couple of occasions to discuss the issues of the QEUH Ventilation, It was agreed that this should not be a group specific to the QEUH and as such the BVSG was established and this group was disbanded

Ventilation - Commissioning and Validation

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

A I was not involved in this process

a) Who was this carried out by?

A I was not involved in this process

b) Who signed off?

A I was not involved in this process

c) To what extent, if any, did infection control have input prior to sign off? Refer to **Estates Team 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 was not involved in this process

(i) If so, who did have input?

A I was not involved in this process

(ii) When should this have been done?

A I was not involved in this process

(iii) Were you involved?

A I was not involved in this process

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

A I was not aware as I was not involved

e) What commissioning and validation documentation did you see before handover in 2015?

A I was not involved in this process

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

A I was not involved in this process

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

A I was not involved in this process

g) How does commissioning differ to validation?

A Commissioning is required to ensure equipment is installed, tested and operated to the original design specification; Validation is to ensure the system is consistent to operate to the required healthcare documentation. In this case SHTM's

h) Was there a validation document to accompany this for handover?

A I was not involved in this process

i) What is the purpose of Commissioning and Validation (C&V)?

A Commissioning is required to ensure equipment is installed, tested and operated to the original design specification; Validation is to ensure the system is consistent to operate to the required healthcare documentation. In this case SHTM's

j) What are the consequences of it not being carried out? What concerns did you have, if any, that the QEUH/RHC had not been signed off without C&V?

A If commissioning is not carried out then there is nothing to show that the system is compliant to the design specification. If the C&V was not carried out then this would affect certain patient groups, especially high risk patients.

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

A I would be concerned about its compliance to the original design specification and SHTM03-01

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

A You would not be able to know how the ventilation system was performing and as such would be a potential risk to patients

215. 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 was not involved with the project

b) Did you provide the commissioning and validation data to Dr Teresa Inkster?

A I was not involved with the project

c) Is it correct that there are no minutes from these meetings?

A I was not involved with the project

d) Why were no minutes taken of these meetings?

A I was not involved with the project

e) What actions were taken following these meetings?

A I was not involved with the project

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

A I was not involved with the project

217. **Refer to Estates Team 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 I was not involved with the project

b) What was the consequence of this?

A I was not involved with the project

c) Why did handover take place in these circumstances?

A I was not involved with the project]

d) What happened following this report?

A I was not involved with the project

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

A I was not involved with the project

Have regard to the following emails when considering your answers to the above:

Estates Team Bundle, documents 64, 67 and 68.

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

A I was not involved in this process

219. Where was the documentation for C&V stored at that time?

A I was not involved in this process

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

A No

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

A I was not involved in this process

b) If no – should you not have sought this? Who is responsible for ensuring it is in place? Who should have chased this up? Would this not be part of ID remit?

A I was not involved in this process

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

A I was not involved in this process

222. 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 was not involved in this process

a) To the best of your knowledge, was the hospital ventilation system validated at the point of handover?

A I was not involved so I cannot answer this question.

223. Were you asked by microbiologists or Infection Control to provide information regarding the ventilation system and validation? **Refer to Estates Team Bundle, document 27.** Who was supposed to provide this information? If it was not provided, why not? What action was taken to ensure that information was provided – if it was not, what was done to escalate this? Who was responsible for providing this information?

A I was not involved in this process

Ventilation System – General

224. What testing and maintenance protocols and regimes were in place? **Refer to Estates Bundle, document 62.**

A These are ventilation commissioning reports, however I was not involved.

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

A I am not a HVAC or water systems designer and cannot answer this question
As an Estates Manger, standing not being a HVAC or water system designer, what concerns, if any, do you have relating to the ventilation? What concerns, if any, do you have relating to the water temperature? What concerns, if any, do you have relating to the movement within the water system?

226. Was it possible to incorporate a comprehensive ventilation system into the QEUH/RHC?

A I am not a HVAC designer and cannot answer this question
As per Q195 please can your answer relative to your role as Estates Manger?

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

A I am not a HVAC designer and cannot answer this question
As per Q195 please can your answer relative to your role as Estates Manger?

228. What are your thoughts about these ventilation systems that were used?

A I am not a HVAC designer and cannot answer this question
As per Q195 please can your answer relative to your role as Estates Manger?

229. **Refer to Estates Team Bundle, document 48**. Explain your concerns and actions taken.

A I am not a HVAC designer and cannot answer this question

As per Q195 please can your answer relative to your role as Estates Manger?

230. **Refer to Estates Team Bundle, document 86**. Where there any issues? Did you respond to Dr Peters? If so, what did you say? If not, why not?

A I was not involved

231. **Refer to Estates Team Bundle, document 136**. Explain the concerns regarding latent defects and actions taken.

A I was not involved

232. Explain your involvement with a review of specialised ventilation areas.

A I was not involved

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

A I was not involved

234. Describe your understanding to have appointments, such as authorised person for ventilation.

A The respective SHTM Guidance documents details the requirements for Authorised Persons (APs) and Competent Persons (CP's) which will bring governance and compliance to the management of these systems.

a) Following commencement of your role in August 2015, what appointments were occupied in respect of ventilation, who was responsible for ensuring these appointments?

A

	AP Appointment by	Appointment covering period
Cyril Dawson		05/01/15 to 04/01/18
	Mary-Anne Kane	12/12/16 to 11/12/19 #
Melville McMillan	Alan Gallacher	01/12/20 to 30/11/23

Paul Allan		05/01/15 to 04/01/18 ##
	Alan Gallacher	03/07/19 to 02/07/22
James Guthrie	Alan Gallacher	09/05/19 to 08/05/22
Mark McKaig	Alan Gallacher	08/05/19 to 08/05/22
Darryl Connor	Alan Gallacher	22/01/19 to 21/01/22
Hugh Brown	Alan Gallacher	02/12/20 to 01/12/23
William Fenn	Alan Gallacher	16/12/22 to 15/12/25
Thomas Ramsay	Alan Gallacher	31/05/23 to 30/05/26
Scott Macer	Alan Gallacher	04/03/21 to 04/03/24
		05/03/21 to 04/03/24
Connor Stepney	Alan Gallacher	07/06/24 to 06/06/27
Grant Bennett	Alan Gallacher	16/12/21 to 11/08/24
Ben Twaddle	Alan Gallacher	11/04/23 to 10/04/26
Gary Donnachie	Alan Gallacher	13/06/24 to 12/06/27
John Hetherton	Alan Gallacher	31/03/23 to 30/03/26

Certificate of Appointment GG&C-V-16 dated 12 Dec 2016 (from AE (Ventilation) issued to Cyril Dawson. No 'appointment letter' from NHSGG&C found. Cyril was noted within the 2017 AE (Ventilation) annual audit (See below) as appointed as AP(V) and issued 12/12/16.

Paul Allan noted as AP(V) for period 05/01/15 to 04/01/18 on AE (Ventilation) annual audit (Dec 2015 - See below), however no internal paperwork found.

2AE(V) Audit Summary dated 23 Dec 2015

VENTILATION SYSTEMS SHTM 03-01

AP Training and Appointments Matrix

AP Name	David Brattey	Cyril Dowson	Paul Allan		
Status	AP (V) des	AP (V) des	AP (V)		
Based at	QEUH	QEUH	QEUH		
Appointment Certificate	Not yet	Not yet	GG&C V 07		
Issue Date	N/A	N/A	05-Jan-15		
Expiry Date	N/A	N/A	04-Jan-18		
Sites covered	N/A	N/A	SGH		
AP(V) Training Expiry Date	TBA	27-Apr-18	30-Oct-17		
First Aid Expiry Date	TBC	TBC	30-Jun-16		
Permit-to-work to support inspection & maintenance.	0	53	0		
Quarterly inspection of critical ventilation systems.	0	0	0		
Annual verification of critical ventilation systems.	5	0	4		
Annual inspection of non-critical ventilation systems.	0	0	0		
Number checked by AE	2	6	1		

Training Comments

David Brattey
Mr David Brattey should attend AP (V) training and forward a copy of his training certificate to the AE on completion. He should also forward a copy of his first aid training certificate to the AE .

Cyril Dowson
Mr Cyril Dowson should forward a copy of his first aid training certificate to the AE .

Paul Allan
Mr Paul Allan should attend emergency first aid training by 30 Jun 16 and he should forward a copy of his training certificate to the AE .

SHTM 03-01 SPECIALISED VENTILATION FOR HEALTHCARE PREMISES

AP Training and Appointments Matrix

AP Name	Paul Allan	Cyril Dowson			
Status	AP (V)	AP (V)			
Based at	QEUH	QEUH			
Appointment Certificate	GG&C V 07	GG&C V 16			
Issue Date	05-Jan-15	12-Dec-16			
Expiry Date	04-Jan-18	11-Dec-19			
Sites covered	QEUH	QEUH			
Ventilation Training Expiry Date	30-Oct-17	27-Apr-18			
First Aid Expiry Date	11-Dec-19	22-Jun-18			
Permit-to-work	0	0			
Number checked by AE	0	0			

Comments

Paul Allan should attend an AP refresher course.

Another AP (V) should be nominated to carry out training.

One of the AP (V) should be designated the lead AP.

Answer

b) What steps did you take to ensure that these appointments were filled?

A It is the responsibility of the QEUH Site Manager Operational Estates (SMOE) to nominate to the Compliance Manager (Ventilation), any staff who are to become Authorised Persons (Ventilation). Training is then put in place for these staff by the Compliance Manager and, after successful completion of training, are then assessed by the AE(Ventilation) on their competence to become an AP(Ventilation) for the site. Once successfully assessed by the AE(Ventilation) the Compliance Manager (Ventilation) is then informed by the

AE(Ventilation) who then informs the Head of Corporate Estates. The Head of Corporate Estates then appoints the individual in writing as an AP(Ventilation).

There is now a strict governance around appointments of Authorised Person (Ventilation) and Competent Persons (Ventilation), however this did not come into play until after the compliance team were formally established which was late 2016.

Numbers of AP's are reported through the respective compliance manager reports and discussed at bi-monthly Statutory Compliance and Risk Tool (SCART) Steering Group Meetings with all senior and operational estates managers.

c) What training and qualifications were required in respect of these appointments?

A Authorised Person Ventilation HTM 03-01 (APV) – City & Guilds Assured (CPV) – **See attachment**

Authorised Person Ventilation Refresher HTM 03-01 (APV) – City & Guilds Assured (CPV) – **See attachment**

Competent Person Ventilation HTM 03-01 (APV) – City & Guilds Assured (CPV) – See attachment – **See attachment**

Specific Events in Relation to Ventilation System

235. 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 was not involved.

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

A I was not involved.

What awareness, if any, at the time did you have regarding these issues? Was this within your remit as Estates Manger to have an awareness of these issues? If not, why not?

c) Dr Brenda Gibson raises there concerns **refer to Estates Team Bundle, documents 17 & 18.**

Describe your involvement and any actions taken in respect of this matter.

A I was not involved.

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

A I was not involved.

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

A I was not involved.

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

A I was not involved.

g) 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) Explain your concerns

A I was not involved.

In your role, did you have an awareness of these issues? Please explain what awareness you had, what the issue was, and what involvement, if any you had in resolving the issue.

ii) Tell me about the issues

A I was not involved.

iii) Potential patient impact

A I was not involved.

iv) What was done to resolve matters and your involvement.

A I was not involved.

h) 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 Team Bundle, document 93:**

i) Explain your knowledge of the issues

A I was not involved.

Did you have an awareness of the issues at the time? How did you satisfy yourself that these matters were resolved appropriately?

ii) Detail the issues

A I was not involved.

iii) Potential patient impact

A I was not involved.

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

A I was not involved.

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

A I was not involved.

j) Issues detailed in Estates Team Bundle documents 94, 95 and 96.

A I was not involved.

k) Issues detailed in Estates Team Bundle, document 104.

A I was not involved.

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

A I was not involved.

m) Dr Inkster tells us that she wrote an SBAR regarding Ward 4C and recommended a feasibility study for the ward to improve the specification. This was discussed at the Specialist Ventilation Group in July 2019. What was your involvement, understanding of the issues and what action did you take?

A I was part of this Specialist Ventilation Group and remember this being discussed. As I understand it the focus at that time was Ward 2A and as such all resources were concentrated to that ward and the high risk patient group.

(i) What specific ventilation qualifications did you hold in order to sit on the ventilation specialist group?

A None

(ii) What was ward 2A the focus at the time? What was your understanding of the issues with Ward 2A at the time? Describe your role, involvement and action taken? In respect of Ward 4C what action did you take?

A From my recollection there was concern around air changes in critical areas especially ward 2A given the patient type.

In respect of Ward 4C no feasibility was carried out that I am aware of as Ward 2A was deemed as the priority at that time.

n) Any other issues/ incidents not mentioned above.

A None

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) Were any external organisations 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) 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?

Write your answers in the relevant answer boxes above.

236. What level of awareness should a General Manager of Estate have of the ventilation issues?

A From a compliance perspective there should be a ventilation register in place for site.

a) Was there a ventilation register in place during your time as General Manager for Estates? Was responsibility did you have to ensure that this was in place? If it was not in place, why was it not in place? What action should have been

taken to address this and why was it not? What was the impact of this not having been in place? Did this result in the system not being compliant?

A A 'Board Ventilation Register' is now in place for critical ventilation across NHSGG&C, not just QEUH. In 2015 this was not in place. All the functionality around compliance to SHTM's sat with each site and the respective management who were responsible to deliver the governance and compliance to the respective SHGTM's.

The lack of a ventilation register would not mean the system is non-compliant as the ventilation register is exactly that, a register. The important documentation is the validation/verification reports which are in place to support the compliance of the system.

Isolation Rooms

237. You signed the **Stage 3 Sectional Completion Certificate Estates Team Bundle, document 3** on 29th January 2015, HEPA filters in isolation rooms were listed as incomplete **Estates Team Bundle, document 3, page 25:**

a) What was missing?

A I was not involved.

b) While you did not sign the certification, what was your understanding of the situation when you began your role in August 2015? What action, if any, did you take in order to address matters?

A I was not made aware of any situation

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

A I was not involved.

d) Was this discussed with other members of staff? If so, who?

A I was not involved.

e) Was this issue escalated to Board level? If so, to whom and who escalated matters?

A I was not involved.

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

A I was not involved.

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

A I was not involved.

Should you have had an awareness? If you did not, why not?

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

a) why was this work carried out?

A I was not involved.

Should you have had an awareness? If you did not, why not?

b) What was the result of this work?

A I was not involved.

c) What was your involvement in the work?

A I was not involved.

d) What if any issues arose?

A I was not involved.

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

e) Should you have had an awareness? If you did not, why not?

A I was not involved.

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

A I was not involved.

g) Potential impact on patients?

A I was not involved.

h) Your involvement with the HAI Scribe

A I was not involved.

240. **Refer to Estates Team Bundle, document 26** Christine Peters states that you were dealing with sealing light fittings:

a) What was the issue?

A I was not involved.

b) What was the potential impact on patients?

A I was not involved.

c) What did you do to resolve this matter?

A I was not involved.

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

a) Explain your understanding of the issues

A I was not involved.

Should you have had an awareness? If you did not, why not?

b) Were the affected wards/ areas complaint with the relevant guidance at the time

A I was not involved.

c) Tell me about your understanding of whether the affected areas/ wards had been built to contractual specification at the time

A I was not involved.

Are you aware of whether the affected areas and wards had been built to specification? Was this matter ever discussed during your time at QEUH? What was your understanding of the situation?

d) Tell me about your involvement in carrying out/ instructing work to remedy any issues

A I was not involved.

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

A I was not involved.

f) Your understanding of the potential impact on patients

A I was not involved.

242. There remained issues regarding testing in September 2015 **refer Estates Team Bundle, document 61:**

a) Explain the issues

A I was not involved.

Should you have had an awareness? If you did not, why not?

b) Your involvement

A I was not involved.

c) Work carried out to resolve any issues

A I was not involved.

d) Potential patient impact

A I was not involved.

243. **Refer to Estates Team Bundle, document 70**, David Loudon stated that the Board would not be taking handover until they were confident that the rooms were fully compliant:

a) At the time how were the room not fully compliant

A I was not involved.

Should you have had an awareness? If you did not, why not?

b) Explain your involvement

A I was not involved.

c) What work was carried out and how was this recorded?

A I was not involved.

d) When did the rooms become fully complaint?

A I was not involved.

e) When did the Board accept handover of the rooms?

A I was not involved.

f) Who advised the Board to accept handover of the rooms?

A I was not involved.

g) What document did you see to confirm that the rooms were fully complaint?

A I was not involved.

244. Discuss the issue with the manual controller in isolation rooms in ward 2A **Estates Team Bundle, document 83**:

a) Your understanding and involvement

A I was not involved.

Should you have had an awareness? If you did not, why not?

b) Work carried out

A I was not involved.

c) Potential patient impact

A I was not involved.

Pentamidine Rooms

245. Discuss Pentamidine Rooms:

a) What are Pentamidine Rooms?

A These are rooms which allow pentamidine to be given to patients

b) What is your understanding of the purpose of these rooms?

A As above

c) The guidance applicable to these rooms for water and ventilation?

A For ventilation they should be following SHTM 03-01 and sitting at a negative pressure with between 10 & 12 ac/hr; For water they should be following guidance given in SHTM04-01

d) Discuss any issues with the specification of these rooms during 2015 **Estates Teams Bundle, document 38.**

In particular consider any issues with:-

i) the air change rates

ii) air pressure Estates team Bundle, document 78.

iii) compliance with guidance

iv) any issue(s) arising from the testing

A I had no involvement with these types of rooms so I cannot answer questions (i) to (iv) above

Ward 4B

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

A I was not part of the design team or project team for the new QEUH so I do not know.

a) As at August 2015, what was the stated proposed of Ward 4B? What sort of ward did you understand this to be?

A I cannot answer this as I do not know.

247. How did this purpose change prior to January 2015? If so, what changes were made?

A See Q200 above

Are you are of any changes to the purpose of the Ward being made prior to January 2015? During your time at QEUH was this ever discussed with you?

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

A See Q200 above

249. How involved were you with the changes?

A See Q200 above

250. 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 Team Bundle, document 30** - What was the purpose of the SBAR?

A See Q200 above

From August 2015 please describe any issues you were aware of in respect of Ward 4B?

b) How long after migration to ward 4B were patients decanted back to the Beatson?

A See Q200 above

c) On commencing your role at QEUH, what, if anything, were you advised regarding patients in Ward 4B returning to the Beatson? What reason, if any, were you given for this happening? Describe your understanding of the issues at the time, and your involvement, if any, in dealing with these issues.

A I did not have any information as to why patients were being returned to the Beatson. This was a clinical decision.

d) 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? Add in re CP and ¾ rooms no HEPA.

A See Q200 above

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

A See Q200 above

252. **Refer to Estates Team Bundle, document 36:**

a) What were the early testing being carried out?

A See Q200 above

b) Why were tests being carried out?

A See Q200 above

c) Explain your involvement.

A See Q200 above

d) To what extent, did the test result provide assurance regarding Ward 4B's suitability for the intended patient cohort? If so, how?

A See Q200 above

253. **Refer to Estates Team Bundle document 23:**

a) Were there issue(s) with the particle counts?

A See Q200 above

b) If so, when was the issue(s) identified?

A See Q200 above

c) What was your role?

A See Q200 above

d) What action was taken and by whom?

A See Q200 above

e) What action resolved the issue(s)?

A See Q200 above

254. **Refer to Estates Team Bundle document 39:**

a) What were the issue(s) with the pressure gauges?

A I was not part of any handover/defect team so I'm not aware of the issues

b) When was the issue(s) identified?

A See (a) above

c) What was your role?

A See (a) above

d) What action was taken and by who?

A See (a) above

e) What action resolved the issue(s)?

A See (a) above

f) Why was the issue(s) not identified sooner than July 2015?

A See (a) above

255. **Refer to Estates Team Bundle document 40:**

a) Provide information on the upgrade works referred to, what the works were, why they were required, when the matter was identified and by who, what was your involvement. Were matters escalated, if so, by who and who was the situation escalated to?

A I had no involvement with this upgrade works

256. **Refer to Estates Team Bundle document 62:**

a) What is this document?

A This is a ventilation commissioning report

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

A No

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

A A ventilation commissioning report is to ensure the system performance complies with the existing/original design specification

d) Did any issues arise from this report?

A I was not aware of this report as I was not part of the handover team

(i) Should you have had an awareness from the point of commencing your role? If you did not, why not?

A No. The QEUH issues were still being taken forward by the Project/Handover/Estates Operational teams.

e) How involved were you?

A I was not involved

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

A I was not involved

g) If yes to (f) what action was taken?

A I was not involved

257. **Refer to Estates Team Bundle document 66:**

a) Discuss the issues referred to in this email chain.

A I was not involved

(i) Should you have had an awareness? If you did not, why not?

A This was still part of the handover/defect works for the QEUH and I had no involvement or awareness.

b) What was your involvement?

A I was not involved

c) What works were required?

A I was not involved

d) Why were works required?

A I was not involved

e) Were all necessary works carried out?

A I was not involved

258. **Refer to Estates Team Bundle document 69:**

a) What is his document?

A Test Report for Compliance to HBN04 Supplement 1 for Isolation Rooms within QEUH Ward 4B

b) Have you seen it before?

A No

c) How did this document inform your decisions and actions taken?

A I was not involved

259. **Refer to Estates Team Bundle document 71:**

In this email Peter Moir states that Ward 4B was ready for handover:

a) How confident were you that the ward was ready for handover?

A I was not involved in this project

(i) At the time, as General Manager of Estates should you have had an awareness? If you did not, why not? If you did have an awareness, please confirm your understanding of the position.

A This did not fall within my responsibilities. I can only assume the project team & operational team were leading on this project.

b) To what extent did the ward meet the relevant SHFN and SHTM 03-01guidelines for the intended patient cohort?

A I was not involved in this project

c) What reservations, if any, did you have at that time?

A I was not involved in this project

d) If so, when did you escalate these concerns and to whom? If not, why not?

A I was not involved in this project

e) Was any further work carried out to Ward 4B at this time?

A I was not involved in this project

260. **Refer to Estates Team Bundle document 73** detail the remaining defects at this stage, did this prevent handover of Ward 4B?

A I was not involved in this project

261. **Refer to Estates Team Bundle documents 77 & 77.1:**

a) Discuss this email

A I was not involved in this project

b) Explain your involvement

A I was not involved in this project

c) Explain any assurances given

A I was not involved in this project

262. In her statement Dr Teresa Inkster tells us that at a meeting on 7th December 2015 in respect of the proposed patient move back to Ward 4B that *'Ian Powrie highlighted that it was still unclear what specifications the original design team worked to.'*

To what extent is this statement accurate? What concerns did you have at the time regarding Ward 4B? What concerns did you have at the time about the ward specification? If so, explain what your concerns were and why? Had any of your concerns been resolved by December 2015?

A I was not involved in this project

263. **Refer to Estates Team Bundle, document 87** – Why was NSS involved in the issues? Actions taken in response, your involvement.

A I was not involved in this project

264. **Refer to Estates Team Bundle, documents 88 and 89**

a) Describe the situation

A I was not involved in this project

b) Any action taken

A I was not involved in this project

c) Your involvement

A I was not involved in this project

d) Any concerns and whether matters were escalated and if so to who.

A I was not involved in this project

265. **Refer to Estates Team Bundle, document 101**

a) Describe the situation

A I was not involved in this project

b) Any action taken

A I was not involved in this project

c) Your involvement

A I was not involved in this project

266. 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 was not involved in this project

(i) While you were not involved, at the time what was your understanding of the works being carried out to Ward 4B, why were the works carried out? What specification did the remedial works bring the ward to?

A I had no involvement in this project and therefore cannot answer this question.

Refer to the following when answering:

a) **Estates Team Bundle, document 71**

b) **Estates Team Bundle, document 72**

c) **Estates Team Bundle, document 97**

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

A I was not involved in this project

267. Involvement and knowledge to HAISCRIBE – what was this and what was the issue – **refer Estates Team Bundle, documents 117 and 118.**

A I was not involved in this project

268. **Refer to Estates Team Bundle, documents 120 & 122**

a) Describe the situation

A I was not involved in this project

b) Any action taken

A I was not involved in this project

c) Your involvement

A I was not involved in this project

269. Ward 4B:

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

b. Why did this happen?

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

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

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 was not involved in this project therefore I cannot answer any of the above

(i) Were you aware of the Ward 4B decant? Why they returned and what works were carried out despite not being involved in the project?

A No I was not aware. I understand this was a clinical decision to move patients back to the Beatson.

Decision to Close Wards 2A/B and Move to 6A and 4B

270. 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 Team Bundle, document 133.

A I understand that there were ventilation and potable water concerns highlighted within the Ward by Ian Powrie

b) What was your involvement.

A I had no involvement prior to the closing of ward 2A

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

A I had no involvement prior to the closing of ward 2A

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? **IMT Bundle, document 39** you flagged concerns, were these ever followed up? Did you escalate

these concerns? With the benefit of hindsight, what steps could have been taken to progress this matter further?

A I had minimal involvement of IMT Meetings around Wards 2A and attended 1 or 2 to give an update on drain cleaning and PoU filters only

(i) What was the purpose of drain cleaning, what prompted it be carried out? Did the drain cleaning have any impact? If so what impact?
Describe your involvement in respect of PoU filters, describe any issues and action taken.

A It was identified at an IMT that the drains in sinks could be a source of contamination. A drain cleaning regime was pulled together by the Facilities Team and, as I may recall, an SoP or simple instruction given to the domestic staff around how this should be done which included pouring of disinfectant down the drain and in some cases having to put a small brush down the drain. On recollection I don't think there was an improvement in water quality although the drains were cleaner. The general healthcare guidance is not to clean drains.

The installation of PoU Filters mostly fell out of IMT meetings where water quality was discussed.

e) Tell me about the works done to Ward 2A/B and 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 I had no involvement around the works done in Ward 2A (Minor Upgrade) this was led by Ian Powrie.

(i) What was your knowledge of the situation at the time?

A I attended IMT meeting around Ward 2A/B and this is documented. There were a number of issues mainly around water quality and taps which were of concern and which has been discussed in this question set

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 I cannot provide any information to support this

271. 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;

b) Gram Negative Bacteraemia

c) Water filters

d) Ventilation, including HEPA filters

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

f) Patient communication

g) Internal escalation - HAIIT scoring

h) External escalation

A It was a clinical decision to relocate patients from Ward 2A to Ward 6A. I was never asked for my views although I was not a main player in the decision making process. There is a patient placement protocol which I assume the clinicians followed to the rule.]

i) SBAR relating to Ward 6A **Estates Bundle document 141**

A A significant Action Plan was derived from the SBAR in an effort to upgrade Ward 6A. All actions were carried out. This is included as **Attachment 7.**

<u>Reports Prepared by Innovated Design Solutions October 2018</u>

272. **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) Who commissioned these reports?

A I think this was commissioned by Ian Powrie after discussion with Mary-Anne Kane

b) What was the background to these reports being commissioned?

A There were concerns about the ventilation system in Ward 2A as annual verification reports were highlighting that ac/hr in single bedrooms was approx 3

c) Why were these reports commissioned? What issues prompted the instruction of these reports?

A To address the concerns mentioned above and to see if there was a potential solution

d) What concerns, if any, did you have regarding the ventilation system in Ward 2A?

A Ventilation verification reports were identifying air changes of just under 3 ac/hr when the SHTM specifies this should be 6 ac/hr.

e) When did these concerns arise? Was anyone else in estates concerned? Why?

A These concerns, I believe, have been in place since handover and have been escalated previously by Ian Powrie

f) What was the impact on patients?

A I cannot answer this question. That is for the clinicians to answer

What concerns, if any, were there regarding patients that you were aware of at the time?

Answer

g) What concerns were raised with anyone?

A I understand the IDS report was escalated but to whom I do not know.

h) What concerns, if any, did you have regarding the ventilation system in Ward 2B?

A There were concerns around the air changes which were approx. 3 ac/hr

i) When did these concerns arise? Was anyone else in estates concerned? Why?

A I cannot recollect when these concerns arose.

j) What was the impact on patients?

A This would need to be answered by my clinical colleagues.

k) What concerns were raised with anyone?

A See i) above

l) What happened in response to these reports? For example, the SBAR you prepared.

A I did not prepare an SBAR

m) What matters were escalated arising from these reports? If so, to whom, and if not, why not?

A See i) above

n) What works, if any, were carried out in response to any findings in these reports?

A As I understand it this document potentially was the catalyst for the Wards 2A & 2B Upgrade.

o) Following the works being carried out, what was the ward specification? To what extent did it meet the requirements of SHTM 03-01 guidance?

A I have no visibility of the ward specification, however this upgrade is now complete and ventilation is now fully compliant to SHTM03-01

273. When did you instruct Innovated Design Solutions before these reports, if at all? If so, in what capacity? Describe any further action taken in response to any recommendations by Innovated Design Solutions.

A I did not instruct IDS

Cryptococcus

Refer to the Cryptococcus Bundle and SBAR bundle to assist.

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

a) What is Cryptococcus?

A It is a fungi

b) What was your experience of Cryptococcus in a healthcare setting prior to QEUH?

A No experience

c) Describe concerns, if any, you had in respect of pigeons at QUEH/RHC? If you had concerns when did these concerns initially arise, and for how long/ how often did such concerns arise?

A As I recall I only became aware of pigeons at QEUH/RHC through attending IMT meetings, up till then I was not aware of any issues. This would normally be addressed and actioned by operational estates.

d) Describe your involvement, if any, in respect of pest control management in relation to pigeons at QEUH/RHC? Describe your involvement, if any, in respect of instructing works to be carried out in respect of pigeons at QEUH/RHC?

A I had no involvement.

e) 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 Cryptococcus was found in ventilation plantrooms in the QEUH. It is airborne and can get into the hospital via ventilation systems so there was a general fear that it could contaminate wards. Cryptococcus was isolated in Wards 6A. It is thought that Pigeon Guano can be attributable to this.

f) Describe your visit to the plant rooms? When did you go, why did you go at that time, what did you see? Did cleaning take place before the visit – if so why – what was evidence prior to the cleaning?

A I visited several plantrooms when it was highlighted about pigeon droppings (Guano). On my visits I saw some evidence of guano but this was limited. I was informed that cleaning had not taken place before my visit.

g) Do you recall photos – what did they show?

A I recall a number of photographs of Guano in plantrooms.
Describe what the pictures showed. Did this concern you? What action did you take following being show these pictures?

h) Describe your involvement, if any, in air sampling from the plantrooms. When was this carried out? Why was this carried out? Was this routine carried out prior to December 2018, if not, why not? Describe any concerns you had in respect of the air sampling results from December 2018, or at any other time?

A I was not involved in air sampling of plantrooms. This would have been an operational estates task in conjunction with Infection control.

i) Describe your involvement, if any, with cleaning of the plant rooms at any time but in particular, in early 2019. Including instructing cleaning to be carried out, to whom, why and when? Was the cleaning more specifically done in 2019?

A I was not involved. The instructions to do this work was, I believe carried out by Operational Estates.

j) If cleaning was carried out, why was it carried out?

A I can only assume it was to remove pigeon droppings

Refer to document from GP Environmental Ltd dated 8th January 2019:

275. What concerns, if any, did you have on reading that there was *'a very large population of feral pigeons present at various locations…*'

A I had no visibility of this particular paper. As I recall at that time

276. What concerns, if any, at the time did you have about the *'Significant Health and Safety Issue'* what further action was taken, was this escalated? If so to whom? Were HPS/ HFS involved? If not, why not? What concerns, if any, in this regard do you have now?

A I did not have visibility of this paper and I do not know whether this Feral Pigeon Trapping Programme took place. This would have been managed by Operational Facilities.

277. What action, if any, was taken follow receipt of this document from GP Environmental Ltd?

A I had no visibility of this paper and I was not party to any actions, however what I recollect is that a number of plantrooms were cleaned using both GP Environmental and NHS staff.

278. What methods of cleaning were used by GP Environmental Ltd and why? Did this resolve the issue(s)?

A I do not know the answer to this question as this was managed by Operational Estates and Operational Facilities teams.

279. Were GP Environmental Ltd instructed previously in respect of pigeons at QEUH/RHC, if so when, and by whom?

A I cannot answer this question as this would have been managed by Operational Estates and Operational Facilities teams.

a) What concerns, if any, did you have about water cascading down the walls? Is so, why and what was the consequence of this?

A I cannot recollect this issue

b) Discuss your involvement at the Cryptococcus Sub-Group Meetings - actions taken, internal escalation: HPS involvement.

A I had no involvement in these groups

c) What, if any, external reporting occurred?

A None that I am aware of.

d) PAGs/ IMTs/ AICC and BICC involvement.

A I was involved in IMT's around Wards 2A & Wards 6A which discussed cryptococcus

e) What steps were taken in response/ precautions put in place?

A Action plans for both IMT's were put in place to address cryptococcus and other issues within the wards

f) Did you read John Hood's report?

A No, I was not given visibility of the report

g) When did you read John Hood's report?

A See k) above

h) What observations, if any, did you make after reading John Hood's report? What actions were taken following the John Hood report?

A See k) above

i) What else could have been done? How could matters have been handled differently? What concerns, if any, did you have about how matters were dealt with?

A I cannot answer this question

Staffing and Working Environment

280. 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 staff came from Old Victoria Hospital, Western General Hospital and existing staff from Southern General Hospital

281. 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 had been aware of concerns around staffing & workload from Ian Powrie who was the Sector Estates manager at the time.
Please describe what these concerns were, what impact, if any these concerns had on the operation of estates, and what action, if any, you took in response to these concerns?

282. 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 Team 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 had no visibility of any of this as this would be down to the Operational Estates Managers

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

A This would be down to the Senior Operational Estates Managers and GM(Facilities) at that time.

284. What concerns did you have regarding staffing levels?

A I had no visibility of staffing levels
Standing your lack of visibility, did you have any concerns regarding staffing levels?

285. 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 I was not 'Operational' but was aware from colleagues that the workload was very high

286. 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 This would be down to Operational estates which I was not part of.

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

A Although I was not involved in the operational day to day workplace environment, I was aware that it was extremely busy.

288. 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 part of the handover process

289. 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 was not part of the handover process

290. Were the concerns raised by infection control colleagues regarding the general build of QEUH/RHC taken seriously? What action did you take in response to these concerns, not already mentioned in your answers? Refer to Estates Team bundle document 100 and 116 in considering your answer.

A Whilst not privy to any of the meetings between estates and infection control colleagues about the QEUH/RHC build, I would reply that estates department have always taken the concerns of out ICT colleagues seriously no matter what project or area of work.

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

A No

Declaration

292. 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.

293. The witness was provided the following Scottish Hospital Inquiry Bundles / documents for reference when they completed their questionnaire statement (Appendix A)

294. The witness introduced / provided the following documents to the Scottish Hospital Inquiry for reference when they completed their questionnaire statement (Appendix B)

Appendix

A48807918 – Bundle 1 – Incident Management Team Meeting Minutes (IMT Minutes)
A48807956 – Bundle 4 – NHS Greater Glasgow and Clyde – Situation, Background, Asse
A43293438 – Bundle 6 – Miscellaneous Documents
A48806285 – Bundle 8 – Supplementary Documents for the Oral Hearing commencing on 12 June
A48808157 – Bundle 9 – QEUH Cryptococcus Sub-group Minutes
A47395429 – Bundle 10 – Water Technical Group/Water Review Group Minutes
A48808145 – Bundle 11 – Water Safety Group
A48807604 – Bundle 12 – Estates Communications
A48245730 – Bundle 18 – Documents referred to in the export report of Dr J.T. Walker
A48408984 – Bundle 19 – Documents referred to in the Quantitative and Qualitative Infection Link export reports of Sid Mookerjee, Sara Mumford and Linda Dempster
A49267796 – NHS – Karen Connolly – Feral Pigeon Infestation – QEUH - 08012019

Appendix B

A49382482 – Attachment 1 – CV dated June 2024

A49382484 – Attachment 2 - General Manager Estates Lead NHSGGC Jan 2015 (10)

A49382486 – Attachment 3 - Ward 6A Action Plan

A49382487 – Attachment 4 - Enhanced ClO2 treatment schedule of affected areas (2)

A49382489 - Attachment 5 - QEUH 1 2ppm Clo2 Dosing Proposal v2

A49382490 - Attachment 6 - WTG Water Review Meeting 21st June 2019

A49382491 - Attachment 7 - WARD 6A Estates Action Plan - Ongoing Compliance Works - 20 Aug 19

A49382492 - Attachment 8 - Water Quality Incident Action Plan 2018

A49524265 – Legionella and water hygiene control within hot and cold water systems

A49524266 – Legionella control refresher and update

A49524267 – Legionella management for water systems SHTM-04-01

A49524270 – Level 3 legionella control responsible persons

A49532696 – Authorised person ventilation htm-03-01

A49532703 – Competent person ventilation htm-03-01

A49532709 – Authorised person ventilation refresher htm-03-01

Alan G Gallacher

[redacted]

PROFILE

I am a professional engineer having been employed within the Ministry of Defence, Local Government and Healthcare sectors within the field of expertise of property management, operational maintenance, compliance, fire, Net Zero and delivery of capital projects. I am currently employed by NHS Greater Glasgow & Clyde (NHSGG&C) as the Head of Corporate Estates

I have over 37 years experience in working in a senior management role in various positions but all within the property management field which is where I am passionate.

I am an enthusiastic individual who can bring a wealth of experience in both operational and strategic estates management including bringing to the fore the whole issues around sustainability, its impact on the organisation and how best to deliver the tough energy and carbon targets expected by both the Scottish and British Governments against ever diminishing revenue and capital budgets.

I strive on staff development ensuring that the organisation can, where practicable, develop from within. This would assist and contribute enormously towards any future succession planning requirements needed by the organisation due to retiral's etc and which in turn will also lead to staff satisfaction and better relations with union colleagues.

KEY ACHIEVEMENTS

- Increased the Legislative Compliance Level of NHSGG&C to 85% (from 60%) therefore reducing the impact of NHSGG&C breaking the law;
- Implemented Net Zero energy & carbon reduction schemes within a number of large acute and smaller sites which resulted in a substantial reduction in the energy consumption and by relation the carbon footprint of these sites. A small number of case studies have since been produced on the back of these schemes;
- Managed the operational budgets of the Clyde Sector successfully ensuring no overspend situation arose at year end without prior warning and approval of senior financial accountants;
- Overseen the management of NHSGG&C's utilities budget;
- Led in the successful implementation and appointments of estates apprenticeships within NHS Tayside and most recently at NHS Greater Glasgow & Clyde;
- Produced a 'career pathway' which would allow NHS Staff in the lower bands of estates (i.e. unskilled) to move up the pay bands by up-skilling accordingly. This subsequently won a national award in 2013.

EMPLOYMENT EXPERIENCE

NHS Greater Glasgow & Clyde **February 2020 to present**

Head of Corporate Estates

- Provision of technical expertise leadership planning and communication on policy development and implementation impacting on the safe operation of the Board service provision (statutory and mandatory compliance).
- Be responsible for the management of Contractors and project manage minor works schemes of Capital and Revenue developments involving feasibility studies, production of specifications and drawings, preparation of quotation/tender documentation, evaluation of returned quotations/tenders and the management and control of the Contractors throughout the duration of the project to ensure compliance with specification and all

statutory obligations. This will include budget management and ensuring compliance with SFIs.

- To lead and coordinate the Boards approach to Sustainability, Carbon Management, Energy Management and Environmental initiatives.
- To lead and coordinate the Boards approach to Fire Management, Asbestos Management and Asset Management (ie CaFM).
- To lead the development and implementation of robust standards and policies to ensure consistent working practice throughout Estates, including Statutory compliance, Planned Maintenance Schedules and robust financial management
- Work with Estates operational management to develop practical workable governance structures.
- To ensure compliance with national and statutory legislation and local policies in terms of Health and Safety for staff and others.
- Contribute to the development, implementation and ongoing review of new and improved processes to reflect compliance to SHTM's with the introduction of national and statutory compliance throughout the Board.
- Advise on PPI/PFI Hard FM compliance and professional service delivery standards
- Participate in Business case preparation as required.
- Liaise directly with the Boards Asset Team ensuring that information retained within all data bases informing decision making reflect the current position
- Work in conjunction with Senior SEHD and HFS staff to develop / establish and deliver effective national Strategies and Policies for Operational Estates and Environmental matters.
- Effectively work with other Health Boards / Agencies and contractors to develop and manage local national and regional projects as required.
- Effectively represent NHSGG&C on national and Regional Projects.
- Liaise with other Health Boards and Agencies to effectively deliver best practice in NHSGG&C.

NHS Greater Glasgow & Clyde **August 2015 to February 2020**
General Manager (Estates)

- Lead on the Operational Estates Strategy for NHSGG&C aligning it to the Boards Clinical & Property Strategies;
- Provision of technical expertise leadership planning and communication on policy development and implementation impacting on the safe operation of the Board service provision (statutory and mandatory compliance).
- Coordination of effective recruitment, management and development of NHSGG&C operational estates staff ensuring clear roles, responsibilities and accountability are in place to provide value for money, comply with standing Financial Instructions, KPI's statutory and mandatory Professional standards.
- Development of workforce planning tools and arrangements supported by demonstrable changes in culture to patient focussed / customer focussed delivery of service.
- To lead and coordinate the Boards approach to Sustainability, Carbon Management, Energy Management and Environmental initiatives.
- Deliver single system working approach to Estates
- Advise on PPI/PFI Hard FM compliance and professional service delivery standards
- Development of effective and robust reporting mechanisms for all aspects of operational estates.
- Participate in Business case preparation as required.
- Liaise directly with the Boards Asset Team ensuring that information retained within all data bases informing decision making reflect the current position
- Work in conjunction with Senior SEHD and HFS staff to develop / establish and deliver effective national Strategies and Policies for Operational Estates and Environmental matters.
- Effectively work with other Health Boards / Agencies and contractors to develop and manage local national and regional projects as required.
- Effectively represent NHSGG&C on national and Regional Projects.
- Liaise with other Health Boards and Agencies to effectively deliver best practice in NHSGG&C.

NHS Greater Glasgow & Clyde **September 2011 to August 2015**
Sector Estates Manager (Clyde)

- Lead Estates Manager for the Clyde Sector of NHSGG&C taking responsibility for the safe maintenance, operation and use of 2 acute hospitals and 7 Health Centres along with the Largest NHS laundry and Call Centre in Scotland. This brings with it an operational maintenance budget of £3m, 8 senior managers and 65 tradespersons;
- NHSGG&C Lead Manager for Energy & Carbon Management taking 'Boardwide' responsibility for this subject including driving solutions to support NHSGG&C to meet government energy and carbon targets. This brings along with the position the management of the Utilities Budget of £35m per annum, a £1m energy projects budget and 3 Energy Managers. I interface strategically with external agencies including Health Facilities Scotland (HFS), Resource Efficient Scotland (RES), Scottish Futures Trust (SFT) and the Scottish Government (SG) around energy and environmental strategic issues including funding;
- Lead Manager within NHSGG&C for Sustainability ensuring NHSGG&C environmental management system (EMS) remains accurate and robust through chairing the relevant Steering Group and ensuring regular audits are put in place;
- Lead Manager for estates staff development including fronting and supporting the estates 'apprenticeship' programme;
- I am part of the Senior Management Team (SMT) for estates ensuring all important strategic issues are dealt with on time and to agreed deadlines. This can include such matters as Asset Management, Tendering Procedures, Planning, Business Continuity Plans, manpower resources etc.
- I am chair of a number of NHSGG&C strategic groups including Water Safety; Greencode (i.e. environmental management system); SCART (i.e. statutory compliance); Staff Development including Apprenticeships, CAFM. I also represent NHSGG&C at a number of senior executive meetings, (both technical and non-technical).
- Represent NHSGG&C facilities team on numerous 'external' national groups which oversee the performance of NHSScotland on activities such as:
    - Hard FM activities;
    - Sustainability (including energy and carbon management);
    - Legislative Compliance;
    - Asset Management;
    - Staff development;

NHS Tayside **January 2006 – September 2011**
Engineering Maintenance Manager

- Lead Engineer at Ninewells Hospital in Dundee taking responsibility for the safe maintenance and use of the site within the mechanical and electrical areas of work. This brought along with the position the responsibility of managing an operation maintenance budget in the region of £2.2m, 6 senior engineers and 58 tradespersons
- Lead Manager for all Energy Management issues within NHS Tayside addressing many of the roles I currently carry out at NHS GG&C.
- Manage the minor works upgrade projects within the hospital ensuring they were delivered on time and in budget.
- I interacted with managers and senior managers of all grades up to Chief Executive and Director Level on all issues relating to operational and strategic issues around the Mechanical and Electrical Services of Ninewells Hospital.

Highland Council **January 2004 – December 2005**
Estates Engineering Manager

- Lead engineer for ALL Highland Council properties from large office blocks to small community centres. I had 4 estates managers working directly for me based in 4 different areas of the Highlands. I managed an operation budget on £1m which included using local companies to carry out all remedial works required;

- I produced specifications for tendering on ALL mechanical, electrical and grounds services including plumbing, drainage etc;
- I interacted with the local senior managers around all aspects of services which affected their properties.
-

Ministry of Defence, Paderborn, Germany **January 2004 – December 2004**

Garrison Establishment Works Consultant

- I was the Garrison Engineering Works Consultant involved in all aspects of delivering projects, ensuring maintenance was carried out and that the Garrison was technically compliant;
- I produced feasibility studies on all proposed estates development programmes to ensure value for money and achievability;
- I produced an in-year, 3 year and 5 year plan for estates development to enable funding to be sourced accordingly to support these plans.

EDUCATION & TRAINING

Glasgow Caledonian University
BEng (Honours) in Mechanical and Electrical System Design
1998 - 2004

I have attended numerous technical training courses to ensure my technical knowledge is always up to date.

I am currently participating on an 'accelerated' management course leading to my Diploma in Management and ultimately become a Chartered Manager.

PROFESSIONAL MEMBERSHIPS

Member of the Institute of Mechanical Engineers (IMechE) since 2002 (Chartered Engineer)

INTERESTS

I enjoy golf, football, watching rugby, reading and gardening

References available on request