Scottish Hospitals Inquiry
Witness Statement of
Alasdair Fernie

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

Personal Details and Professional Background

1. Name, qualifications, chronological professional history, specialism etc – please provide an up-to-date CV to assist with answering this question. Please provide details of your role working for Multiplex Construction Europe Limited previously, Brookfield Construction (UK) Limited until 21 February 2011 and thereafter Brookfield Multiplex Construction Europe Limited until 31 August 2016 (hereinafter referred to as 'Multiplex') during the time Multiplex was appointed as Contractor in respect of QEUH/RHC, providing details of when you started and left this role, your responsibilities.

A. My name is Alasdair Gordon Fernie. My date of birth is [redacted], and my address is c/o Multiplex Construction Europe Limited, 99 Bishopsgate, Second Floor, London, EC2M 3XD. I have a HND in Construction Management and a BSc (Hons) in Building Engineering & Management.

Project Experience up to starting as Project Manager for Multiplex.

2007 – 2010 | Balfour Beatty | Project Manager / Project Director | Victoria Hospital Glasgow

The Victoria Hospital Project was a state of the art highly serviced medical facility designed and built as a first- generation ambulatory care facility in Scotland. The construction value was £110M and it was one of the last major hospital facilities to be constructed under the Private Finance Initiative (PFI) in Scotland.

I was responsible for managing the design team through the planning and pre-construction stages as well as the completion of the construction stage through to handover. The project was delivered successfully.

2001 to 2006 – Balfour Beatty, Project Manager

Health Facility for the University of Glasgow Commercial Office blocks, Glasgow Police Training College, Glasgow

1997 to 2000 – Jarvis, Project manager

Health Facility for University College London

1995 to 1997 – Wates Construction, Site Manager

Graduate Programme

Prior to going to University, I had completed my apprenticeship as a City and Guilds Carpenter

Qualifications

1993 | HND Construction Management

1995 | BSc. (Hons) Building Engineering & Management

2005 | MCIOB (Member Chartered Institute of Builders)

2013 | FCIOB (Fellow Chartered Institute of Builders)

2015 | MRICS (Royal Institute of Chartered Surveyors)

I am a Fellow of the Chartered Institute of Builders (FCIOB) and a member of the Royal Institute of Chartered Surveyors (MRICS). I was involved in the Project from around February 2011 until its practical completion on 26 January 2015. When I joined the Project, it was as a Construction Project Manager for the Adults and Children's Hospital buildings. This area covered the substructure and superstructure of the building and as the project progressed, I would then manage the building envelope and the internal fit out. The Energy Centre was not part of my works package at that time. In September 2014 I was promoted to the position of Project Director following the sudden passing of Mr Mike Sharples the Project Director. I reported to Mike when I started as Project manager. On being promoted to Project Director I then reported to Ross Ballingall.

The role of the Construction Project Manager is to oversee all aspects of the physical construction of the project (within their area of responsibility regarding the building), ensure the works are completed safely, on time, within budget and to the required quality and standards that are set out in the design drawings and specifications. As the project and number of construction workfaces and activities I managed a larger team of construction managers and project managers. This would break down in to 3 main areas of the Adult Tower Works, The Adult Podium Works and Children's building works. Each area was managed by a Project Manager responsible for the delivery and coordination of the construction works within their zones and overall area of responsibility. There were also areas like the main adult's atrium space that was under the control of one Project manager and their team.

The role of the Project Director is to lead a team of contractors, designers, engineers and the project team made up of multiple professional teams and individuals. The Project Director reports progress to the clients and internally to Multiplex at board level. When the project achieved Practical completion, I was involved for a short period after this to manage the completion of the defects and assist the NHS team where possible in the Migration Strategy. I was moved to a new project some months after PC with the day to day responsibility of the defects then being managed by one of the Multiplex managers that has been involved with the delivery of the project for a number of years previous to my moving to the next project.

2. What previous experience or training, if any, did and you have to working as Director of Construction? How, if at all, did this experience serve you for the role in respect of the QEUH/RHC?

A. I have attached an outline setting out my experience and the projects and my roles on each prior to starting at Project Manager on the QEUH/RHC.

3. Please provide details of any other healthcare projects that you were involved in prior to the QEUH & RHC.

A. Victoria Hospital, Glasgow. University of Glasgow health facility building, Glasgow. UCLH Health Facility Building, London.

4. **Please refer to page 3 of Bundle 43, Volume 3, Document No. 12, Page 493**. The Inquiry understands that Multiplex refers to itself as having 'Specialist Contractor and Design Team staff'. Please explain what having a 'Specialist Contractor and Design Team' means, what this entails, what necessary qualifications/experience the team holds, the relevance of this specialism relative to building healthcare premises.

A. Specialist Contractor and Design Team means a contractor that has the experience within its supply chain and its staff to manage the construction of a healthcare project such as a hospital. In respect qualifications these are numerous across all the disciplines that make up the delivery team covering an enormous number of disciplines and specialists/professions. The above document (10.0 PEP) was written prior to my involvement with the Project. As such my statement above related to an in general statement.

5. On the Multiplex website it states:
'We [Multiplex] have a long track record of delivering world-class hospitals and aged care facilities that enhance wellbeing and safeguard the day-to-day running of existing operations…

Our teams are skilled in the detailed planning and robust scenario-testing required to ensure safety and surety of delivery in highly sensitive environments….

We are experts in delivering state-of-the-art medical facilities in collaboration with our specialist supply chain. Our UK portfolio includes the largest hospital campus in Europe, Scotland's largest children's hospital, and luxury later living accommodation in Chelsea, London.'

a) In delivering world-class hospitals, please explain the level of knowledge and understanding of healthcare regulations and guidance expected of Multiplex staff?

A. Multiplex Staff would be informed by the Specialist design teams and specialist subcontractors. Staff would also work to the relevant specification and requirements unless there had been an agreed derogation to the specifications or technical manuals and guidance.

b) Explain your personal knowledge, understanding and any relevant qualifications in

healthcare regulations and guidance?

A. Throughout the project. From when I started as a Project Manager and finishing as Project Director, I was able to access any regulations required be it directly or via the supply chain. My understanding of the regulations is that these are incorporated into the design and specification. This is then checked for compliance during the design sign off and construction sign off process. My qualifications are specific to the construction industry covering the disciplines of the construction/built environment and are set out on my CV.

c) Please explain your understanding of the importance of compliance with healthcare regulations and guidance for infection prevention and control?

A. My understanding is that compliance is of the upmost importance for the building success and end user success and ultimately patient and staff care. In some instances, there are agreed derogations/changes to the regulations on a project. These are reviewed with the client and normally their compliance team. Signed off and then incorporated into the design and specification.

d) Who from the QEUH team provided Infection Control input and at what stage?

A. I do not recall specifically who provided this information but there was an infection control team that worked with the NHS GGC project team. This would have started prior to my involvement with the project at the design stage. And continued through the duration of the project until completion David Louden or Alan Seabourne may be better placed to answer this.

Appointment as Contractor

6. The Inquiry understands that Multiplex was appointed as Contractor to undertake the works for the QEUH & RHC. The works under the Building Contract were to be carried out in stages: Stage 1 (Construct Laboratories), Stage 2 (Detailed design of hospital to FBC submission), Stage 3 (Construction), Stage 3A (Demolition surgical block and landscaping) **(Please refer to Bundle 17, Document No. 12, Page 613)**

a) Describe the appointment process leading up to the Multiplex's appointment as Contractor.

A. I was not working for Multiplex at the time this appointment was made. I joined the

project in Feb 2011.

b) Describe your role and remit, in particular provide details regarding Multiplex's role, responsibility and authority in respect of the design and build of QEUH/RHC.

A. I joined the project as a Project Manager for the Adult and Children buildings. My role was to manage the construction process of both of these buildings, which at this time excluded the Energy Centre, external landscaping and link bridges. I have set out my responsibilities during this time in answer A1. When I joined the project, I would not have in the first 12 to 24 months have been involved in the design of the building other than perhaps refining some structural elements during the coordination of the sub structure, structure, facades and internal fit out. In September 2014 I was promoted to the role of Project Director. At this time the design was mainly completed so was responsible for coordinating the completion of the overall project. Multiplex employed a large number of specialist design teams to provide the design for the hospital and coordinated the design programme with its Design Management team.

c) Who was responsible for ensuring that Multiplex complied with the terms of the contract with NHS GGC in respect of the QEUH/RHC project?

A. This responsibility was across all of the disciplines involved with the project so many individuals were involved with this process.

d) What responsibility, if any, did Multiplex have for ensuring that the built hospital complied with relevant guidance such as SHTM and SHFN?

A. Multiplex would be responsible for making sure the design and construction was compliant with the hospital standards and building standards or working to an agreed change/derogation to this. This would be reflected within the contract.

e) Describe how derogations from the Employers Requirements were signed off by NHS GGC. What role, if any, did you have in respect of this? Who was responsible for ensuring that the Board signed off on derogations?

A. From memory, the derogations would have been signed of prior to me becoming PD in September 2014, as such I do not have the detail behind this and do not recall having any significant involvement in derogations either as Project Manager or the Project Director, I would have viewed this as contracted works and would have worked to this.

f) Describe your working relationship with NHS GGC prior to appointment, had you worked with any members of the NHS GGC Project Team prior to appointment, if so whom and when?

A. Before joining Multiplex, I worked for Balfour Beatty. I was Project Manager and then Project Director for the ACADS Victoria Hospital in Glasgow. I worked with Karen Conelly from the estates department during this time. Karen was responsible for the migration of staff from the existing Victoria Hospital to the new hospital. This I believe would have been 2 years before working for Multiplex

g) Describe your working relationship with NHS GGC during the terms of your appointment, including day-to-day dealings with the NHS GGC Project Team, details of who you worked with and in respect of what matters?

A. As project manager I worked with many of the NHS GGC project team. I shared the same office building so would see the staff from the NHS GGC Project Team on a daily basis and would also at times take the staff on site to see the progress of the building programme. As time on the project passed and the project size and scale grew. I would attend meetings with the NHS GCC Project Team to report progress of the building programme across the Adult and Children's buildings. I reported this to Alan Seabourne and then David Louden (Normally with the Multiplex Project Director, Mike Sharples in attendance during the monthly project meetings and at times attended numerous meetings in relation the construction updates with the NHS GGC project team discussing site-based issues. Moving to the role of Project Director my relationship with the NHS GGC project team I believe was professional and focused on working together, towards delivering the project as a team.

h) Describe your working relationship with Currie & Brown prior to appointment, had you worked with any members of Currie & Brown who worked on QEUH/RHC prior to appointment, if so whom and when?

A. I did not work on the project prior to the appointment as joined Multiplex around Feb 2011. I do not recall working with any of the Currie & Brown managers, however, I may have during the ACADS Victoria hospital project

i) Describe your working relationship with Currie & Brown during the terms of your

appointment, including day-to-day dealings, and details of whom you worked with?

A. The relationship was professional. This led to a good communicative environment during meetings. I would attend meetings that the Currie & Brown team would be in attendance like the progress review meetings. This would be more so when I was promoted to Project Director. I do not recall all the names of the Currie & Brown managers, but David Hall and Douglas Ross would have been my main contacts

j) Describe Currie and Brown's role and responsibilities in respect of the project. Are you aware of any changes to their role during the project, if so, please explain.

A. From memory, they had a number of managers working with the NHS team. They reported on cost and project management. They were involved in the majority of the senior team meetings when Multiplex reported on progress of the project and early warning meetings. I do not recall any changes during my time involved with the project.

k) What role, if any, did Currie & Brown have in ensuring contractual compliance?

A. My recollection is that the members of the C&B team would carry out reviews and give advice to the NHS project team and were I believe involved in reviewing the design process leading to approved drawings for construction.

l) Describe your working relationship with Capita prior to appointment, had you worked with any members of Capita who worked on QEUH/RHC prior to appointment, if so whom and when?

A. I did not work on the project prior to the appointment as joined Multiplex around Feb 2011. I do not recall working with any of the Capita managers prior to me joining the project, however, I may have during the ACADS Victoria hospital project.

m) Describe your working relationship with Capita during the terms of your appointment, including day-to-day dealings, and details of whom you worked with?

A. The relationship was professional. This led to a good communicative environment during meetings In General, I would not meet Capita on a week to week bases and my interactions with the Capita team would be more likely to be that at a meeting with the MPX and NHS delivery team like a progress meeting or early warning meetings. I very rarely had individual interaction with Capita team other than if we passed in the

office or out on site. I would often ask then how things where and if they were happy with how the project was progressing during these informal meetings but most of my interaction was at formal meetings.
Main contact would have been John Redmond

n) Describe your understanding of Capita's role and responsibilities in the project.

A. From memory, Capita had a number of managers working on behalf of the NHS GGC project team. These managers were on site daily and produced monthly reports that were issued at the main progress meetings between MPX and the NHS GGC project team. These reports included commentary on quality issues on site which would in turn be reviewed by the MPX team and actioned where required. The Capita managers provided commentary on quality and compliance for the onsite works across all of the construction activities/works throughout the duration of the project. The Capita managers were also present for the testing and witnessing of the commissioning results and this covered the main buildings and the Energy Centre this was in conjunction with the Multiplex commissioning management team.

o) What role, if any, did Capita have in ensuring contractual compliance?

A. I do not know their contractual requirements in relation to this.

p) Who did you report to on a day-to-day basis?

A. When I joined the project in Feb 2011, I reported to the Project Director Mike Sharples and then from September 2014 I reported to Ross Ballingall. When reporting the project to the NHS, I would report to David Louden

q) In respect of other contracts and sub-contractors, explain which contractors and sub-contractors Multiplex had worked with prior to appointment, describe your day-to day working relationship with them, and details of whom you worked with?

A. I do not recall the full list of the subcontractors MPX would have worked with before, however, I think Mercury, Structal, Prater, Astins had worked on previous MPX projects. From memory the relationship with the managers of the supply chain across the project was professional and conducive to working together to deliver the project.

r) Describe Mercury's role and responsibilities in respect of the project.

A. Mercury's role and responsibilities were for the management of the MEP installation across the project. This involved managing the design development of the consultant's design into what is known as shop or working drawings, having these agreed and signed off, procuring the material and labor and installing these materials then testing the materials / equipment against the required outputs and agreed design and to, and achieving the contracted requirements.

Review of the 'Works Information'

7. What information was provided to Multiplex to assist with the planning and costing of the project to enable Multiplex to prepare the Contractor's Proposals?

A. This information was issued to MPX prior to my involvement with the Project for MPX. The team involved in the completion of the FBC would be better placed to answer this.

8. The Inquiry understands that NHS GGC provided a list of guidance documents (e.g. SHTM/SHPN) that the design had to comply with, please confirm what elements of the design contained in the Contractor's Proposals, did not comply with guidance, and why and how any non-compliances were highlighted during the tender process and ITPD process?

A. This information was issued to MPX prior to my involvement with the Project for MPX. The team involved in the completion of the FBC would be better placed to answer this.

9. What consideration was given to the impact of any non-compliances on patient safety/infection prevention? At what point, if any, was advice sought from Infection Prevention and Control Staff? If advice was sought, from whom was it sought and what was the advice given?

A. Infection prevention and the hospital design where in general I believe completed prior to me joining the project. I do not know dates as to when the Infection Prevention and Control Staff were involved with the design process. I was aware of their involvement during the construction process.

a) In what ways were Infection Prevention and Control Staff involved in the construction process? Please provide details.

A. They were I understand involved in the design process reporting to the NHS GGC project team. I believe they were involved in the sample approval process. The sample approval room was set up on site next to the NHS GGC project team office to allow inspection of all the building elements. This allowed the NHS GGC project team to have the teams reporting to them or providing support to view the proposed materials and products like window finishes with interstitial blinds and proposed taps for the toilets through to light fittings and ventilation grills etc. There was a very large selection of samples provided and subsequently approved due to the size if the project. I believe the infection control were on site during the construction process. My own involvement with the infection control team was very limited due to the timing of each of my roles.

b) Who from NHS GGC infection prevention and control was involved in the construction process?

A. I am unable to provide any real detail here but, believe the main input for the infection control team was carried out prior to me taking over as Project Director. Any infection control matters raised when I was the Project Director would have been through the NHS project team at early warning meetings or project reporting meetings. David Louden may be better placed to advise on this.

10. Did Multiplex propose any changes to the exemplar/reference design? If so, please provide details of the changes and why?

A. I was not involved in the project at the stages (having joined in February 2011) where changes to the exemplar would have been suggested or derogated into the contract and do not believe I was involved in any proposed design change decisions when I was project manager. The team involved in the completion of the FBC would be better placed to answer this.

11. The Inquiry is aware of the agreed ventilation derogation recorded in the M&E Clarification Log. **(Please refer to Bundle 16, Document No. 23, Page 1662)**

a) Describe Multiplex's role in respect of the proposals leading to the ventilation derogation.

A. I was not involved with the project at this stage having joined in February 2011. The

team involved in the completion of the FBC would be better placed to answer this.

b) What was the reason for the ventilation derogation?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

c) Who drafted the M&E Clarification Log and who was responsible for updating the Log? Following updates to the log, please provide details of who the log would have been distributed to?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

d) What was the scope of the agreed ventilation derogation recorded in the M&E Clarification Log? In particular, was it restricted to general wards only? If so, (a) how is this interpretation evidenced within the documentation; and (b) where is the specification located for areas that required specialist ventilation and isolation rooms?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

e) At the time what concerns, if any, did you have regarding the derogation? Did you raise any concerns, if so with whom?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this

12. Refer to the ZBP Ventilation Strategy Paper dated on or around 15 December 2009? **(Please refer to Bundle 16, Document No. 21, Page 1657)**

a) What was your/Multiplex's involvement in this document being instructed?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

b) What was the intended purpose of this document?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

c) When did you first have sight of this document?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this. I do not recall when first seeing this document.

d) Who was the document shared with?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

e) How was Multiplex satisfied that the proposals set out in the above document were suitable for use in a healthcare setting?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

f) What concerns if any did you have on reading this document? If so, did you escalate these concerns and to whom?

A. I do not recall when I seen the document or what concerns I had if any at this time.

13. Are you aware of any risk assessments, whether in compliance with the standards in HAI Scribe or otherwise, that NHS GGC carried out in respect of the change in the ventilation strategy that appears to follow the ZBP Ventilation Strategy Paper dated 15 December 2009? **(Please refer to Bundle 16, Document No. 21, Page 1657)**

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

14. Describe the advice sought, if any, or the involvement, if any, of GGC Infection Prevention and Control staff in respect of the change in the ventilation strategy that appears to follow the ZBP Ventilation Strategy Paper dated 15 December 2009?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

15. Who from the GGC Project Team and Board were aware of the ventilation derogation?

A. I was not involved with the project at this stage having joined in February 2011. The

team involved in the completion of the FBC would be better placed to answer this.

16. How was the ventilation derogation communicated to the wider Project Team?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

17. What impact did the requirement for a BREEAM excellent rating have on Multiplex's proposed design in particular in respect of ventilation?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

18. What impact did the energy usage target of no more than 80kg of CO2 per square meter have on Multiplex's proposed design?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

a) When, if at all, did you become aware of the ventilation derogation? Who informed you of the ventilation derogation?

A. I do not recall.

b) Upon becoming aware of the ventilation derogation, what concerns if any did you have? If you had any concerns what action, if any, did you take?

A. I do not recall having any concerns. The MEP Multiplex team would have been working to a set of agreed drawings. These drawings would not have reached the construction team if they had not been agreed by the MPX and NHS GGC project teams during the design review periods. When these drawings where agreed they would have been viewed as the contractual requirements for the works to be installed to and completed against. As such there would be no concerns when proceeding with these works.

c) Upon becoming aware of the ventilation derogation, what assurances, if any, and from whom, did you seek in respect of the ventilation derogation?

A. As stated above, this information would have been through the approval process and sign off process prior to the construction delivery team implementing the works. As such that information would have been taken by me and the construction delivery team

as the requirements for that sections / area of works.

d) At any time did you seek assurance that a risk assessment in respect of the ventilation derogation had been carried out and from whom did you seek this assurance?

A. No, as set out above, the information would have already been through a process being agreed by the MPX and NHS GGC project teams. This was what the NHS GGC team had requested so risk assessments would I believe have been carried out, by the NHS GGC project team and the medical specialists for that area/department prior to implementing the derogation.

e) From the point you started on the QEUH/RHC project in your role at Multiplex, what importance and value, if any, was attached to achieving BREEAM excellence?

A. It was the same as achieving all of the building requirements. There was no significant emphasis on BREEAM being achieved over any other building performance requirements, we worked to complete the works to the contracted requirements.

f) Was the ventilation 'fixed' when you came on board?

A. If the question relates to the design of the ventilation being fixed then I do not recall at what stage the ventilation was fixed. I was not from memory involved in any detailed design discussions surrounding the ventilation as this was managed by the Multiplex MEP team. Darren Pike MEP Manager or Darren Smith Design Manager may be able to provide more detail.

g) You must have understood what you were was building and that the ventilation was not in compliance with SHTM presumably? Please explain your position.

A. As set out in the answer above, the construction team take the information that is provided throughout the design approval process and proceed on that basis. I did not consider any of the works being constructed to be non-compliant, I considered them to be approved under the contract and this is what MPX and NHS GGC were asked to do.

19. The Inquiry is aware that Chilled Beam Units were proposed by Multiplex and accepted for use through the QEUH/RHC. What was the basis for Multiplex proposing to use Chilled Beam Units? Is the use of Chilled Beam Units appropriate throughout

hospitals? At the time, what concerns, if any, did you have regarding the use of Chilled Beam Units?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this. The question of if chill beams are appropriate throughout hospitals would be best answered by the Designers ZBP. I had no reason to have concerns over the use of chill beams as no concerns had been, from memory, brought to my attention.

20. Would it have been possible to achieve the sustainability requirements (BREEAM excellent rating and 80kg of CO2 per square meter) if Chilled Beams were not selected for use in the QEUH/RHC?

A. I do not know.

Full Business Case

21. Under 'Services Systems' confirmation was required "that the design fully complies with the requirements of the Employers Requirements, M&E appendices 1 to 6, all HTM's, HBN's, SHTM's and current legislation". The Inquiry is aware of several departures from SHTM 03-01 Guidance in relation to air change rates, pressure differentials and filtration requirements. There was also a variation to the primary extract arrangement for PPVL isolation rooms from that set out in SHPN 04 Supplement 01. Was Multiplex aware at the time, of these non-compliances? If so, please confirm how Multiplex communicated these non-compliances to the NHS GGC Project Team. If no action was taken by the NHS GGC Project Team what obligations, if any, did Multiplex have to report matters further and to whom?

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

a) Please refer to **Bundle 12, Document No.96, Page 785**. In respect of the variation to the primary extract arrangement for PPVL isolation rooms from that set out in SHPN 04 Supplement 01 and you provide advice in this regard to David Loudon of NHS GGC. Explain your involvement in this matter. What concerns if any did you have regarding this variation?

A. This was after the project was completed, however, as the Project Director any letters

in relation to the project after completion would have been addressed to me. I would liaise with David Wilson and or Fergus Shaw who were part of the Multiplex team that remained on the project when I had moved to a new project. I would ask them to inform me on any technical issues raised by the NHS GGC project team like this letter from David Louden. I would ask them to set out a response, provide advice, which I would then issue to the NHS team believing this to be an appropriate and suitable response. As some time has passed since I sent this response, I do not recall what if any concerns I would have had.

b) Who from the Board and Capita signed off this solution?

A. I do not know.

c) How often were you asked for advice in respect of compliance with healthcare guidance from NHS GGC?

A. I do not recall being asked specifically about this. This would have been discussed during the design developments and reviews with the NHS GGC project team and the Multiplex design teams.

d) What was the outcome of these discussions with David Loudon?

A. I do not recall now.

22. Was the ventilation derogation noted in the M&E Clarification Log, recorded in the Full Business Case? Who was responsible for doing this? If you were aware that it had not been recorded in the Full Business Case, please explain what action, if any, you took.

A. I was not involved with the project at this stage having joined in February 2011. The team involved in the completion of the FBC would be better placed to answer this.

Design and Construction and Role in the QEUH/RHC Project

23. The Inquiry understands that ward layouts and Room Data Sheets (RDS) were approved through the reviewable Design Data (RDD) process. Describe your role, if any, in the RDD process and the user groups.

A. I was not involved with the RDD process or the User Groups.

24. How were members selected to be part of a user group?

A. I was not involved with the RDD process or the User Groups.

25. Confirm who attended the user groups meetings from Multiplex, the NHS GGC Project Team, IPC, Estates and Clinical teams for the following areas: Ward 4B – QEUH; Ward 4C – QEUH; Level 5 – QEUH; Critical Care – QEUH; Ward 2A & 2B – RHC; PICU RHC – RHC; All Isolation rooms.

A. I was not involved with the RDD process or the User Groups.

26. How often were user group meetings scheduled to review design proposals and agree the design with the user groups?

A. I was not involved with the RDD process or the User Groups

27. How were designs and the RDS approved to proceed to construction?

A. I was not involved in this process but it would have been managed by the Design Leads for MPX and the consultant design teams in conjunction with the NHS GCC delivery team and the sign off process agreed to allow designs to proceed to construction.

28. How was the ventilation derogation communicated to users during the RDD process?

A. I was not involved with the RDD process.

29. Please describe how the technical requirements (air change rates, pressure differentials and filter requirements) for each ward were managed and approved during the user group meetings and the RDD process, including your role and involvement.

A. I was not involved with the RDD process or user group meetings.

30. Were any requests made by the User Groups during the RDD process that were refused – please provide details.

A. I was not involved with the RDD process or user group meetings.

31. Please refer to **Bundle 17, Document No.75, Page 2881.** Appendix 3 states: "Commissioning settings for all elements of the works, including microbiological testing proposals for operating theatres and specialist ventilation… Confirmation that

the design team fully complies with the requirements of the Employers Requirements, M&E appendices 1 to 6, all HTM's, HBN's, SHTM's and current legislation".

a) Describe the intended use and purpose of the following wards in QEUH/RHC: Ward 4B – QEUH; Ward 4C – QEUH; Level 5 – QEUH; Critical Care – QEUH; Ward 2A & 2B – RHC; PICU RHC – RHC; all Isolation rooms.

A. there has been a significant passage of time passed since I was involved in the delivery of the QEUH/RHC Hospitals. I am unable to recall the specifics of ward areas.

b) At the time were you aware of there being a Ward for immune compromised paediatric patients?

A. There has been a significant passage of time passed since I was involved in the delivery of the QEUH/RHC Hospitals. I am unable to recall the specifics of ward areas. As a Project Manager or even as a Project Director my focus is delivering the building to the construction information. These drawings and specifications are the culmination of a detailed design development and review process. Drawings and information would have gone through a number of statuses as per the contract until they were issues as construction status. On such a large project the focus was to ensure not stepping outside that of construction issue information.

c) At the time would you have been aware of the intended use and purpose of Wards? If not, why not?

A. As my statement in point B) above. There has been a significant passage of time passed since I was involved in the delivery of the QEUH/RHC Hospitals. I am unable to recall the specifics of ward areas but I would have had an overview of the intended use of the departments. The detail of these would have been discussed during the design and construction process, to which I do not recall the specifics now. As my statement sets out above, the focus was on delivering the project to the agreed construction status information and contract.

d) What were the specifications of these wards?

A. There has been a significant passage of time passed since I was involved in the delivery of the QEUH/RHC Hospitals. I am unable to recall the specifics of ward areas.

e) What guidance was considered in the design of these wards, what processes were in place to ensure guidance compliance?

A. I was not involved in the design process, ZBP, Nightingale, The MPX FBC Team may be better placed to answer this.

f) Were there any changes to the design during the design and build, if so, please describe any such changes, describe the impact, if any, on guidance compliance as set out in Appendix 3, and describe the sign off process for any such changes, your involvement and how any changes were communicated to the Board. Was external advice ever sought in respect of design changes?

A. I was not involved in the design process. During the construction phase, I recall, it would not have been normal practice to change the design as this may have affected the programme to completion. From memory, Change was not often implemented by the NHS team either as this again would have impacted time and cost of the project. Any changes that where considered a requirement would from memory have been raised as an early warning. There was also a formal change order process which involved the NHS requesting the change carried out over a number of hold point. These hold points would have been early dialogue on what a change may or may not impact. This would then be instructed to MPX to carry out a programme and cost assessment on the proposed change. This change may or may not be instructed at this point. This instruction may have been to progress the design and the programme and stop for review. Or a full instruction to design, programme and construct the works and incorporate into the final project.

32. Describe your involvement and understanding, if any, of the decision to remove carbon filters? What was the rationale behind this decision, who was involved and what advice, if any, was sought in reaching this decision?

A. I do not recall being involved in the decision to remove carbon filters.

33. Were any specialist design workshops required? If so, please provide details.

A. I do not recall this now.

34. Were Value Engineering meetings/workshops held during the design phase? Please provide details of any agreed value engineering elements.

A. I was not involved with the main design phase the team involved in the FBC would be

better placed to answer this. During the construction process the design substantially completed with minor comments on some drawings but the time for VE would most likely have been before this.

Ward 4B and 4C

35. The Inquiry understands that Ward 4B in the QEUH was originally intended to provide accommodation for Renal and Haemato-oncology patients. The 2009 NHS Clinical Output Specification for the Haemato-oncology ward stated, “Please note the haemato-oncology ward area has a very specific function and a considerably higher than average requirement for additional engineering support/infrastructure. There should be no opening windows, no chilled beams. Space sealed and ventilated. Positive pressure to rest of the hospital and all highly filtered air >90%, probably best HEPA with adequate number of positive pressure sealed HEPA filtered side rooms for neutropenic patients as in the Beatson West of Scotland Cancer Centre.” **(Please refer to Bundle 16, Document No.15, Page 1595)**. However, following a Change Order Request in July 2013 by Jonathan Best **(Please refer to Bundle 16, Document No.29, Page 1699)** it was confirmed that the Bone Marrow Transplant (BMT) service would transfer to Ward 4B in the QEUH and the Haematology patients that were originally planned to accommodate Ward 4B would move to Ward 4C.

a) Please confirm how this change was communicated to Multiplex and how this change was captured in the revised design and specification documentation, following the Change Order Request.

A. I was not involved in this change process. I do not know how this communicated. I was aware there was a change in the design of that area which I believe would have been reflected on the design information issued as construction status this is the information the construction team would have worked to.

b) If you were not involved, who from Multiplex was involved?

A. As set out above, not being involved I am unsure as to who was involved. Ross Ballingall, Darren Smith and Darren Pike may be better placed to advise on this item.

c) Describe your understanding, if any, of the impact of the change order?

A. As set out above, not being involved I am unsure as to who was involved. Ross

Ballingall, Darren Smith and Darren Pike may be better placed to advise on this item.

d) What actions, if any, to assess the feasibility and impact of the change order were carried out by Multiplex?

A. As set out above, not being involved I am unsure as to who was involved. Ross Ballingall, Darren Smith and Darren Pike may be better placed to advise on this item.

e) Please confirm if Multiplex highlighted any risks with the proposal to move the adult BMT Unit to the QEUH.

A. I was not involved with this workstream at this time, so unable to comment

f) As Project Director, with the benefit of hindsight, is this not something you should have been aware of at the time?

A. This change, I believe, was before I took over as Project Director. Due to the timing nearing completion of the project, when I took over as PD my focus would have covered a many workstreams. As this change had been agreed some time before it is not an item that would have been a focus.

g) Did Multiplex advise the GGC Project Team that the requirements set out in SHTM 03-01 relating to air change rates, pressure differentials and filtration requirements would not be achievable in Ward 4B at the QEUH?

A. I was not involved with this workstream at this time, so unable to comment

h) Is this something that you would have expected to have happened?

A. I would have expected to work to the agreed drawings and specification included within the contract. MPX would give advice in relation to construction and building performance.

i) Who approved the lower specification from the GGC Project Team and the Board for the adult BMT service?

A. I was not involved with this workstream at this time, so unable to comment

j) As Project Director for Multiplex at the time, describe your awareness, if any, of the lower specification?

A. I would have taken the construction information and progressed the works on that basis. There would have been no consideration by me of any lowering of specification.

k) Why were suspended ceilings installed in Ward 4B given that the original Clinical Output Specification (COS) referred to 'space sealed' – did Multiplex raise this as a non-compliance with the 'Works Information'?

A. I was not involved with this workstream at the time of the design being approved, so unable to comment. This area would have been constructed in accordance with the agreed construction drawings and celling plans by the construction team. I do not know if MPX raised a noncompliance.

l) Following the change order, do you recall any issues being raised in respect of suspended ceilings in Ward 4B, please explain your answer.

A. I do not recall.

m) Please confirm who approved the reflected ceiling plans for this area.

A. I do not know

n) As construction progressed on site, please confirm if suspended ceilings were highlighted as non- compliant with the COS (works information).

A. I do not recall specifically if this was raised

o) With the benefit of hindsight, is this something which should have been raised?

A. The benefit of hindsight often brings clarity to complex building and construction issues. If the suspended ceilings, be it tile and grid or dryline/sheet material have led to there being an issue then hindsight would allow the team to reflect on this and seek to improve / mitigate issues in future.

p) Why was no back up Air Handling Unit (AHU) provided for Ward 4B? Who approved this decision? And what strategy was agreed for PPM or equipment failure?

A. I was not involved in the design process for this area and I do not recall discussing this during the construction phase. I cannot now recall the PPM arrangements.

q) In respect of Ward 4C, what was the specification of this ward at the point of the Change Order? Did you understand that Ward 4C was to be used to house immunocompromised patients? If so, what was the justification from departing from SHTM guidance in respect of ventilation, pressure and filtration requirements and who signed this off?

A. I am unable to recall the specification for Ward 4C at the point of the change and was not involved in the change process from a design perspective. The use of wards and what sort of patients would be treated in them I am now no longer recall.

r) At the time would you have been aware of the intended use and purpose of Ward 4C? If so, what would have been the justification for departing from SHTM guidance in respect of ventilation, pressure and filtration requirements and who would have signed this off?

A. I do not recall what I would have been aware of specifically in relation to ward 4C. A this time I and the Multiplex team would have been working to the approved design/construction for this area. These drawings and information would have been through the design approval process which I was not involved with directly. Darren Smith or Darren Pike may be able to provide further information in relation to this item.

s) What was your understanding of the requisite air change rate required in accordance with SHTM guidance in respect of Ward 4B and 4C, and was this the air change rate achieved? If not, why not and who signed this off? What risk assessments were considered in respect of this decision?

A. At the design stage of the project, the level of detail outlined in this question would have been managed by the design team and the review process with MPX and NHS and later by the construction site team during the construction phase. When I took over as Project Director, I engaged with the MEP and commissioning site team to gain an understanding of the overall progress of the MEP works, including an overview of the programme, installation, and commissioning. I do not recall the specific individual requirements, in relation to departments and wards at this time. I do not recall any conversations regarding an inability to comply with the contract in relation to air changes. My understanding was that the team was in the process of commissioning the AHUs and balancing the system, an expected and routine activity given the scale of the project. An inspection team, working on behalf of the NHS, mainly Capita, was

involved in witnessing the commissioning rates of all departments, along with the Multiplex MEP commissioning management team. If any concerns had arisen during the construction phase, I would have expected them to be flagged either by the MPX team or, as an additional safeguard, by the Capita team. From memory, a matrix was in place and managed by the MPX MEP commissioning managers, to track outstanding elements across all systems within the building. Each of these elements were reviewed, closed out, and agreed upon with the inspection and quality team.

Ward 2A/ 2B RHC

36. The Inquiry understands that Ward 2A/2B is the paediatric-oncology Unit and includes the Teenage Cancer Trust and the paediatric Bone Marrow Transplant (BMT) Unit - the department is known as the Schiehallion Unit.

a) Confirm your understanding regarding the intended use and purpose of the Ward 2A/2B, what guidance was considered in the design of these wards, what processes Multiplex put in place to ensure guidance compliance?

A. Due to the passage of time the specifics surrounding individual wards and rooms I do not now recall. I was not involved in the design process for these wards. For compliance MPX would have had a testing and commissioning programme followed by inspection and sign off in accordance with the signed off design.

b) Please provide copies of the testing and commission programme.

A. I don't have access to this information as have left Multiplex some time ago. Multiplex Legal team may be able to provide this information.

c) Who would have carried out the inspection and signed off?

A. MPX MEP Team David Wilson lead the commissioning team on this and Fergus Shaw as Project Manager for the children's hospital section may also have been involved. Both may be able to provide further information on this item.

d) What changes, if any, were made to the design during construction? Please describe any such changes, describe the impact, if any, on guidance compliance, and describe the sign off process for any such changes and your involvement. Was external advance ever sought in respect of design changes?

A. I am unable to recall if any specific changes were made during construction period but there may well have been changes if they happened would have been part of an early warning or a discussion with the NHS GCC delivery team and agreed formally before being carried out.

e) Describe the IPC involvement in the design of Wards 2A and 2B, who was involved and who signed off the final design and when?

A. I was not involved with this process at this time but NHS team may be able to answer this

f) Who from Multiplex would have been involved at the time?

A. This would have been led by Darren Smith and the design teams working for Multiplex.

g) What concerns, if any, did you have regarding the final design specification of Wards 2A and 2B, and what action, if any, did you take in respect of these concerns?

A. I was not involved with this process. But would unlikely have concerns based on the sign off process reaching the constructions stage.

h) Who from Multiplex would have been involved at the time?

A. Darren Smith, Darren Pike and or Fergus Shaw may be able to provide further information on this.

37. What was your understanding of the requisite air change rate required in accordance with SHTM guidance in respect of Ward 2A and 2B, and was this the air change rate achieved? If not, why not and who signed this off? What risk assessments were considered in respect of this decision?

A. With the passage of time, I do not recall the specifics of Ward requirements. The air change requirements and testing of these would have been managed by the MPX MEP commissioning team and witnessed by the Client Inspection Team normally Capita along with the supply chain specialist team responsible for this. The results would have been recorded and signed off by each of these parties. Had there been any irregularities I would have expected this to have been raised during the commissioning schedules sign off and any concerns raised to the senior team via the

MPX or Capita Reports

Isolation Rooms

38. Describe how the number and location of the isolation rooms was agreed? Who approved the final number and locations in the QEUH and RHC?

A. I was not involved with the process for this so unable to advise who approved.

a) Who from Multiplex would have been involved at the time?

A. I am unable to assist the enquiry as was not involved. Darren Smith may be able to provide further information on this or Ross Ballingall.

39. Who was responsible for producing the drawings and the specification for isolation rooms; who approved these from the NHS GGC Project Team?

A. I was not involved with the process at this time

a) Who from Multiplex would have been involved at the time? Who would have been responsible?

A. I do not know specifically, but would think Nightingale the architects and ZBP. Darren Smith may also be able to provide further information on this item.

40. What concerns, if any, did you have regarding isolation rooms and compliance with SHTM/HTM? What action, if any, did you take in respect of any such concerns?

A. I recall there being a number of conversations around room pressures being achieved. The rooms when constructed would have been subject to a pressure test and this would have been witnessed by MPX and the NHS inspection team. The testing would in some instances lead to further works being required to ensure the pressure requirements where achieved. This in some instances in some rooms required multiple testing and works before these achieved the required rates. I do not recall having any other concerns highlighted in relation to the Isolation Rooms.

41. The Inquiry has reviewed the RDS in excel format and notes that there is an entry under 'Design Notes' relating to Ward 2A isolation rooms, the entry states:
"WARNING NOTICE: This room is based on a theoretical design model; which has not

been validated (see paragraph 1.8 of HBN 4 Supplement 1). Specialist advice should be sought on its design. The lamp repeat call from the bedroom is situated over the door outside the room."

a) Was this note entered on the RDS? If so, why and by whom?

A. I was not involved in this process.

b) Who from Multiplex would have been involved at the time?

A. Darren Smith or Darren Pike, Nightingale architects and ZBP.

c) What specialist advice was sought relating to the design of these rooms

A. I was not involved in this process.

d) What was the final agreed design for isolation rooms and who approved this?

A. I was not involved with this process.

e) Who from Multiplex would have been involved at the time?

A. As I was not involved in this process, I do not know exactly who would have been involved from Multiplex. Darren Smith or Darren Pike as design manager and MEP manager may be able to provide the enquiry further information.

f) Why was the main extract placed in the patient's bedroom and not the ensuite as outlined in SHPN 04 Supplement 01? Why was this change requested, who requested this change and who approved this from the NHS GGC Project Team?

A. I was not involved with this process

g) Who from Multiplex would have been involved at the time?

A. Darren Smith as Design Manager and Darren Pike as MEP manager.

<u>Water and Taps</u>

42. Describe your involvement, if any, in respect of the decision to use Horne taps.

A. I do not recall being directly involved in this decision.

a) What indirect involvement did you have, if any?

A. I was in meetings that the taps where discussed, but the details around these I do not recall. Darren Pike, would I believe have had a more detailed discussion on this matter.

b) What concerns, if any, did you have regarding the use of Horne taps?

A. None.

c) What risk assessments were carried out in respect of the use of Horne taps?

A. Having not been directly involved I do not know.

d) Who from Multiplex would have been involved at the time?

A. Darren Pike or Darren Smith, Mercury Engineering.

e) Who was involved in, and who signed off the use of Horne taps?

A. I do not know.

f) Did you attend the meeting regarding the use of Horne taps in 2014? If so, why was the decision made to proceed with Horne taps?

A. I do not recall attending this meeting.

g) Did the use of Horne taps depend on thermal disinfection? If so why, if not, why not? What action, if any, was taken regarding this, and your involvement, if any?

A. I was not involved in this directly.

43. Are you aware of the water system having been filled prior to handover on 26 January 2015? If so, who filled the system, why was it filled and what concerns, if any, did you have. If you had concerns to whom did you escalate these concerns?

A. The water system was filled. I do not know who filled the system but the MPX MEP team may be able to advise. I was not aware of any concerns at the time and do not recall having any other than when filling was being carried out this was done some in a managed fashion, safely and monitored for any leaks.

a) Who from the MPX MEP team should the Inquiry discuss this matter with?

A. Darren Pike or David Wilson may be able to provide the Inquiry further information on the item.

b) The Inquiry understands from **Enc 1- PROJECT STEERING GROUP - 25092012 details – Please refer to Bundle 40, document 175, page 854** that it was intended that there would be no water in the pipes until March 2013.
The Inquiry understands that the water system was likely filled sometime between March 2013 and September 2014, what was the purpose of the water system being filled at this time? With the benefit of hindsight, should there have been concerns at the time with filling the water system between March 2013 and September 2014? If so, please describe what these concerns should have been and why.

A. Not involved in this item. I would advise the Inquiry that the works would have been managed by David Wilson Commissioning manager or Darren Pike MEP manager.

Commissioning and Validation

44. In respect of commissioning and validation please confirm the following:

a) Describe your role in the lead up to commissioning. What action, if any, did you take to ensure that the wards within RHC and the QEUH met the guidance requirements of SHTM?

A. The duration of the commissioning process lasts a considerable amount of time for such a large project over a number of years. When I was moved to the role as Project Director there was an established team in place that were managing the commissioning process. This was made up of MPX staff who then managed a team of supply chain partners. I would have asked for an overview of the progress as part of the reporting progress across all of the different workstreams. As the project neared completion, the number of workstreams would reduce and the number of outstanding/remaining systems to be commissioned would be reducing also. Commissioning progress would be on a schedule allowing the teams to focus on areas still to be completed or achieve there required outputs. Had I been made aware of any areas being unable to achieve their design requirements I would have discussed this with the MEP/Commissioning senior team to understand the overall impact to the project and if this would in turn affect the completion of a department or building.

b) Describe what commissioning of the water and ventilation system took place prior to handover, and your involvement, if any.

A. I was not involved directly with this process but would have received updates from the MEP/commissioning team. The granular detail behind commissioning the water I can no longer recall.

c) Can you recall any details regarding the commissioning of the ventilation system of the QEUH/RHC?

A. The commissioning works were managed by David Wilson. David produced a monthly commissioning update as the project progressed and neared completion. The commissioning of the ventilation system was on an inspection bases with members of the MPX and NHS GGC project team witnessing the rates and ultimately achieving the contractual requirements.

d) Who was responsible for ensuring that commissioning of the water and ventilation system was carried out, and who signed off that it had been carried out?

A. The responsibility for the actual process would have been with Mercury the MEP specialist supply chain partner. Ensuring this was achieved to the correct requirements would have been the responsibility of the MEP/commissioning team for MPX. The sign of process would have been a combined process involving the specialist supply chain partner, MPX MEP/Commissioning/Quality team and the NHS Capita inspection team during the witnessing process.

e) Please refer to **Bundle 16, Document No.13, Page 1357**. Clause 8.2.28.4. of the ERs require the Contractor to demonstrate and certify to the Board the successful completion of all commissioning, testing and compliance with all relevant standards. Was it not part of your role as Project Director for Multiplex to ensure that such certification could be made?

A. As Project Director I was aware of the management process. The detail was managed by David Wilson the commissioning manager for Multiplex. As part of the completion and handover at the end of the project. On the day the project achieved PC all parties involved in the acceptance of completed building advised they were happy with the building and building performance. A list of defects was attached to the Practical Completion Certificate. Multiplex retained a team on site to deal with these defects

and sign off with the NHS GGC project team. I do not recall any issues surrounding lack of certification at that time.

45. Clause 6.8.2 of the Employer's Requirements requires the Contractor to provide a Final Commissioning Programme setting out details of all commissioning tasks, including the timing and sequence of events. This was also to include the relevant testing and commissioning elements of other parties, such as the Control of Infection Officer, the Supervisor and the Independent Commissioning Engineer. **(Please refer to Bundle 16, Document No. 13, Page 1357)**

a) Was the Final Commissioning Programme prepared? If so, by whom and who was it shared with? If not, why not?

A. From memory, there was a commission programme prepared; this was prepared by the MEP/commissioning team and the MPX planning engineers for MPX. This programme was shared with those that were required to review the process/progress like the MEP team, the supply chain and the NHS team to allow the programme to be monitored by the NHS/MPX teams.

46. Clause 6.8.4.2 of Employer's Requirements, states that the Contractor was required to arrange, "all factory testing and shall furnish the Board, its Project Manager and its Supervisor with the opportunity to witness all factory testing and sign off marked items of Plants and Materials. The Board, its Technical Advisors and the Supervisor shall be given fourteen days notices of such testing." **(Please refer to Bundle 16, Document No.13, Page 1357)**

a) Was Capita given the opportunity to witness all factory testing and sign off on marked items of Plants and Materials?

A. With the passage of time, I cannot say now if they were given the opportunity for all of the factory testing, however, had they not received this opportunity I would have expected this to have been raised as an early warning by that team for rectification by the MPX team

b) If Capita was given the opportunity to witness all factory testing, please describe the process.

A. I do not recall the specifics surrounding the process of this but this would have been managed jointly between the MPX delivery team and the specialist supply chain and the NHS inspection team.

c) If Capita was not given the opportunity to witness all factory testing, why not? How did this impact, if at all, Capita's role as NEC3 Supervisor?

A. I do not recall an instance of this happening, but it could have happened. This would not have been intentional.

47. The Inquiry understands that NHS GGC decided to forgo the requirement to have an independent commissioning engineer. Who made this decision? What was the rationale was behind this decision? What was the impact, if any, of this decision? In hindsight, do you think that it was the correct decision?

A. I was not involved in this decision so do not know who decided this. Until reading this question I have not given any consideration to wither this was the correct decision. The responsibility to manage the commissioning was with MPX and its specialist supply chain partners and there commissioning engineers as an example, H&V Commissioning. This would then be witnessed by the NHS inspection team. This was done in an open environment with opportunity afforded to the inspection team across all of the systems to review the results and be involved in live on site witnessing/ testing rather than just a desktop results schedule issued.

a) Did Multiplex have any concerns about its ability to demonstrate and certify to the Board the successful completion of all commissioning, testing and compliance with all relevant standards given that the hospital systems were not being checked by an independent third party as recommended by the guidance. If so, please describe these concerns. If not, why not?

A. No concerns because the process was being managed in line with the contractual requirements and standards. David Wilson was managing this process and this had been agreed with the NHS GGC project team some time before.

48. **Please refer to Bundle 15, Document 7, Page 606**. SHTM 04-01, part E states that, "any pipes delivered unprotected or with open ends should be rejected". The Inquiry understands that Capita highlighted on a number of occasions that pipework was being left open during the construction work making them vulnerable to contamination. What was done to rectify this issue? Was such pipework subsequently rejected?

A. The granular detail of this remediation I do not recall in each instance, but the works would have been rectified to the satisfaction of the MPX managers and the NHS

inspection team, this may have involved replacing pipework. It would have also led to further emphasis on the pipework having capped ends as it arrived on site or cut on site.

49. Was the energy centre commissioned prior to NHS GGC taking occupation of QEUH? If so, describe what you know about the commissioning of the energy centre. Provide details of the intricacies in relation to its completion.

A. The commissioning of the energy centre was in tandem with the main building. From memory there was a schedule of elements being progressed by the MPX and NHS MEP management team at PC. This I recall as being an agreed list at PC.

50. Describe your involvement, if any, in the decision for the energy centre to be retained by Multiplex following handover. What as the rationale/when was the energy centre handed over to NHS GGC, and what was your involvement, if any? Describe your knowledge and understanding, if any, of a payment being made by NHS GGC to Multiplex in respect of the energy centre following the same being handed over.

A. From memory, the energy centre was included within the completion certification. MPX accessed the energy centre under a permit to work system that was controlled by the NHS estates team. I have no knowledge of the payments being refer to in this question

51. Please describe what role Multiplex had, if any, in ensuring that validation was carried out? Was this required to be carried out prior to handover? If so, by whom? The Inquiry understands that validation was intended to be carried out by an independent party. Did this happen? If not, why not?

A. Validation would I believe, have been by the NHS management team so this would be best placed to discuss with that team.

a) Are you aware of validation being carried out? If so when and by whom?

A. I do not recall any elements validation now.

b) At what point did Multiplex advise NHS GCC Management Team that validation could be carried out?

A. I do not recall any specific conversations surrounding this.

c) What requirement was there for validation to be carried out prior to handover?

A. This was not a Multiplex requirement and was I understand to be managed by the NHS GCC project team.

d) What is your knowledge, if any, of the SHTM requirement for NHS GGC to carry out/ ensure that validation had been carried out prior to handover?

A. Because validation was not part of the requirements and not something that I had given consideration detailed consideration to.

e) What allowance was made by you/ Multiplex, if any, for validation by NHS GCC prior to handover in the programme? What communications, if any, did you, or your Team have with NHS GGC about this at the time, given that you talk about working 'hand in glove' with NHS GGC.

A. Because validation was not part of the requirements and not something that I had given consideration detailed consideration to.

f) In that spirit of working 'hand in glove' with NHS GGC, should you have raised the issue?

A. As this element of works was not to be completed by Multiplex our and my focus would have been delivering the building works. The NHS GGC project team had a migration period of some 15/16 after practical completion was achieved. I thought any validation prior to patients arriving after this migration period would have been carried out during this period.

Handover

52. Describe your role in the lead up to NHS GGC accepting handover.

A. As PD I would report the progress and completion of the works across the project to the NHS GGC Delivery team. This would be on a monthly, weekly bases and in some instances daily bases. I would have a number of members of the MPX team prepare areas of the report under their supervision and these in turn would be used to give a full report on all of the workstreams across the project. I would attend these meetings with the MPX leads for Safety, design/planning, construction and commissioning. These meetings were recorded with actions allocated.

a) At the point of handover, how satisfied were you that all areas of QEUH/RHC 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 satisfied that we had followed the process to achieve handover and that the NHS team where happy to accept the building. In the spirit of the project MPX worked hand in glove with the NHS team during their Migration Period. All areas were I believe, constructed as per the design information.

b) How were you assured that the wards met the requirements of the specific patient cohorts?

A. I was not aware of any concerns at the time of PC

c) Were any wards not handed over, or only partially handed over, please confirm. If so, why they were they held back? Was there any financial consequence to both Multiplex and NHS GGC of the ward(s) being held back? What works were carried out in order to allow this ward(s) to be handed over to the NHS GGC?

A. I do not recall any areas being held back.

d) Describe the process for approving the defects listed on the Stage 3 Sectional Completion Certificate (Please refer to Bundle 12, Document No. 3, Page 23) Who saw the Stage 3 Section Completion Certificate before it was signed? Why was the Stage 3 Sectional Completion Certificate signed when there were a number of outstanding defects listed?

A. The exact process I am now not able to recall but would comment that this would have been a list agreed between MPX and the NHS team of outstanding defects to be completed in a serious of agreed dates. The defects listed is a common practice at the completions of large projects. This highlights normally minor works to be completed and signed off. This also talks to NHS subcontractors' requirements an example would be Imaging equipment supplied by the NHS supply chain, supported by MPX. Loose furniture and comms would be another example of this and damages during this installation rectified by MPX.

e) Do you think that the Stage 3 Sectional Completion Certificate accurately listed all of the defects with the QEUH/RHC? If not, please describe the inaccuracies.

A. I do not recall if the certificate listed the remaining defects. MPX issue an outstanding

list of defects as agreed with the NHS inspection team. This list was worked on throughout the migration period.

53. Who oversaw contractual compliance? Who was responsible for ensuring that the paperwork was produced to confirm contractual compliance? What action, if any, did you take to ensure that paperwork was in place to ensure contractual compliance? Was validation of the ventilation system a contractual requirement? If so, who signed off on contractual compliance given the lack of validation?

A. MPX and Capita Symonds managed the contractual compliance, MPX management team worked in tandem with NHS compliance team to ensure the paperwork was in place. This would have been led by the MPX quality team.

a) How was the contractual compliance documentation made available to end-users? Do you think that document sharing system made the contractual compliance documentation easily accessible to such users? If so, why? If not, why not?

A. From memory a document control system called Zutec was in place, training was made available for that system. The estates team where I understood happy with the formatting and a training programme was put in place for a small number of NHS GGC estate managers that where available at the time.

54. Explain what the Building Contract says about a retention period in which some money would be held back pending completion of the QEUH/RHC. In doing so, please explain if the retention period was enforced?

A. Retention would be held as set out in the contract. This would have been paid on completion of the defects period

55. Who was responsible for providing asset tagging. Why was there no asset tagging? Who decided to proceed without it?

A. Tagging was the responsibility of MPX. This tagging system would have been agreed with the NHS estates team which from memory took some time to agree in relation to how it should best work and operate for the estates department. I do not now recall to the extent this was in place. The MPX commissioning and MEP management team may have the detail from then.

a) Given that asset tagging was a responsibility of Multiplex, who decided to proceed without asset tagging? When was this decision made, and who, if anyone, from NHS GGC signed off on this decision?

A. I was not involved in the decision regarding asset tagging but I recall Darren Pike was working with the NHS project team and the NHS estate team to agree what and how the tagging should look and work. Darren Pike would be able to provide further information on this item.

56. Did you consider it appropriate for the handover of QEUH/RHC to take place when the energy centre was not operational due to design issues? Did you appreciate at the time of handover that it would take almost a year before the energy centre was in a position to be brought online?

A. The hospital would have been unable to function and open if the energy centre was not operational. There was an agreed list of works that were to be completed and these were carried out under a permit system managed by the NHS Estates FM team to allow access to the energy centre or the hospital buildings. This would have been carried out after approvals from the NHS Estates FM department of risk assessments. From memory the energy centre was under the control of the NHS management team after PC and was part of the overall handover.

a) Did you consider it appropriate for the handover of QEUH/RHC to take place when the CHP system was not operational due to design issues? Did you appreciate at the time of handover that it would take almost a year before the CHP system was in a position to be brought online?

A. The building was working and operational. I do not now recall the specific issues surrounding the CHP but I believe it was working at the point of practical completion. David Wilson may be able to provide the Inquiry with the detail on this item.

57. The Inquiry understands that no validation was carried out in respect of the ventilation system of QEUH/RHC prior to handover. When did you become aware of this? How did handover come to be accepted without the ventilation system being validated? Who was responsible for this and who signed off on this?

A. MPX had commissioned the systems and signed this off with the NHS team. Validation would have been by the NHS team. I would not have had any conversations around Validation or in any real detail.

58. Describe Multiplex's involvement in works carried out following handover. Describe the nature of these works, whether remedial or new works, the cost and responsibility of payment of these works, details of who instructed the works and when.

A. After completion and PC, I was moved by MPX to a new project in early 2015 before being moved I recall that there was an agreement that all members of the MPX construction team requiring access to the hospital estate would do so through a permit to work system. This would have been to complete the outstanding list of defects at PC and also any issues the NHS team had with the operating and maintenance of the hospital. There was a drive by the MPX team across all the disciplines to ensure the transition from the point of PC project to a live hospital was one of supportive and responsive to any and all concerns. This was essential during the migration period and was the spirit of the project between MPX and its supply chain and the NHS team. I do not recall payments for works or individual instructions.

59. Describe the build condition of the QEUH/RHC as at Final Defects Certificate (CI 43.3) Completion of Whole Works – Stage 3 Adults and Child's Hospital and Energy Centre dated 26th January 2017 **(Please refer to Bundle 12, Document No. 113, Page 848)**.

A. The building condition was complete with systems operational. There was a list of defects to be competed as per the agreed schedule at PC. Prior to PC there had been a number of site "walks" across all the departments with the NHS team paired with MPX project managers responsible for their areas inspecting the building. This was carried out a number of times in the lead up to PC with a final inspection on the morning and afternoon of the date of PC

a) Describe the build condition, with a particular focus on the ventilation and water systems, as at contractual handover on 26th January 2015?

A. From memory, the ventilation was completed in accordance with the requirements of the contract there may have been some defects as part of the completion certification. The build conditions were completed to the level that allowed all parties to sign off the Practical completion certification with defects list. There were some areas that the NHSGGC project team had contractors working in, perhaps installing medical and IT equipment not included in the Multiplex contract. This work required that they removed ceiling tiles and drilled holes in walls to allow cables to be installed. Areas

like the Imaging Department had a number of areas where ceilings were left down to allow the Boards works to be completed. There was also a large area of landscaping to be completed by Multiplex but that was agreed as part of the programme phasing and did not directly affect the running of the buildings.

b) Describe your post contractual handover knowledge of whether or not the wards were compliant with the relevant NHS guidance and relevant regulation, particular in respect of water and ventilation, in particular the isolation rooms within the Schiehallion Unit?

A. I have limited knowledge of this because I left the project soon after PC. But the works were carried out accordance with the contract requirements. Fergus Shaw as Project Manager and an after-care team manager may be able to provide further information on this item.

c) The Inquiry has heard evidence from a number of witnesses in the August 2024 hearings that suggests that the QEUH/RHC site looked like a building site at handover. What would you say to this?

A. The build conditions were completed to the level that allowed all parties to sign off the Practical completion certification with defects list. There were some areas that the NHSGGC project team had contractors working in, perhaps installing medical and IT equipment not included in the Multiplex contract. This work required that they removed ceiling tiles and drilled holes in walls to allow cables to be installed. Areas like the Imaging Department had a number of areas where ceilings were left down to allow the Boards works to be completed. There was also a large area of landscaping to be completed by Multiplex but that was agreed as part of the programme phasing and did not directly affect the running of the buildings.

d) The Inquiry has heard evidence during the August 2024 hearings that many of the outstanding issues at handover were far from ‘minor’. Please comments and confirm your position and understanding at the time. What, if anything, was done to address these issues?

A. After practical completion was agreed, I was then moved to a new project a few weeks after this. Multiplex had in place an aftercare team after handover. The size and number of managers in this team was agreed with the NHS GGC project team. This was to ensure the weeks leading up the hospital receiving patients and operating

as a live hospital that the NHS GGC project team and the team of estates managers had support managing the running of such a complex building. This team was also responsible for clearing the list of defects as set out on the completion certificate. Work on the defects list was carried out after practical completion by that team to the satisfaction of the NHS GGC project team. Any items arising out with that list brought by the NHS GGC project team or the Multiplex managers would also be managed by the aftercare team.
The Hospital buildings were operational at practical completion.
Numerous inspections had taken place across all of the departments, plantrooms and public spaces over many months prior to practical completion by the relevant Multiplex managers and NHS GGC project team members.

In the last few weeks leading up to practical completion, these teams were split into specific areas of the building to carry out a final inspection. This was to give the correct level of confidence that the building works where finished prior to the NHS GGC project team accepting the building. This involved a visual inspection of every single room of the many thousands of rooms inside the buildings, all of the plant rooms and all off the communication spaces / public spaces. There were no areas of the building that were left of this inspection. The Multiplex delivery team and the NHS GGC project team carried out these inspections together and would agree on a list of defects for their respective areas. I accompanied David Louden and Peter Moyer on a number of inspections to ensure what was being report by the inspection teams was reflective of the condition of the building.

On the day of Practical completion, I believe I spent most of that morning and afternoon with both David Louden and Peter Moyer walking around the building to again ensure that the defects list and building condition was completed. The NHS GGC project team agreed that the building was in a suitable condition allowing the signature of the practical completion certificate in the afternoon of that day.

DMA Canyon

60. Prior to handover, who was the Duty Holder in respect of the water system at QEUH/RHC?

A. I do not recall who the duty holder was

61. What responsibility, if any, did Multiplex have in respect of carrying out L8 testing prior to handover? If Multiplex had such a responsibility, was the L8 testing carried out and by whom, and where would the records of the testing be sorted? Were these records made available to NHS GGC?

A. I do not recall the contract requirements for this question.

62. Who became Duty Holder when NHS GGC took handover of the QEUH/RHC site on 26 January 2015?

A. I do not recall who became Duty Holder

63. SHTM 03 01 remains an obligatory part of the contract except insofar as derogated from. Is it not your/ Multiplex's job to ensure that what you/ Multiplex deliver complies with it?

A. The Multiplex's requirement is to deliver what is set out in the contract and agreed in the construction information.

64. Do you have any further information that you consider relevant or interest to the Inquiry?

Declaration

65. I believe that the facts stated in this witness statement are true. I understand that proceedings for contempt of court may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief in its truth.

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

Appendix A

A50091098 - Bundle 12 - Estates Communications

A47664054 - Bundle 15 - Water PPP

A47851278 - Bundle 16 - Ventilation PPP

A49342285 - Bundle 17 - Procurement History and Building Contract PPP

A52281466 - Bundle 40 - Miscellaneous Minutes from Design and Construction Phase

A52725667 - Bundle 43 - Volume 3 - Procurement, Contract, Design and Construction, Miscellaneous Documents