IIT PEARS BUILDING PROJECT

DETAILED BASEMENT CONSTRUCTION PLAN TECHNICAL MEETING

MINUTES OF MEETING

Project	Pears Building
Date	Wednesday - 19.04.2017
Time	13:30 – 16:00hrs
Meeting Ref.	DBCP Technical Meeting
Location	Royal Free Hospital

Present	
Michael Bye (MB)	Director of Property Diocese of London (DOL)
Michael Taylor (MT)	St. Stephen's Restoration & Preservation Trust (SSRPT)
Dr Michael de Freitas (MdF)	First Steps Ltd
Michael Eldred (ME)	Eldred Geotechnics Ltd
Ian Stephenson (IS)	Stephenson Davenport Structural Associates Limited (SD Structures)
Peter Owens (PO)	Royal Free Charity (RFC)
Keith Davies (KD)	Buro Four
Liz Brown (LB)	Campbell Reith (CR)
Phill Cracknell (PC)	Willmott Dixon – Construction (WD)
Roy Conway (RC)	Willmott Dixon - Construction
Stuart Wagstaff (SW)	Soil Consultants (SC)
Tony Suckling (TS)	ASquared (A2)
Angelo Fasano (AF)	ASquared
Andy Heyne (AH)	Heyne Tillet Steel (HTS)
Mark Duncombe (MC)	Lucking + Clark (L+C)
Dr Stephen Thomas (ST)	OGI Groundwater Specialists
Apologies	
Najib Sheeka (NS)	Heyne Tillet Steel (HTS)

Previous Minutes
Not applicable

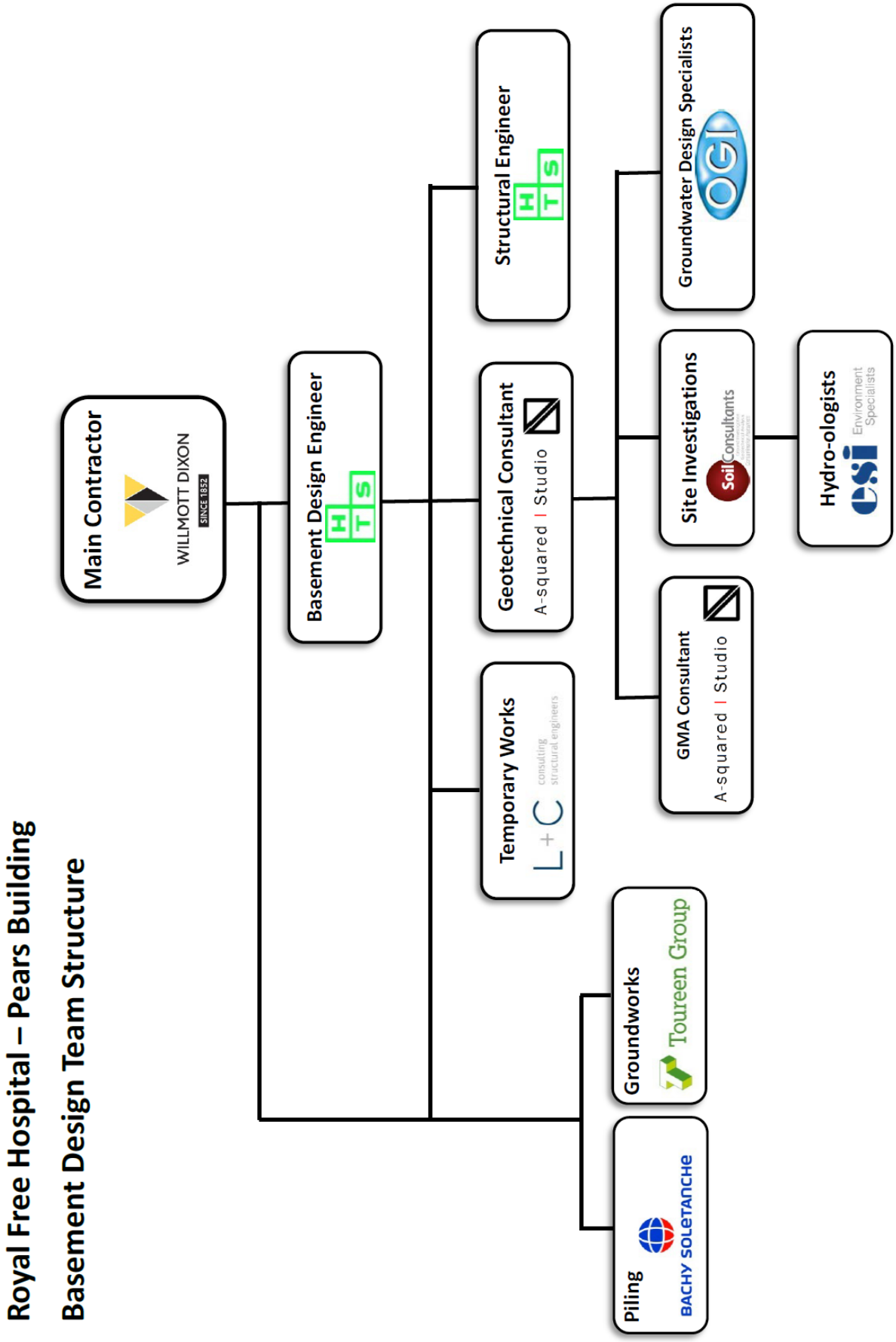
ITEM	Description	Action By	Target Date
1	**MEETING DISCUSSION** MB opened the meeting stating the intent was for the interested parties to enter into open dialogue in connection with the DBCP, with the intention of establish a common understanding and shared knowledge. At the current juncture representations to the final draft of the DBCP had been received (on 7 March) from MT's Technical Team, hence today's meeting to review the comments received.	Note	
2	MT gave a brief synopsis of the Church's history and the previous problems encountered regarding structural movement and ground water related problems. He also drew attention to a number of technical publications namely the report headed 'The Geological Problems of Pond Street' produced by Dr. Eric Robinson – UCL Earth Sciences dated Dec '14.	Note	
3	Further, MT highlighted that the deep contiguous piled basement retaining wall will have an adverse effect on the upslope due to it casing a dam effect.	Note	
4	AF drew attention to the fact that the existing car park was at present causing such an obstacle and whilst the contiguous piled wall will be deeper, it is the upper strata which affects the water flow.	Note	
5	MdF commented that is was important to understand the parameters which have been used in the ground model. In this regard TS invited interested parties to visit ASquared to view the model referred to in the DBCP and gain a thorough understanding to its composition.	Note	

ITEM	Description	Action By	Target Date
6	IS was of the opinion that there was a need to conduct a series of technical meetings to understand how various parts of the Section 106 have been suitably addressed.	Note	
7	PO had no objections to holding these, which was the philosophy expected to be adopted following the meetings of the Technical Experts held in July '16 which unfortunately, had been influenced by the stance adopted by the Objectors in their legal challenge against Camden Council following issue of the Planning Application Decision Notice.	Note	
8	TS stated this would be better undertaken following the next stage of ground investigations. However, it was agreed during the course of the meeting that these meetings should take place earlier.	Note	
9	MT reported that recent on-site investigations within the church grounds comprised of: a) 2 No. trial pits had demonstrated that the foundations of St Stephen's tower were present up to a depth of 2.2m (minimum) and water was inflowing at circa. 1.6m below ground level. b) 1 No. shallow (3m) borehole adjacent to trail pit no.1, which permitted hand vane testing to measure residual shear strength of cohesive soils (i.e. clays and silts). On completion 2 No. stand-pipes were installed so as to measure the ground water level at 3m and 1m depths.	Note Note Note	
10	The issue of carrying out further ground investigations within the church & the school grounds was discussed. MT expressed the need to minimise the scope to only that which is essential due to the extent of hard paving etc. He also reminded all parties that two on-going businesses need to operate 'as business as usual' and the timing of undertaking such work requires to be co-ordinated with pre-booked events.	Note Note	
11	PO made reference to the agreement in place between DOL, SSRPT and RFC regarding the extent of trail pits and boreholes to be undertaken within the curtilage of St Stephen's, making reference to SC technical specification (dated 10 March '17) which was with MT and his Consultant, Southern Testing for consideration, with 'windows of opportunity' to be identified by MT in order for the works to be carried out.	MT	
12	WD tabled a marked up site plan showing the extent of the boreholes and their purpose. It was agreed that to move forward the technical team should jointly agree the extent of such further ground investigations. In this regard MdF emphasised the need to let the ground 'talk to us' so as to enable the results to feed back into the model. TS stated they were 4 key issues to consider: 1. Whether pre-existing slip planes where in existence. 2. As to what depth is the ground weak and where it is in relation to the church's foundations. 3. To gain a better understanding of ground water over time and different conditions e.g. following a period of heavy rainfall. 4. To ascertain the exact depth of the church's foundations **Post Meeting Note:** In the smaller focused meeting which was held after the technical meeting, it was agreed that Soil Consultants would re-visit the proposals and place more focus outside of the St Stephens curtilage and put forward their recommendations for consideration.	Note SW	 24.04.17

ITEM	Description	Action By	Target Date
13	PO raised the question as to whether information was in existence to assist in appraising the ground conditions and uncovering the 'as built' nature of the church/school, making reference to 7 x technical reports RFC had sought sight of following receipt of representations from MT's technical team. MT stated that this information was with SSRPT's solicitors (Birketts) for Birketts to forward to Withers (RFC's Solicitors).	MT	w/c 24.04.17
14	IS requested clarification regarding the process that had been followed in developing the design and subsequent production of the ground movement model referred to in the draft of the DBCP. In production of the model TS pointed out that SC/A2 could only use the information that was available at the time, as access had not been granted for WD to carry out investigations within St Stephen's in order to obtain critical information for including into the model. In this regard the DBCP had been populated employing information obtained to date from boreholes outside of St Stephen's as well technical information supplied to date by SSRPT. That said certain conditions had to be assumed for incorporating into the draft of the DBCP. In addition certain criteria had to be applied, as required in the s106 Agreement e.g. the adoption of conservative parameters. Moving forward and in the role of Geotechnical Consultant TS would be producing a Geotechnical Design Report (GDR) making known what we know, opinions, assumptions and thereafter re-run the ground movement assessment. TS went on to say that there would be no third iteration of design other than, say, the uncovering of slip plane(s) which would necessitate some design re-work. MdF stated that there may not be the existence of slip planes but a series of mud flows i.e. zones of sheared clay, as evidenced in the trial holes.	Note Note Note	
15	MdF emphasised that the common denominator was 'the ground' and the ultimate aim should be to jointly agree that the RFC had "done its best" to address this. MdF reported that he had undertaken a review of the vertical profiles penetrated by the boreholes that have been sunk and would share such information with the team.	Note MdF	24.04.17
16	PO enquired as to what evidence was in existence to demonstrate that slip planes were in existence. The response given was that the opinion formed was based on the geology of the site and such could not have been formed in any other way.	Note	
17	IS stated that in his opinion there seemed to be a lack of cohesion in the overall design, inferring that there didn't appear to be an overall co-ordinator or someone on the engineering side who was in control of the design process. In response WD (PC) tabled (attached) a Basement Design Team Organogram which identified all of the 'contributors' to the design process and that Andy Heyne of HTS was the lead.	Note	
18	MT stated that as far as SSRPT is concerned he was of the opinion that the church tower was safe following the findings of the 2 trial pits. ME further commented that his professional opinion concurred with this statement.	Note Note	

ITEM	Description	Action By	Target Date
19	PO mentioned that as part of the agreement reached leading to the production of the technical specification produced by SC it was fundamental to drill the boreholes adjacent to trail pit no. 2 which had yet to be done: in order to gain a realistic understanding the condition of the soils in that vicinity. Only then could a statement be made that the tower was safe.	Note	
20	MT was requested by MB to permit access to the church & school grounds in order to go through the method and installation of installation of the monitoring equipment. This was seen by all parties as being a critical activity. PC went on to say that all of the information (e.g. method statements, risk assessments etc) MT had requested WD to produce was in place to allow this to occur. MB stated he would get back to WD with a response.	MB	24.04.17
21	PC handed over a Q&A Tracker containing comments/representations received within various reports, to which some 80% had been responded to and the remainder was awaiting the outcome of further ground investigations.	Note	
22	It was agreed that a smaller working Technical Group would meet on a regular basis i.e. fortnightly over the coming weeks, which would be arranged and chaired by PC.	PC	On going

Date and Time of Next Meeting		
Date: 2nd May'17	**Time:** 10:00am	**Location:** A Squared, One Westminster Bridge Rd London, SE1 7XW


Royal Free Hospital – Pears Building
Basement Design Team Structure
Main Contractor
WILLMOTT DIXON
SINCE 1852
Basement Design Engineer
HTS
Structural Engineer
HTS
Geotechnical Consultant
A-squared | Studio
Temporary Works
L+C consulting structural engineers
Groundwater Design Specialists
OGI
Site Investigations
Soil Consultants
GMA Consultant
A-squared | Studio
Hydro-ologists
esi Environment Specialists
Groundworks
Toureen Group
Piling
BACHY SOLETANCHE