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| Delegated Report | | Analysis sheet | Expiry Date: | - |
| (Members Briefing) | | N/A / attached | Consultation Expiry Date: | - |
| Officer | | Application Number(s) | | |
| Charles Thuaire | | 2014/6845/P | | |
| Application Address | | Drawing Numbers | | |
| Royal Free Hospital Pond Street London NW3 2QG | | Royal Free Hospital Pears Building 'Detailed Basement Construction Plan' Revision E1 dated 12.10.17 by Heyne Tillett Steel, plus associated revised 'Monitoring Action Plan' Revision H dated 7.12.17 by Willmott Dixon. | | |
| PO 3/4 | Area Team Signature | C&UD | Authorised Officer Signature | |
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| Proposal(s) | | | | |
| <p><u>Detailed Basement Construction Plan</u> required by S106 (section 4.3) attached to planning permission dated 25 April 2016 ref 2014/6845/P for Demolition of existing carpark and erection of new 7 storey building for Institute for Immunity and Transplantation and other uses.</p> | | | | |
| Recommendation(s): | | Approve Detailed Basement Construction Plan and discharge S106 clauses 4.3.1 and 4.3.2 | | |
| Application Type: | | S106 planning obligation | | |
| Conditions or Reasons for Refusal: | | - | | |
| Informatives: | | | | |

Consultations

| Adjoining Occupiers: | No. notified | 00 | No. of responses | 29 | No. of objections | 29 |
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| <p>Summary of consultation responses:</p> | <p>No formal consultation. However in light of the continuing interest and dialogue by neighbouring objectors and their technical advisors (ie. St Stephens Church Trust, Hampstead Hill School and some Pond St residents), the DBCP was placed on the website after its formal submission on 12.10.17 and these objectors were advised by email that they could view the plan and make comments within a 4 week period until 13.11.17.</p> <p><u>Objections-</u></p> <p>25 individuals, including 12 parents of children at School and 6 adjoining neighbours in Pond St and Haverstock Hill- Construction nuisance, traffic, noise, pollution; impact on listed church stability; impact on school and Green (light, privacy, peace); encroachment on footpath; temporary closure of path for piling mat; health and safety of schoolchildren; does not comply with S106 requirements according to technical experts used by Church; better sites suited for this Institute; monitoring scheme inadequately robust for Pond St properties- need to adopt their engineers' recommendations to ensure no structural damage occurs to all these properties which have historically suffered subsidence, 'one size fits all' approach inappropriate for different age and style buildings.</p> <p><i>(officer response- most of these objections relate to the principles and details of the proposed development here which have already been addressed at the original planning application stage. The footpath narrowing and partial closure is being dealt by separate highway legislation via a stopping up order. Issues relating to basement construction and damage to neighbouring properties is discussed in section 5A below)</i></p> <p>St Stephens Church Trust and Hampstead Hill School- Footpath closure affects school fire escapes; piled foundations will block groundwater movements, risks stability of church and hall; pollution and noise harms school use; impact on future viability and repair of church community venue.</p> <p><i>(officer response- see comments above)</i></p> <p>21 Pond Street (both as resident and chair of HGNG)- Protection of Pond St buildings inadequate- 'one size fits all' approach inappropriate for different age and style buildings and only monitors front walls of buildings, not the rest; no strategy in place to deal with a catastrophic event; Council's draft audit supports their concerns about safeguarding neighbouring properties; local group HGNG tried to enter dialogue with Royal Free Hospital but failed, consultation between technical experts suspended for several months; 'meaningful consultation' has not taken place and many points raised remain unresolved; LBH draft review for Council does not provide any critical analysis and evaluation of the applicants' evidence nor makes reference to the reports of the technical experts for Church and HGNG.</p> <p><i>(officer response- see sections 5A and 5B below)</i></p> <p><u>Birketts solicitors</u> representing <u>St Stephens Church Trust, Hampstead Hill School and Hampstead Green Neighbourhood Group (HGNG)-</u></p> | | | | | |

15 page covering letter submitted, enclosing various appendices including-

- a report from Eldred Geotechnics and First Steps Ltd on ground properties and engineering response;
- 2 reports from Stephenson Davenport Structural Assocs on design implications for the church, school and 5-23 Pond St;
- a report on planning implications from DRK Planning Ltd.

This response scrutinises the DBCP by considering in particular the reliability of the ground model for predicting the damage that could occur to the church, school and surrounding ground, by identifying key questions relevant to those predictions that remain unanswered, and by noting information of critical significance to the management of construction for the excavation that has not been supplied. They ask that members are supplied with a copy of this report and its appendices and encouraged to read them.

This response letter and its appendices 1-6 are attached as requested, as Appendix B to this report for members' information.

Birketts summarise their position as follows:

'1. The current DBCP gives serious cause for alarm in a number of areas. In the view of our experts it is inevitable that the works will cause damage that exceeds level 0 on the Burland Scale and are thus certain to be in breach of the 106 provisions;

2. The DBCP has revealed previously undisclosed detail about the piling mat and the consequent noise that will be generated from the piling and its impact on the school. The length of time that piling operations will be present, and the amount of noise generated, is likely to make it impossible to operate the school at all.

3. Officers have discretion to reject the current DBCP or revert back to the applicant for more information or delay its approval until such time as the applicant can prove that its requirements will be met.

4. We recommend that the Council does not approve the DBCP as it is clear that it does not comply with a number of the requirements of the 106 agreement, including specifically demonstration that the development as a whole will not have "any impact on the structural integrity of the Neighbouring Properties beyond 'category 0 (negligible)"". Indeed given the seriousness of the deficiencies identified, we are of the view that it will be irrational and unreasonable to approve the document in its current form.'

They consider that even if the Council is minded to approve the DBCP, it is evident that changes must be made. They also acknowledge that 'most of the major changes that have been made to date relate to the ground model of movement and damage, to the ground model of ground water and to the design and management of construction, have been initiated and justified by the technical group from St Stephens, who have already contributed so much of relevance to try to guide the project's safe completion'.

Accordingly they propose that any decision to approve the DBCP is made conditional on the Royal Free signing up to a 'Memorandum of Understanding' to improve existing communications, to ensure effective ongoing oversight, and to inform the operation of any working group set up with the local community.

The response then summarises the technical evidence concerning engineering and structural issues. It concludes that- the DBCP does not comply with the S106 requirements; does not demonstrate that the risk of damage will be limited to 'category 0'; gives little evidence of the interface

between monitoring data and ensuing damage predictions; disputes that many issues on the 'S106 Q&A document' have been 'closed'; gives no evidence of effective engineering oversight or scrutiny of the project; its design remains uncoordinated, has 'worryingly poor' information and a crude approach in modelling resulting in unreliable outcomes; results in a risk to continued operation of the Church and School.

It summarises concerns relating to construction impacts on the footpath and school, concluding that works carried out so far, the proposed construction traffic and temporary footpath closures, and the proposed piling mat both harm the school physically and operationally in terms of noise, vibration and fire safety.

The response finally raises numerous detailed and specific concerns about the consultation process and lack of clarity on the 'neighbouring properties' referred to in the DBCP; it concludes that there is inadequate evidence that the Royal Free 'has meaningfully and actively consulted' local groups and 'has taken account of any representations received' by addressing any issues raised. It also expressed concerns about costs incurred by their technical experts and borehole investigations, which should be reimbursed by the Royal Free.

It concludes that 'If the Council does approve the DBCP, we ask that this is approval is made conditional on arrangements put in place based on the attached Memorandum of Understanding'.

(officer response- see sections 5A and 5B below regarding the DBCP issues; with regard to the issues of CMP and footpath closure, the CMP has already been approved by the Council on 24.7.17 and that S106 clause discharged; the partial narrowing of the public footpath and closure of the hospital access road is covered by separate highway legislation via a stopping-up order- this has been reported to the Mayor for a decision in January 2018)

DRK Planning Ltd representing St Stephens Church Trust, School and HGNG- objection letter received 3.1.18-

Advises that in the context of an earlier Judicial Review application, the Court intended that a very high level of certainty should be established to show that there would be no harm as a result of the proposed works and that consultation with all local interested persons has been carried out to an appropriate degree. They cannot support DBCP at present as 'it falls significantly and worryingly short' for following reasons- severe damage to Grade 1 listed church, significant damage to Pond Street properties, construction and pollution nuisance to School, danger to school children and staff (by blocking fire escape routes), loss of community events and income to Church. DRK thus appeal to members not to allow the current DBCP as it is not 'fit for purpose'. They request that their letter be shown to Members along with a full list of the documents that were provided by their clients' expert consultants.

This response letter is attached as requested, as Appendix C to this report for members' information

(officer response- see comments above; matters relating to fire escapes, future operations of neighbouring commercial premises, construction nuisance, etc. are not relevant to assessment of a DBCP and its issues of basement excavation)

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| <p>CAAC/Local groups* comments: *Please Specify</p> | <p><u>Heath and Hampstead Society (with Councillor Stark)</u> met officers on 12.12.17. They have not formally commented in writing on the DBCP. However they support the scheme in principle, but they wish to be satisfied that the Council's technical assessment is sound and that it addresses the concerns by the objectors' technical expert reports about the structural stability of the church.</p> |
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Site Description

1.1 The Royal Free Hospital campus has a multi-storey carpark facing Rosslyn Hill and Hampstead Green, a Council-owned private open space. Permission was granted in 2016 for its redevelopment for the 'Pears Institute of Immunology' here (see history below), referred to below as the 'Pears Building'. The permission is subject to a comprehensive S106 including a clause for a Basement Construction Plan.

1.2 At the northwest corner of the Green is St Stephen's Church and Hampstead Hill School. The church is now used for community purposes; it is a local landmark and Grade 1 listed. The churchyard gate and wall are Grade 2 listed. The School in the single storey former church hall is also listed Grade 2. To the west of the Green on Rosslyn Hill is a cabman's shelter listed Grade 2. The area to the north and east is characterised by residential properties; the houses to the north at 5-23 Pond Street are listed.

1.3 The site is not within a conservation area but borders Hampstead conservation area to the north and west which includes the Green and Church. Further west across the road lies Fitzjohns/Netherhall conservation area and to the south of this is Belsize conservation area.

Relevant History

25 April 2016- ref 2014/6845/P- planning permission granted subject to S106 for Demolition of existing carpark and ancillary structures and erection of new 7 storey building containing laboratory/research space for Institute for Immunity and Transplantation, a patient hotel, Royal Free Charity offices plus a replacement carpark, plant and landscaping.

15.8.17- ref 2017/4229/P- Non-Material Amendment granted for minor amendments to allow an increased width of public footpath adjoining Hampstead Green, redesign of landscaped terracing and staircases adjoining this, redesign of north courtyard landscaping and addition of 1 disabled car parking space.

Relevant policies

Camden Local Plan 2017
A1 Managing the impact of development
A5 Basements
D2 Heritage

Camden Planning Guidance 2015
CPG4- Basements

Assessment

1. Purpose of report-

The report is presented to Members for approval following a requirement in the S106 attached to the planning permission for the Royal Free Hospital Institute of Immunology ('Pears Building') that the Detailed Basement Construction Plan ('DBC') should be agreed by Members Briefing or Development Control Committee, if referred to by Members (see para 3.7 (e) below).

2. Background history-

2.1 Permission was granted in April 2016 for the Pears Building subject to a complex S106 covering a number of issues, including a Construction Management Plan and DBCP. The applicant is the Royal Free Hospital Trust (RFHT). The scheme had been originally agreed in principle twice by Committee on 9.2.15 and 6.8.15. However the ensuing S106 negotiations were very lengthy and complex and attracted continuing criticisms by local groups and neighbours and their technical advisors regarding the submitted BIA and the draft DBCP clause. These objections (submitted in Nov 2015 and March 2016) related primarily to the scheme's impact on the structural stability of the adjoining St Stephen's church, adjoining school and Pond Street properties. Consequently these objections with technical evidence were further reviewed in March 2016 by the Council's independent engineering advisors (LBH Wembley) who had previously advised on the original BIA for this application. LBH recommended that the S106 BCP clause be further enhanced with a set of expanded conditions, requiring more studies to be done and submitted for approval. These expanded conditions (summarised in section 3 below) identify significant further investigation and geotechnical assessment that will need to be undertaken before a contractor can proceed to the detailed design of mitigation measures. The application, with a final revised S106 incorporating this enhanced DBCP clause, was finally agreed by Committee on 7.4.16.

2.2 The CMP was agreed and the S106 clause on this discharged by the Council on 24.7.17.

2.3 The DBCP clause is a very complex, unusually detailed and bespoke one compared to most clauses of this nature, and is based on the recommended wording of the Council's technical advisors (LBH). The DBCP is defined in para 2.16 as a plan relating to the design and construction of the basement with a view to minimising impacts on defined neighbouring properties and to provide a programme of detailed mitigating measures to be undertaken with the objective of maintaining the structural stability of these properties and the application site itself. Section 4.3 relates to the DBCP. Clause 4.3.1 requires a DBCP to be submitted for approval prior to works commencing on site. Clause 4.3.2 requires the Council to approve the DBCP in writing prior to works commencing on site. Clause 4.3.3 requires that the Council will not approve the DBCP unless it is demonstrated, by way of certification by a suitably qualified engineer, that 'the development can be constructed safely in light of the ground and water conditions and will control ground movements such that impact on the Neighbouring Properties is limited to "category 0 (negligible)"...'.

3. DBCP requirements-

3.1 The S106 requires the DBCP to have several stages in its preparation, review, submission and approval. As shown below, the process contains several checks and balances; in particular it should be noted that the DBCP had to be not only prepared by an agreed certified engineer but also reviewed by another independent certified engineer and then, after its formal submission, it could be further reviewed by a 3rd independent engineer acting for the Council.

3.2 Firstly it requires the DBCP to include the following 4 items, in summary-

- (1) ground movement analyses, including considerations of slope stability, to demonstrate acceptable impacts of excavation and basement works on the church and school (with specific issues referred to in subclauses i-iii);
- (2) a detailed construction methodology and sequence demonstrating how the stability of the neighbouring buildings and ground is to be ensured at all stages of the works (with ref to subclauses i-iv);
- (3) a detailed structural monitoring and contingency plan (with ref to subclauses i-x);
- (4) surface water drainage calculations.

3.3 'Neighbouring properties' are defined in the S106 as including St Stephens Church, Hampstead Hill School on Pond Street, and the public house at 250 Haverstock Hill. However ground movement monitors were placed by the applicants (RFHT) on not only these specified properties but also other listed buildings at the cabman's shelter and nos.5-23 Pond Street. Furthermore ground movement

and impact assessments and condition surveys were analysed for all other surrounding properties including houses in Pond Street and Rosslyn Hill, church hall retaining wall and outbuildings, Bartrams hostel site, and the Hospital itself.

3.4 Secondly it requires, in subclauses (i) and (ii), appointment of a 'Basement Design Engineer' (BDE) to prepare the Plan ensuring a number of matters are dealt with. These in summary require-

- (a) a design that incorporates appropriately conservative modelling of ground, water and structural conditions;

- (b) these figures to ensure the development will have no impact on neighbouring properties beyond category 0 of the Burland Scale Category of Damage;

- (c) certification from the BDE that the detailed measures, as listed in 7 ensuing subclauses (1-7), are sufficient to achieve the objectives of the DBCP.

3.5 Thirdly it requires, in subclauses (iii) and (iv), appointment of a 'Certifying Engineer' (CE) to review the design plans and provide a 2 page report to the Council confirming that the plans have been formulated in accordance with the S106 and are sufficient to achieve the objectives in the DBCP.

3.6 The appointments of both engineers (BDE and CE) were required to have the prior approval of the Council. They both have the appropriate qualifications and expertise and their appointments were formally agreed by the Council on 1.12.16. The BDE is Heyne Tillett Steel; the CE is Campbell-Reith.

3.7 Finally it requires, in subclause (v), the applicant to submit the agreed finalised DBCP to the Council for its approval with-

- a) a letter of certification from the CE confirming that the DBCP is an approved form and has been formulated in strict accordance with the S106;

- (b) evidence that the applicant has 'meaningfully and actively consulted local interested parties/local residents groups' on the provisions of the plan prior to its submission to the Council;

- (c) a statement summarising all representations received by the applicant as a result of this consultation;

- (d) evidence that the applicant in preparing the plan has taken account of any representations received and sought to address any issues raised;

- (e) confirmation in writing from Members Briefing that the plan is agreed or (in the event of the plan having been referred to the Development Control Committee on the recommendation of Members Briefing) confirmation in writing from the Development Control Committee that the plan is agreed.

3.8 It also requires, in subclause (vi), the applicant to respond to questions and requests from the Council and to pay the costs for any further independent technical assessment required to 'resolve any unresolved issues or technical deficiencies'.

4. Review process-

4.1 The DBCP was issued in its final form to the Council on 12th October 2017. It is a highly detailed document over 1350 pages long and contains several technical sections under the headings of proposed temporary works sequence, hydrology, trees, ground movement assessment, movement monitoring and construction monitoring; its Appendix P contains a summary of consultation with 3rd parties. The DBCP was placed on the website allowing comments for 4 weeks. Accordingly objections have been received from individuals, neighbours and groups who were previously opposed to the development here, notably St Stephen's Church Trust, the adjoining School and HGNG (representing Pond Street residents). These objections are summarised in the consultation section above.

4.2 The Council submitted the DBCP for a formal review to its technical advisors 'LBH Wembley Engineering' (LBH). The above-mentioned objections, which contained very specific technical critiques, were also sent later to LBH for review and comment.

4.3 LBH submitted their first review to the Council on 21st November and this was placed on the web for public view. Their audit checked that all requirements of the DBCP and its various subclauses had

been correctly followed and carried out. LBH concluded in this first review that 'the present DBCP has been significantly revised since the previous version and now provides evidence that the proposed development should not affect the neighbouring properties'. However LBH recommended that one specific area required further attention- a more robust movement monitoring and contingency plan was required to provide greater assurance that a sufficiently rapid response to exceedances of predetermined trigger levels would actually prevent further movements from reaching limits of unacceptability. The plan was somewhat unspecific and it was perceived that there was scope for misunderstandings to arise about who was responsible for various stages. Thus LBH required a revision of the DBCP concerning subclauses 3vi, 3ix and 3x.

4.4 In response, RFH revised the DBCP on 7.12.17 by an updated Monitoring Action Plan (MAP, revision H) to address these concerns. In particular it identified the BDE (Heyne Tillett Steel) to be the engineer responsible for these key stages and retained throughout the whole construction phase to oversee works and ensure compliance with the requirements.

4.5 LBH reviewed this MAP and submitted their final revised report to the Council on 20th December 2017. LBH has now confirmed that the MAP is acceptable and provides a sufficiently robust contingency plan with identified resources. They also conclude that 'the DBCP has been significantly revised since the original version and now provides the required evidence that the proposed development should not affect the neighbouring properties'.

4.6 LBH have also reviewed the technical objections received as part of the Council's own consultation exercise, notably the joint report submitted by Eldred Geotechnics and First Steps Ltd and 2 reports by Stephenson Davenport Structural Assocs. This is discussed further in paras 5.12-14 below.

4.7 Separately, RFHT have more recently submitted (on 2.1.18) their own rebuttal of the criticisms made by the objectors, whereby their own engineers (Heyne Tillett Steel and A-Squared Studio) and the Certifying Engineer (Campbell-Reith) all rigorously refute the assertions and allegations made and are all highly critical of the statements made. For instance, the BDE refutes the assertion that 'the design remains uncoordinated and far from complete', stating that it is precisely the opposite. The CE points out various 'gross errors' in the joint report and refutes the serious allegations made that they are incompetent as independent checking engineers reviewing the DBCP. RFHT concludes that 'key information has been inadvertently or purposely omitted, supported by the fact that the opinions expressed by the technical representatives [of the Trust and School] have very little or indeed no evidence to substantiate the accusations being made. Furthermore, there are several misinterpretations or misunderstandings being made, demonstrating an apparent lack of understanding of modern ground movement assessment methods and procedures'.

4.8 RFHT have considered Birkett's request that any decision to approve the DBCP is made conditional on them signing up to a 'Memorandum of Understanding' to improve existing communications (see consultation section above). However RFHT have declined this offer, stating that 'it is not feasible for the Charity to enter into a Memorandum of Understanding (MoU) with any interested party notwithstanding there being no legal requirement within the s106 Agreement for the Charity to do so.' Officers note that there is indeed no such requirement in the S106 and the Council cannot compel the applicant to enter such an informal agreement, even if it appears reasonable to facilitate cooperation between parties on the scheme's construction.

5. Assessment-

5.1 As already noted above, the S106 clause on the DBCP is very comprehensive, detailed and indeed onerous in its scope and content. Its aim is to ensure that no damage is caused to neighbouring properties, especially the listed buildings, above category 0 (negligible) of the Burland Scale. All parties, including the objectors, Royal Free Hospital (RFH) and Council, are committed to ensure that the development here does not harm the structural stability of neighbouring buildings, especially the Grade 1 listed church. Furthermore it should be emphasised that the DBCP has been

subject to a rigorous process of creation and checking by a series of independent engineers- it was prepared by the applicants' own engineers (Heyne Tillett Steel) and then reviewed by Campbell-Reith as appointed by RFH. It was then reviewed again by LBH as the Council's own advisors and, following their concerns at specific issues, revised to their satisfaction. It should be noted that these engineers are highly qualified and respected companies with considerable expertise in the fields of geotechnical and structural engineering. Also, as members are aware, Campbell-Reith is used by the Council for all its independent audits of BIAs submitted for planning applications.

5.2 There are 2 aspects of the DBCP that need to be assessed by the Council-

- a) The technical analysis showing that there will be no damage to surrounding properties;
- b) The consultation exercise carried out by RFHT and its input into the DBCP as required by subclause (v) (b-d).

A. Technical analysis

5.3 The DBCP contains the following evidence from the 2 engineers responsible for creating and checking the Plan-

(a) The Basement Design Engineer (BDE) confirmed on 11.10.17 that 'best endeavours have been used to ensure that the design of the basement and the Detailed Construction Plan are in accordance with the S106 agreement.'

(b) The Certifying Engineer (CE) provided on 12.10.17 a 3 page report in which it concludes that 'Campbell Reith has reviewed the information submitted.... and is satisfied that it is in a form approved by the Basement Design Engineer and Certifying Engineer and has been formulated in accordance with the relevant terms and clauses of the Section 106 Agreement'.

5.4 The Council's review of the technical aspects of the DBCP is provided by the final independent review submitted by LBH in Dec 2017. This is itself informed by the earlier review by Campbell-Reith as Certifying Engineer.

5.5 The CE have assessed the DBCP under 4 headings in their review report.

a) It describes the nature of the proposed basement construction.

b) It describes the Hydrogeology & Basement Ground Water Control, in summary as follows- During the construction of the basement, localised water ingress is anticipated through seepages at the top of the clay. This will be managed by the provision of pumps and a settlement/silt capture solution prior to discharge to the foul sewer. This is unlikely to comprise a large volume of water, hence the prescribed contiguous piling retaining wall solution. It is acknowledged that the basement wall may have a damming effect on groundwater, which could reduce the stability in the slope to the west. OGI consultants produced an independent hydrogeological assessment and recommended the incorporation of drainage through the basement wall. Wick drains will be installed to prevent damming and the build-up of pore pressures behind the wall. Land drains will be installed to avoid any adverse impact on shallow groundwater levels once the watertight basement box is completed. Piezometers are to be monitored during and after construction to ensure the efficacy of the drainage and mitigation measures are described should trigger levels be reached.

c) It describes the Ground Movement and Building Damage Assessment, in summary as follows- A Ground Movement Assessment has been undertaken by A-Squared consultants, based on existing and supplementary ground investigation data, and the neighbouring properties have been assessed to have a Burland Category of Damage limited to Category 0 (negligible), as required by the S106 Agreement.

An 'early warning' monitoring regime has been designed incorporating arrays of inclinometers

between the basement and the most sensitive structures (the church and school). These will allow the magnitude of any ground movements associated with the basement construction to be identified and assessed and mitigation implemented, if required, to safeguard nearby structures. It is acknowledged that final trigger levels are to be agreed once further detailed ground modelling is completed. Typically surrounding foundations are outside the zones of influence or are at sufficient depth not to be at risk of heave following removal of trees to permit construction. Two small sections of the school wall and a length of the church boundary wall could potentially be affected. It is proposed to inspect these walls at least annually and make good any damage that can be attributed to heave.

d) it assesses Compliance with Section 106 Agreement and notes that all relevant subclauses of 2.16 in the S106 are 'accepted'.

5.6 The CE have separately confirmed (in their rebuttal to the criticisms made- see para 4.7 above) that the process of creating the DBCP was carefully and extensively scrutinised and commented upon- this is discussed further in the consultation section below in para 5.24.

5.7 LBH have assessed the DBCP and confirmed that all requirements of the various subclauses of the S106 have been carried out and included within the DBCP, as noted in para 4.5 above.

5.8 In particular they note that the detailed ground movement analyses demonstrate that the impacts of the approved excavation and basement works on St. Stephen's Church and Hampstead Hill School are acceptable and within Burland Damage Category 0 (Negligible).

5.9 With regard to the Church, LBH state that 'the Burland Classification has been used to show that movements to the main body of the church are predicted to result in Category 0 damage'. However with regard to the tower, LBH state the following- 'The report explains that The Burland Classification idealises any building as a simple beam in bending/shear and horizontal strain and that, due to the height of the tower, it is not considered that the Classification is valid, as the tower has a length to height ratio much less than 1 and so is outside the range of the simple beam idealisation. The report considers that it is more suitable to consider the total and differential settlements of the tower foundation and any impact these would have on the tilt of the tower. However a maximum tilt of 1 in 35000 is predicted as a result of the works, which is some two orders of magnitude less than that at which it is asserted that tilting becomes noticeable'. This maximum figure for tilt noticeability is 1 in 250 as advised by the Building Research Establishment. LBH have subsequently advised that, on account of the geometry of the tower, it is not appropriate to apply the Burland scale in this case and that this alternative method of assessing movement is acceptable. LBH consider that the predicted tilt of the tower seems entirely acceptable and that it may reasonably be expected to generate damage that lies within the equivalent of Burland Scale 0. It should be noted that the objectors do not seem to have queried this approach.

5.10 With regard to the School, the report explains that 'as a result of the calculated deformations, a Category 0 (Negligible) classification is estimated'.

5.11 In their final conclusion, LBH state that 'it is considered that the DBCP meets the requirements of the S106 agreement and that it has been reasonably demonstrated that the development can be constructed safely in the light of the ground and water conditions and that ground movements can be controlled such that impact on the neighbouring properties is limited to 'category 0 (negligible)' in accordance with the Burland Scale'. This concluding quote reiterates the requirement of clause 4.3.3 in the S106 (see also para 2.3 above).

5.12 LBH have also commented on the technical objections submitted by Birketts to ascertain whether they are valid criticisms or not. LBH have analysed the matters raised in some detail and they completely and robustly refute the criticisms and allegations made. Indeed they have stated that the joint report by Eldred Geotechnics and First Steps Ltd has caused concerns as a result of the emotive language used. This report raises concerns under 6 headings- confidence in the numerical model; assessment of damage levels; review of issues revealed by borehole BH213; management of groundwater; baseline values for ground and its groundwater; matters considered open and closed. LBH disagree on all the matters raised here and dispute the assertions made, which are not based on

clear evidence or understanding of hydrological and geotechnical matters and which appear to be based on misinterpretations and misunderstandings. The objectors refer to the 'S106 Q&A Master Document' (see para 5.23 below) and dispute that many of the matters raised by them have been 'closed'. LBH dispute their implication that such matters can only be closed with the objectors' agreement and consider their criticism to be unfair, as all 35 specific issues raised by the Trust have been clearly addressed by RFHT experts with reasons given why they are closed out; thus the document is not a misrepresentation of the position of the Trust's experts.

5.13 LBH also disagrees with the assertions made in the reports by Stephenson Davenport Structural Assocs about structural matters, for similar reasons as with the above joint report. Their request for a more robust monitoring, communication and contingency plan has now been met by the revised MAP that LBH now consider satisfactory.

5.14 Finally LBH responded to criticisms made by the chair of HGNG (see consultation section above) that the draft LBH review did not provide sufficient evaluation of the DBCP submission. LBH state that their brief was to independently assess whether the DBCP meets the S106 requirements and to identify any issues or areas where it is considered that the applicants have not met the requirements. It was not intended to replicate the studies done by other engineers and reproduce their assessments or calculations, but rather to identify any aspects of the assessment, design, methodology or outcomes that do not appear to accord with expectations in the light of the S106 requirements.

B. Consultation exercise

5.15 Although required specifically by the S106, it does not explicitly say how it should be carried out exactly- it only requires by evidence that the applicant has 'meaningfully and actively consulted' local interested parties and that the Plan has taken account of any comments made as a result of this.

5.16 RFHT have submitted a note within the DBCP outlining the various methods of consultation taken place with the general public and specific interested parties, written evidence to support this, and a series of tables outlining how they have responded to queries. It is noted that some of this is not directly relevant to the issue of basement excavation as they refer to meetings about other matters, such as the CMP or stopping up order. Some of the written evidence was missing- RFHT have subsequently provided further meeting minutes. Nevertheless the submitted information relating to the evolution of the DBCP appears reasonable and adequate in showing how RFHT have responded to various queries and issues raised. There is also ample evidence of correspondence between RFHT and the various interested parties (eg. St Stephens Trust, HGNG, RFH, and Heath & Hampstead Society) about matters such as structural assessments, monitoring installations, boreholes and trial pit investigations.

5.17 However members should note that close cooperation between St Stephens Trust and RFHT on these matters has unfortunately proved to have been very difficult, essentially on account of the Trust's fundamental opposition to the Pears development here, RFHT have commented that objectors still continue to oppose the development of the Pears Building, evidenced by the Trust 'either withdrawing, reneging or not even responding to requests for cooperation'. Consequently access was denied twice to RFHT during 2016 and 2017 for the installation of essential monitoring equipment and drilling of boreholes in the church grounds, which meant that RFHT had to devise an alternative strategy for installing equipment outside the site, resulting in delays to the programme.

The following stages of consultation are noted.

5.18 The lengthy process of creating the DBCP was informed by various informal meetings with technical advisors for the objectors, property owners and residents, as well as Royal Free Hospital itself during 2016 and 2017.

5.19 Three public meetings were held by RFHT with the public, and notification was via hand-delivered letters to over 400 households around the site (see Appendix A showing extent of properties involved). The meeting on 30.11.16 was about introducing the scheme and the CMP; that on 3.5.17

was primarily about the CMP. However the meeting on 9.2.17 was about both the CMP and DBCP and invited the public to make comments on the draft DBCP as part of its formal consultation. Also there was a meeting on 4.1.17 with Pond Street residents about monitoring installations, leading to the successful installation of the equipment after gaining appropriate landowner and listed building consents. These meetings are recorded on a 'Feedback from public consultation' schedule, which notes the comments made and the responses and actions proposed by RFHT. For instance, 9 queries on CMP and BCP matters raised by residents at the 9.2.17 meeting were recorded (the numerous other comments recorded are irrelevant, being praise from staff of RFH and UCL). The extent of notification of residents, as shown in the attached map, is considered to be extensive and appropriate for this particular case. In addition 3 newsletters have been distributed in June, July and October to these households as part of an information sharing exercise; although they invite comments on the project and have a Q&A section, it is recognised that this is not a formal consultation process on the DBCP.

5.20 The draft DBCP was then issued to key stakeholders and placed on RFHT's website for public consultation on 20th Jan 2017, allowing comments to be made until 7th March. Birketts solicitors, representing the objecting parties, duly submitted that day an objection with reports by their 3 technical advisors (Eldred Geotechnics, First Steps Ltd and Stephenson Davenport Structural Assocs). Another objection from DRK Planning Ltd on behalf of the Trust, School and HGNG was also submitted. These objections are referred to in RFHT's 'S106 Master Document', discussed further in para 5.23 below.

5.21 A series of meetings then took place during 2017 between RFHT and 3rd parties about the draft DBCP. There were 7 'Principals Meetings' (on 6th Feb, 22nd Mar, 19th Apr, 17th May, 14th Jun, 10th Aug and 12th Sep) with Diocese of London (owners of the church) and St Stephens Trust to discuss impacts on the Church and to gain agreement on a monitoring and trial pit strategy for its grounds. At the same time, 4 specialist 'Technical Meetings' took place with engineering experts from both sides (RFH and 3rd parties) to discuss in detail technical matters relating to the DBCP and in particular structural impacts on neighbouring buildings. The representatives included Diocese of London, St Stephens Trust, HGNG, plus their 3 technical advisors (as mentioned above), as well as RFHT and their advisors (including Heyne Tillett Steel as BDE and Campbell-Reith as CE). The first meeting on 19th April was a joint working group between all parties to review the technical objections received from the Trust on 7th Mar (as noted in the above paragraph), followed by 3 more meetings on 2nd and 16th May and finally on 28th Sep.

5.22 Evidence is also submitted to demonstrate that other 'Principals Meetings' and correspondence took place during 2017 with other property owners about structural assessments and monitoring of neighbouring properties, such as the cabman's shelter, the George pub, Royal Free Hospital itself and Pond Street properties. This includes 2 meetings about the latter held with HGNG on 26th May and 18th Sep 2017. RFHT have subsequently asserted that the chair of HGNG does not represent the majority of Pond Street residents and thus RFHT liaised directly with the residents and businesses of 5-23 Pond St via a number of Residents Meetings (including that on 4.1.17 mentioned above) and subsequent email correspondence. RFHT advise that other property owners have not criticised the consultation process and also that a 4th newsletter was issued to surrounding properties before Christmas to give an update on development of the DBCP. It is worth noting here that the Hospital itself has to be afforded the same level of protection as the Church and Pond St properties, due to the need to protect acute patient services such as the operating theatres, Central Imaging Suite and A&E Unit. In addition, 2 other meetings were held separately in 2017, with ward councillors in March and Heath & Hampstead Society in May. See also para 5.28 below where it is noted that officers have also engaged with these 2 parties.

5.23 A 'S106 Q&A Master Document' has also been submitted which shows in tabular form how the DBCP has been developed from its inception in 2016 and how RFHT have responded to various queries and issues raised by 3rd parties and engineers (including their own consultants), in particular the objections made via Birketts to the draft DBCP on 7.3.17. The schedule lists the item raised by whom and when, the response by RFHT and whether the issues is closed or still ongoing. They include comments made by various engineers for all parties in July and Nov 2016 and Jan 17; by Heyne Tillett Steel as BDE in Nov 16; by the 3 technical advisors to the objectors in Mar 17; and by

Campbell-Reith as CE in Dec 16 and Mar 17. This schedule shows how the applicant has responded with justification (positively or negatively) to comments received in the development of the DBCP.

5.24 In relation to the above, Campbell-Reith has also separately advised (in their rebuttal to the criticisms made- see para 4.7 above) that the DBCP process was subject to careful scrutiny. They state that 'During the review period a number of errors, omissions, discrepancies and requests for clarification were notified to and discussed with Basement Design Engineer (BDE) and his specialist team. Where justified and agreed, the documents, calculations and/or drawings were amended. This process was extensively tracked via spreadsheets maintained by Willmott Dixon' (ie. the above-mentioned Master Document).

5.25 The documents submitted thus demonstrate that a regular series of meetings took place with technical advisors and 3rd parties throughout 2017 from February to September, which both informed 3rd parties about the DBCP process and also facilitated the evolution of the DBCP, such as development of the Ground Movement Assessment model and extensive negotiations on borehole installations, monitoring assessments, etc. It demonstrates that RFHT have instigated a comprehensive programme of consultation, engagement and publicity with the local community as well as with technical experts to advise on the detailed aspects of the DBCP. RFHT have also confirmed that they had set up a working group with local interested parties and key stakeholders, had funded the costs of technical consultants and party wall surveyors used by St Stephens Trust and the School, had funded the cost of trial pit works in the church grounds, and had shared technical information with other engineers. This all took place prior to the submission of the final DBCP to the Council in October 2017.

5.26 Birketts have objected to the inclusion of 'Technical meetings' in RFHT's consultation record, as these are considered to be meetings of professionals with advanced technical knowledge and do not count as contributing to a public consultation. However officers dispute this and consider that, in this particular case, consultation with and involvement by technical experts and advisors is equally valid as consultation with members of the general public, on account of the very technical nature of the issues involved. Indeed it is inevitable and necessary to involve relevant professionals in helping to make informed comments on and contributions to the Plan. In officers' experience of other schemes which involve basements and BIAs, objections from the public as laypeople are often quite general and are usually more useful if supported by detailed technical expertise in order to address any criticisms raised.

5.27 It is acknowledged that certain neighbours and their technical advisors do not agree with the resulting Plan and final conclusions of RFHT's own engineers, and that some have been unwilling to fully cooperate in facilitating the gathering of data to inform the Plans' preparation. However RFHT have demonstrated their willingness and 'best endeavours' to engage with these 3rd parties and cannot be reasonably criticised for the opposition encountered here or for their professional judgements on how to finalise the DBCP.

5.28 As noted in the consultation section and para 5.22 above, officers have also separately met with Heath & Hampstead Society (HHS) and ward councillor Stephen Stark to discuss their concerns about structural stability and to advise them of the process of reviewing the DBCP.

5.28 It is thus considered that the applicant has made reasonable endeavours (despite the problems experienced in seeking close cooperation with St Stephens as noted in para 5.17 above) to 'meaningfully and actively' consult local interested parties, to engage with technical experts acting for the objectors, and to take account of their comments as far as possible in development of the DBCP.

6. Conclusion-

6.1 The Council's independent engineering advisors have confirmed that the DBCP, as revised, complies with the various detailed technical clauses in the S106 regarding its contents and that the proposed development should not affect the neighbouring properties and will cause negligible impact

on their structural condition. Officers also consider that the applicant has complied with the consultation requirements of the S106 by making reasonable endeavours to actively consult local interested parties and to take account of their comments as far as possible in formulation of the final DBCP.

7. Recommendation-

- a) Approve the 'Detailed Basement Construction Plan' Revision E1 dated 12.10.17 by Heyne Tillett Steel, plus associated revised 'Monitoring Action Plan' Revision H dated 7.12.17 by Willmott Dixon;
- b) Discharge clauses 4.3.1 and 4.3.2 of the S106.

The decision to refer an application to Planning Committee lies with the Director of Regeneration and Planning. Following the Members Briefing panel on Monday 15th January 2018, nominated members will advise whether they consider this application should be reported to the Planning Committee. For further information, please go to www.camden.gov.uk and search for 'Members Briefing'.