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Introduction  
Executive Summary

Architectural Summary

RIBA Stage 1, which has been undertaken July to September 2017, primarily deals with key issues surrounding user briefing and understanding the site constraints and opportunities for the new LMS building. This has been the focus of the design team, which culminates in this report. Through user consultations and benchmarking other similar buildings as well as the current Medical Research Council (MRC) & Imperial College London (ICL) facilities the design team have been able to interrogate the brief and suggest how efficiencies might be made.

Key items that have been reviewed include the ground floor provision for the CBS and imaging suites, lab adjacencies, space per researcher standards, place making, site logistics and social/ collaboration spaces.

Diagrammatic design options have been a tool to explore adjacencies, areas and have formed the basis of many of the design discussions during Stage 1. A series of these studies are included within this report. The result is 2 design options for the LMS building project. These options are very deliberately different, approaching the solution from different angles. The two options each with their respective pros and cons will be analysed within this report.

Engineering Summary

The engineering activities carried out during the Stage 1 preparation and brief period of the LMS project have involved the review of key physical, planning and environmental issues for the proposed building and wider site as the initial project brief has been developed.

Key items that have been reviewed and appraised during this time include reviewing the structural grid, continuity of load paths and advising on vibration sensitivities and adjacencies. We have also investigated various site opportunities and constraints including the existing contaminated slab, the existing foundations and the existing substation that sits centrally on the site.

Preliminary energy (water, electrical power, heating and cooling) utility loads for the proposed building have been estimated and discussions had on options for providing utility services to the building. The project gives rise to the opportunity of relocating the existing sub-station off the Cyclotron Plot, as well as connecting into the existing hospital energy distribution network.

Building services engineering strategies for the building options have been investigated and indicative quantum of plant areas provided and potential locations for plant and distribution reviewed. A number of design criteria for building services design have been established and an outline strategy for Low & Zero Carbon Technologies has been proposed.

All of the work outlined above is subject to further investigation, survey results, ongoing review and design development during RIBA Stage 2.

Key Project Risks

Refer to the project risk register.

- Site logistics for construction period
- Site obstructions (including existing foundations and piles), contamination and radiation
- Issues around existing substation
  - i Can it be relocated off the cyclotron plot by 2018
  - ii Is UKPN capacity still available as per the Stage 0 quote
  - iii Building around active Sub-station (if applicable)
  - iv Timescale/enabling works package
- Unknown existing utilities awaiting survey (including possible combined brick sewer that dissects the site)
- Data centre resilience requirements
- CBS facility brief not finalised
- Restricted site access and implications during construction and in-use
- Understanding level of fit-out (FF&E and Equipment) and inclusion within project scope
- Co-ordination of legacy equipment; Obtaining specification of legacy and new equipment
- Obtaining specification of legacy and new equipment
- Detailed vibration analysis and constraints that may imposed constraints on building design / operations
- Confirmation of requirement for sprinklers
- Detailed vibration analysis and constraints that may imposed constraints on building design / operations

What Happens Next?

The key recommendations are:

- Confirm that the Stage 1 Feasibility proposals meet the strategic requirements of the agreed project brief
- This Stage 01 report is to be shared with the Project Board to seek a consensus endorsement to move to RIBA Stage 02.
- Project Board to authorise the project team to proceed directly to RIBA Stage 2 with a target to reduce the under-provision in animal house
- Agree this report as a basis for future consultation and briefing, future design development and the drafting of an planning application
- Confirm the project cost plan is within the acceptable expenditure limit for the project

What does the Design Team need to do next?

- Determine the fate of the existing electrical sub-station and work with the ICHT (and their electrical infrastructure advisors) to develop the topology for the incoming power to the LMS building
- Consider how best to recognise and incorporate LMS's comments into design development
- Development of the structural solution
- Development of the MEP solution including connecting the new building into the existing Campus wide heating infrastructure
- Review elevational treatment and composition
- Develop selection and specification of materials for the building envelope
- Develop deliveries strategy
- Further dialogue with user groups to enable production of Room Criteria Sheets.
- Begin discussions with Planning Department by instigating the formal pre-application process;
- Continue discussions and engagement with the local community, stakeholders, and other interested parties
- Continue with the reviewing the sustainability requirements
- Further investigate traffic issues with Highways Department
- Further review of the fire engineering and building control issues
- Review the process of the physical construction of the works
- Begin discussions around the procurement route for the new build, in addition to the timing /extent of tender information

- Continue monitoring the Health & Safety risks for the project
- Drainage (SUDs) strategy
- Develop overall madding and plant/ riser/ distribution strategies
- Develop structured cabling strategy based on MRC/ ICL ICT strategy
- Surface and foul water pre-development enquiries to ascertain probability of connection to public sewers
- Consider procurement route for the new build

What does Client need to do next?

- Submission of Stage 1 Report and Business Case document to Project Board for agreement to take the project forward - (early October 2017)
- Confirm funding approval from BEIS following Gateway Review - (on 6 October 2017)
- Whilst comments have been fed back on draft Stage 1 report, a consensus to progress to Stage 2 will be agreed between ICL and LMS in meeting wk/com 9 October 2017.
- Reconfirm the construction budget for the building (ongoing).
- Develop the facilities management strategy for the buiding (ongoing).
- Prioritise and balance the requirements of the CBS brief against the number of researchers / Pls within the building - (mid October 2017).
- Continue discussion with neighbours including ICHT and neighbouring school ARK Burlington Danes School to discuss site logistics and visual impact of the new building (ongoing).
- MRC / ICL to review Design Notes produced by the Design Team to confirm our understanding is correct and aligns with current design standards - (mid October 2017).
- Complete site surveys and input the relevant findings into the design process - (ongoing).
- Provide detailed feedback on the design proposals produced to date - (early October 2017).
- Review and confirm the specific briefing requirements for the various lab groups - (mid-end October 2017).
- Fundraising with other partner organisations such as the British Heart Foundation - (ongoing).
- Confirm the life span to which the building should be designed - (ongoing).
- Consider procurement route for the new build - (ongoing).

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Introduction

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Mission Statement

Introduction

The purpose of this report is to provide a strategic overview of the development proposals for the London Institute of Medical Sciences. It includes a review of the previous feasibility undertaken by BMJ Architects in February 2017, and presents a number of possible options for the old Cyclotron site. It also identifies a recommended strategy for the development of the building from which the proposals can move forward.

The Design Team has been working on the RIBA stage 01 appraisal for only 2.5 months approximately, and is very conscious that within this period (which has been over the summer holiday months of July, August and September) we have had limited engagement with the LMS staff. We would aim to engage more extensively through the next stage of the project so as to accurately establish requirements.

The report identifies possible opportunities and makes a number of assumptions which we would like to discuss further with you. A commentary from each construction discipline is also provided to comprehensively explain the relevant strategies and key issues. This enables all of the stakeholders to appreciate the project ‘in the round’ and give informed comment. This will help the design team to provide the buildings that meets the Institute’s needs.

What does RIBA Stage 1 mean?

The Royal Institute of British Architects (RIBA) sets out the process and protocol for developing a building from appraising the client’s requirements through to post construction. The process is set out as key work stages which describe the activities of the Architect at each of these stages. The other consultants’ work stages run approximately parallel to the RIBA work stages.

RIBA Stage 1 is when the brief is prepared and developed for consideration and approval. Key strategic decisions are made that will determine which direction the project takes. This Stage is therefore an opportunity for the client to set out their aspirations and guide the strategic moves that will be required to turn the designs into reality. This is not the last opportunity to comment or to review the design.

The conclusion of Stage 1 is a significant step towards the decision that the development is needed and will be built. The purpose of this project gateway is to confirm that the emerging brief and ‘Big Moves’ meets the LMS’s needs and will enable progression to the next stage of design development.

Key Project Objectives:

The key project objectives for the construction of the new MRC LMS building are:

- Provide the MRC LMS with a state-of-the-art collaborative research facility primarily to provide research continuity by providing a new animal facility. As well as In-vivo and in-vitro imaging facilities, generic wet labs and write-up areas.
- Enable the LMS and ICL stakeholders to deliver innovative science of the highest standard.
- Support the LMS and ICL stakeholders and other stakeholders in delivering on its multidisciplinary remit and strengthen the interface between clinical and basic science.
- Provide facilities which have a potential adaptability for future developments, change of science directions and opportunities for collaboration (in particular the imaging facilities).
- Allow the MRC LMS to accelerate the commercialisation of research.
- Develop the project with the least disruption to existing adjacent facilities.
- Maintain the specified quality levels whether in terms of documentation, professional team management, design or workmanship throughout the project life-cycle.
- Deliver the facility for occupation in 2021