

Project RED - Electrical Infrastructure

Manchester Royal Infirmary

Feasibility Study

Manchester University NHS Foundation Trust

May 2021

DAY

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00 Introduction

As part of the works for Project RED, the Electrical Infrastructure compound will house the M&E plant required to serve the extension as well as some of the existing departments within the existing hospital.

This feasibility report has been prepared by DAY Architectural and is to be read in conjunction with Hoare Lea and AJP's reports.

01 Existing Site



View from North Road toward the Wellcome Centre Car Park



View from North Road toward the Wellcome Centre



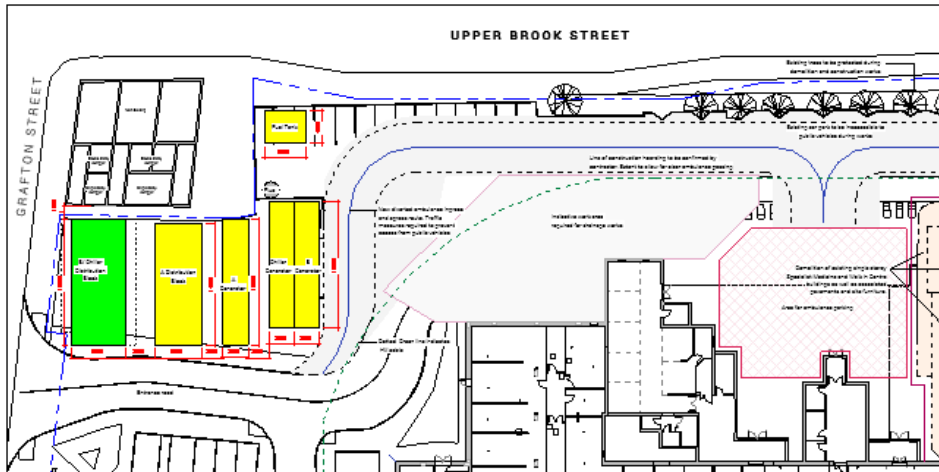
View from North Road toward the existing Car Park



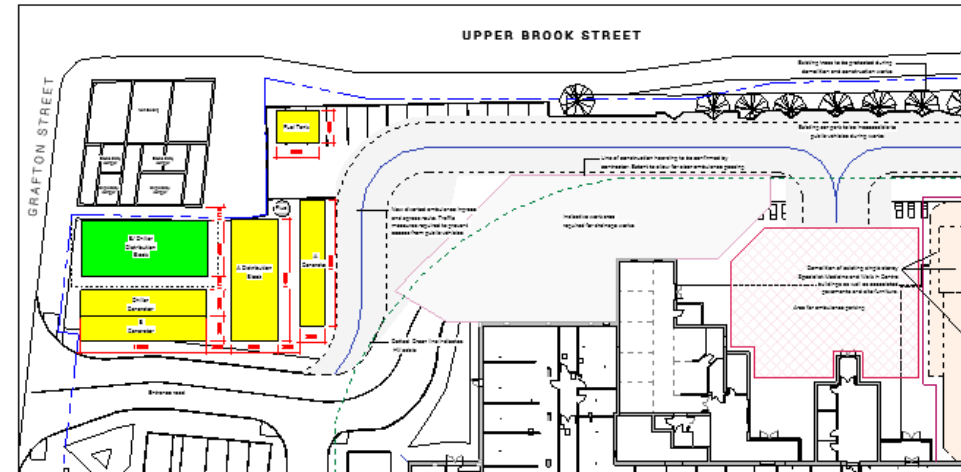
Aerial view

The existing site area is located towards the NW region of MRI, adjacent to sites of project RED, Grafton street and North Road. Google earth images above and adjacent show the local area.

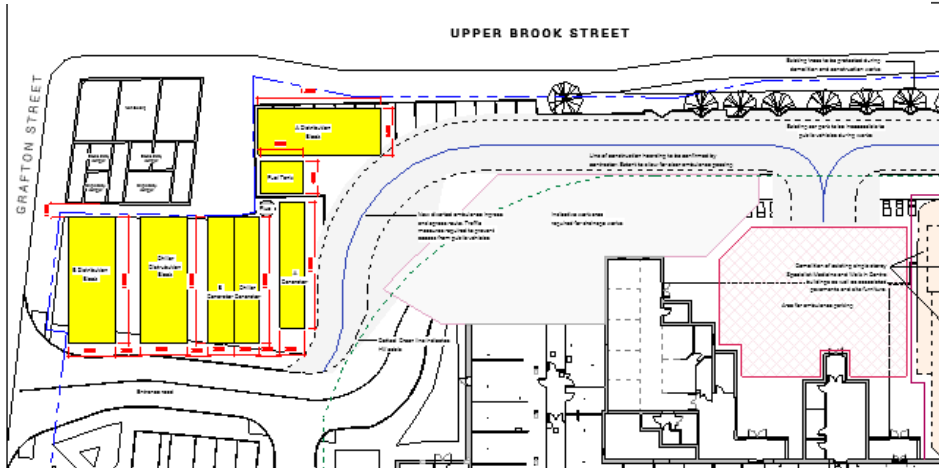
02 Concept Design



Proposed Option 1 – 2 Storey distribution block highlighted in green and a single storey distribution block with generators and fuel storage (yellow).



Proposed Option 2 - 2 Storey distribution block highlighted in green and a single storey distribution block with generators and fuel storage (yellow).



Proposed Option 3 – Single storey distribution block, generators and fuel storage

Following coordination reviews with the M&E engineers, the adjacent plans show the proposed site location & layout options at the early stages of the project.

There were many constraints in this location such as the following:

- The road diversion required as part of the works for RED extension
- Planning condition requirements to retain, and where possible, improve disabled parking numbers

02 Concept Design

Following further review, the Trust advised that the Wellcome Centre Car Park could be utilised as highlighted with red dashed line.



Existing Site Plan Drawing



Google Earth Image



Level 00:

HV Distrib

HV Distribution/Transformer Chiller – 20m2

HV Distribution/Transformer B – 27m2

Medical Gas Store – 30m2

Circulation – 25m2

HV Distrib

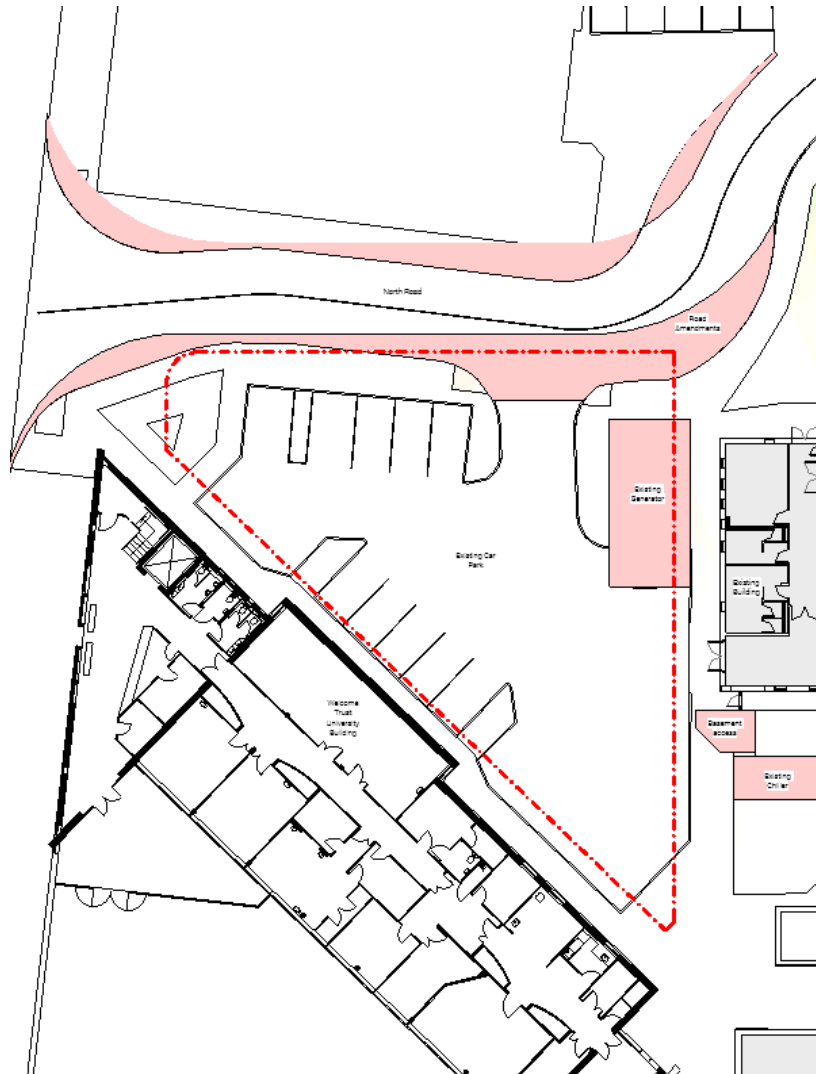
Chiller & LV Distribution A – 37m2

Circulation – 22m2

External compound area – 455m²

The E.I is proposed within an enclosed compound adjacent to the Wellcome Trust University Building and Existing Hospital. The proposed layout inside the compound comprises of single and two storey elements

03 Demolition/ Amendments to Site

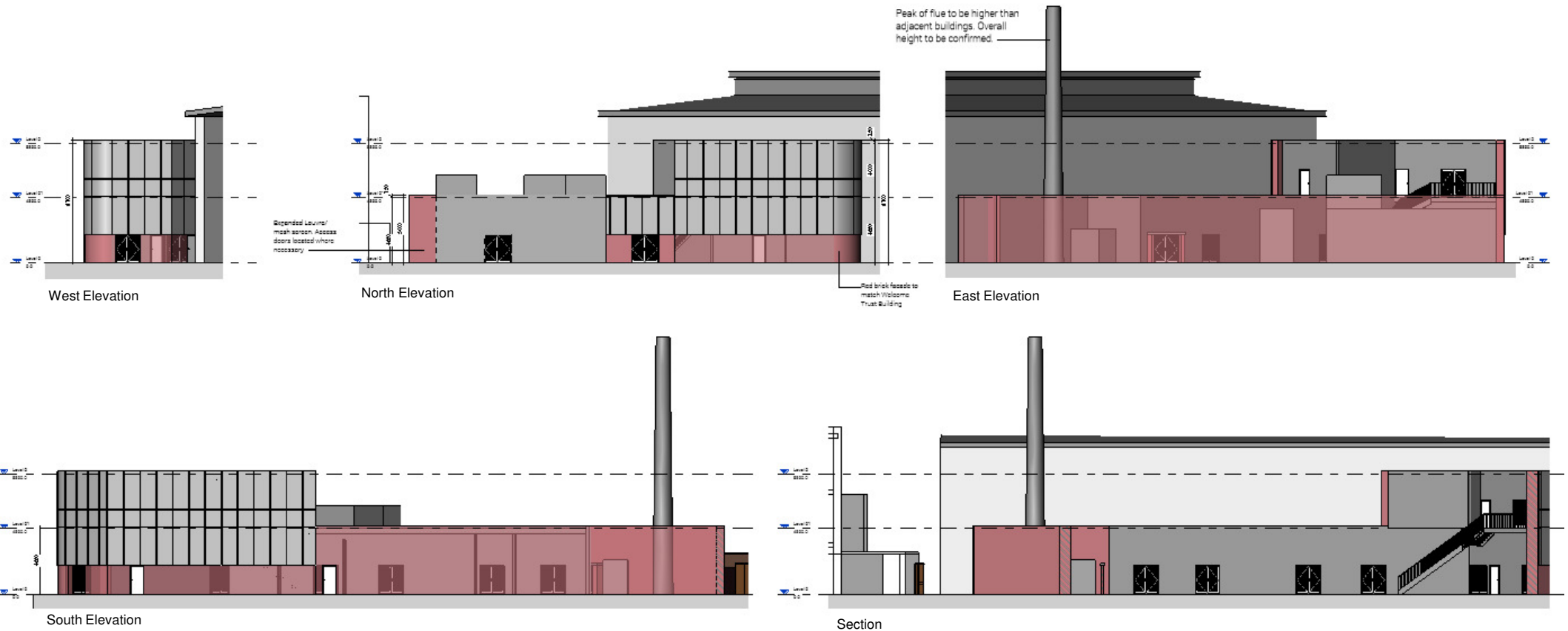


Demolition Site Plan Drawing

Following the proposed site location, amendments will be required to North Road and the existing basement access as well as the demolition of the existing generator compound and relocation of the Wellcome Centre Chiller (all highlighted in red adjacent).

It is proposed to adapt North Road to increase the area available to the site. This will also ease the corners on the blue right route, providing better line of site.

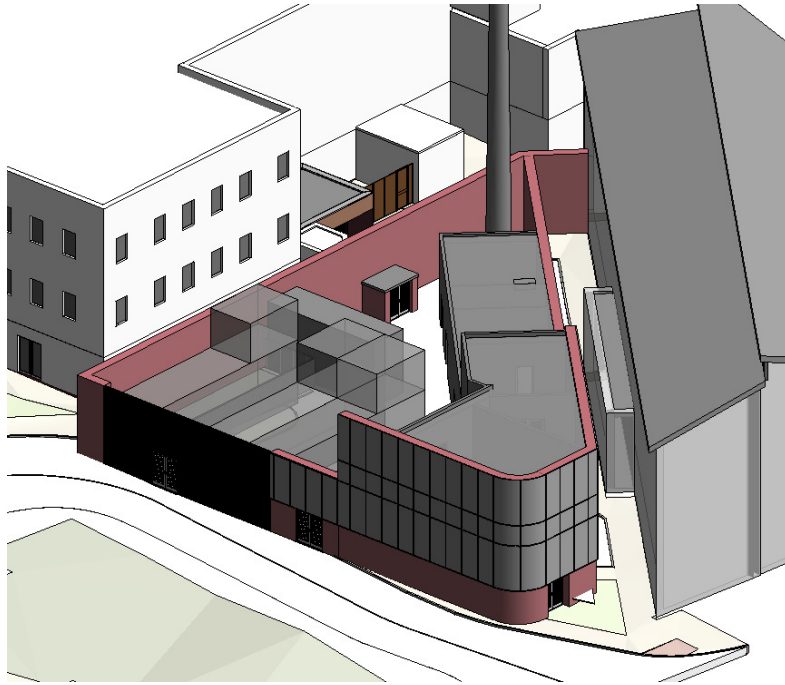
03 Proposed Design



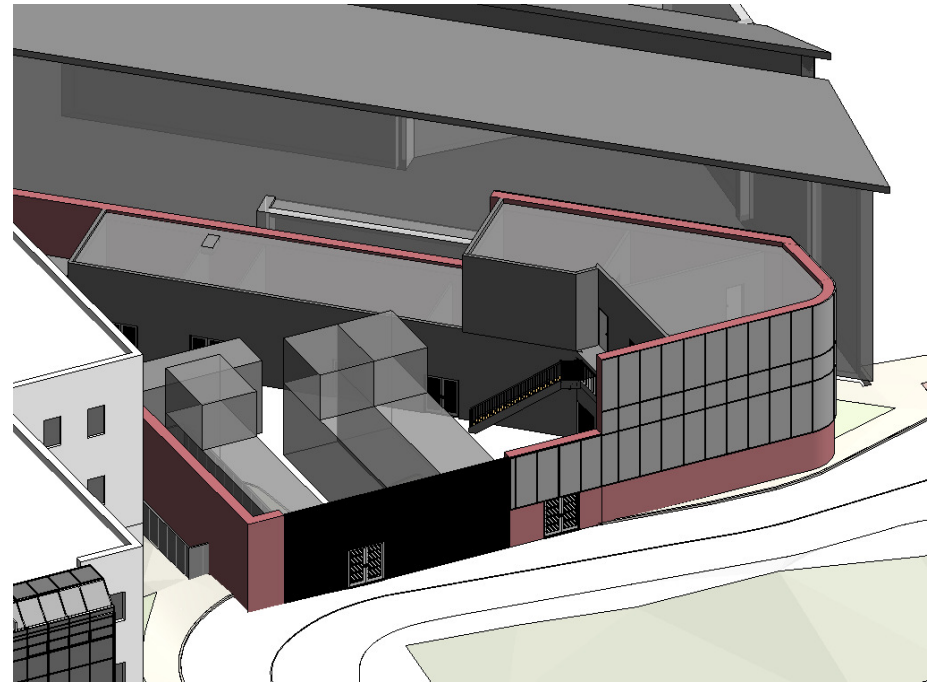
The compound enclosure walls consist of facing brick, rainscreen cladding facade and a mesh / louvre screen. A green roof is proposed for the single and two storey elements.

A flue is required for the generators which will need further review with the local authority. This will need to terminate above the roof of the existing hospital.

03 Proposed Design



3D view of proposal from Grafton Street



3D view of proposal from Upper Brook Street

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