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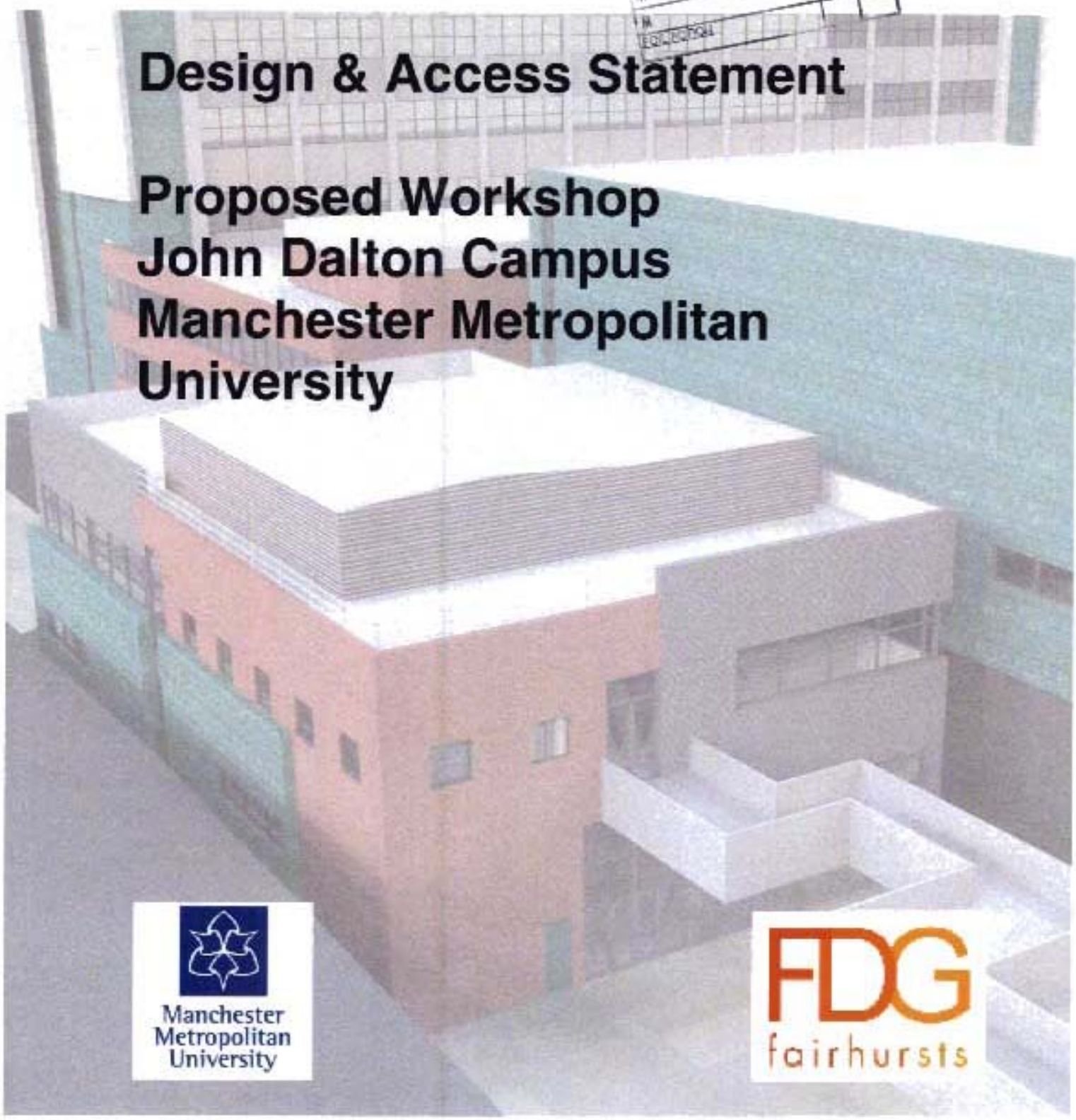
Design & Access Statement

Proposed Workshop
John Dalton Campus
Manchester Metropolitan University



Manchester Metropolitan University

FDG fairhursts

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1.0 Masterplan Context

The proposed workshop scheme has been included in the context of the new Manchester Metropolitan University All Saints site Masterplan, submitted by John McAslan and Partners.

The need to produce a masterplan followed the challenges faced by MMU shared by most Post war urban universities i.e. Campuses clogged and/ or fragmented, low quality additions, a fraying of academic image.

The masterplan carried out appraisals of the existing accommodation and proposed a series of new buildings which would turn All Saints site into MMU's core campus, delivering strong educational and operational benefits as well as the potential to create new and energising urban and cultural connections with the surrounding communities.

The masterplan is not only concerned with changes to the estate but also the perception of the university and its contribution to the life of Manchester as a whole. Implicit in that aim is to redefine MMU image as an internationally recognised, increasingly research led profile.

One of the key proposals is for new gateway buildings at the John Dalton site, and the new workshop will help to facilitate and support these new developments. It will free up key areas especially around the existing workshops, which are low grade buildings and largely obsolete, for the proposed new Hollins Faculty amongst other proposals.

2.0 Brief

In line with the development of the overall Masterplan for the All Saints Campus of MMU, a need has been identified to vacate the existing workshop site to create space for future developments.

As part of the rationalisation of the Science and Engineering faculty, a number of the facilities previously housed in the workshop have already been brought into newly refurbished areas of the John Dalton Tower, however the accommodation available was not suitable or sufficient space available to accommodate all the functions of the existing workshop.

A need was identified by the University to provide workshop accommodation at Ground floor level – primarily due to the large and heavy nature of the equipment used, and the requirements for vehicular access – together with the potential for improving facilities associated with the functions within the JD Tower, for example the provision of new forensic experimentation areas.

A site was identified as close as possible to the JD campus where these facilities could be accommodated, while maintaining the advantages of separating potentially noisy functions within a stand alone, purpose designed building.

The requirement was for a building that would largely fill the site area available, with vehicular access to a number of areas.

The challenge of the brief has been to accommodate the variety of different functions with their individual requirements for natural light, security and access for example within the building; while providing a flexible building that is capable of responding to future changes in the requirements for research areas.

At Ground Floor the need to accommodate large rigs capable of lifting and carrying out tests on complete vehicles, vehicle assembly and technical support areas dictated that the ground floor would require a considerable floor to ceiling height and this has been determined as 6 metres.

At first floor the building will accommodate materials testing laboratories and forensic experimentation areas in a realistic environment, requiring lower ceiling heights but more closely controlled environments.

The building is required to perform thermally to current requirements, with specific areas being temperature controlled to a slightly improved extent, and acoustically to some of the test areas where engine noise will be a major factor.

3.0 Existing Site

The site is located between the rear of John Dalton Central building and the Mancunian way.

Currently there is a small workshop located in the centre of the site surrounded by low level lawned mould, small shrubbery and fencing to the perimeter of the site with the Mancunian way.



Figure 1 View of site looking East

The site is largely flat, with potential access from all sides.

Vehicular access is off Chester Street, through the car park adjacent to John Dalton West building.

The character of the development surrounding the site is as follows.

To the north of the site is the rear of John Dalton Central recently completed extension, with copper coloured rainscreen cladding and grey facing brick. There is also a pedestrian route that runs along this north south axis connecting the All Saints building with John Dalton.



Figure 2 View North of the site



Pedestrian route

To the east of the site is the south west corner of red brick John Dalton East building and perimeter fencing.



Figure 3 John Dalton East red brick building

To the south of the site is the Mancunian way with car park spaces underneath.



Figure 4 Access road to car park underneath the Mancunian way



To the west of the site is the remodelled John Dalton tower building with copper and silver grey rain screen cladding and an access road for the car park underneath the Mancunian way.



Figure 5 John Dalton Tower View looking East



View looking West down access road

4.0 Proposed Building Location

The proposed workshop will be located to the centre of the site with a pathway running around the perimeter and would retain current pedestrian and Fire Access routes.

Most of the available site will be taken up with the new build, with hard landscaping generally around the building, and some limited areas of soft landscaping adjacent to the Mancunian Way.

Refer to location plan.

5.0 Site Conditions

Site investigation report regarding the ground conditions to be forwarded once completed.

6.0 Proposed Building height

The proposed building height was influence by:-

- The requirement to lift vehicles from the back of lorries into the research areas via heavy lifting equipment

- The need to relate to the adjacent three storey John Dalton East building of a similar height, and also to the single storey IT Centre which provides first floor access via the walkway link.

- The relationship to the Mancunian way was also considered important due to its close proximity as well as the sightlines from passing vehicles. The building height was restricted so that the windows on the first floor remain below roadway level of the Mancunian way.



Figure 6 View of Workshop with surrounding buildings

7.0 Disabled Access Strategy

The new building has been designed in accordance with the Local Authority document Design for Access 2 and Part M of the Building regulations in order to meet the requirements of the Disability Discrimination Act both internally and externally.

The design will include the following provisions:

- Passenger lift access to all floors.
- Level threshold to all doors including the main entrance
- Fully compliant disabled wc accommodation on both levels.
- Automatic entrance doors and suitable ironmongery throughout.
- Colour contrast throughout.
- DDA friendly signage.
- DDA width access to all rooms
- Semi ambulant stair access to the first floor

Level access will be provided to the First floor via an enhanced access over the roof of the existing IT Centre. This will help to link the workshop at this level to the main campus buildings.

The existing path will be substantially enhanced by improving the hard paving and ensure that balustrades are fully compliant along the full length of the walkway.

8.0 Building Operation and Management

The building design has been developed in close liaison with the University Science & Engineering Faculty and will provide support facilities for a number of the functions in the John Dalton Tower.

The Usage of the Building is split between Research, Technical Support and Teaching functions, and the design takes full cognisance of the requirements for safe separation of these different areas.

Each of the functions has its own specific operational requirements from delivery of heavy items to both ground and first floors, to the safe operation of large pieces of equipment within all areas. The use of the building will be controlled by the current operational systems in force in the University as a whole, and specifically by the Technical team who will be accommodated within the Building.

The building will generally operate around an 8am - 6pm working day; however the running of long-term experiments may result in operation outside these hours. This is unlikely to cause any disruption to areas outside the University campus due to its central location.

9.0 Servicing

The building will be largely be serviced via the large roller shutter doors to the West elevation, as this is the only vehicular access route.

Deliveries will not be frequent (once or twice a month), but will involve large vehicles. The University are aware of the potential conflict between Servicing requirements and the Pedestrian route that crosses this access route. With this in mind, an unloading bay has been identified where vehicles will wait until the Management team arranges for a banks man to ensure safe crossing of the pedestrian route during deliveries.

Access to first floor accommodation will be provided via removable glazed panels to the West elevation, through which large items of equipment can be installed or removed. Similarly there is a defined walkway on the flat roof which gives access to the plant room, as well as allowing large items of plant to be delivered by crane directly on to the roof.

The nature of the works involved in the building is not expected to generate large volumes of waste. Waste storage will be provided within the building for general rubbish which will be regularly collected by the cleaning contractor as part of the University waste management system.

The University has also identified a need for the storage of waste oils from the workshop which will be temporary stored in bunded tanks on site and transferred to a centralised location within the campus that has been identified as part of the Masterplan.

Rainwater will be disposed of via roof gullies linked to the Campus mains drainage system.

It is envisaged that the regular maintenance of the building will be limited generally to window cleaning. With adequate hard landscaping around the building, this would allow for safe ladder and mobile platform access as appropriate in accordance with the University maintenance strategy.

10.0 Security

The design has been forwarded to the Architectural Police Liaison Officer with the intention that it would achieve a Secured by Design accreditation on completion.

The building provides the following features to aid security.

- All ground floor access will be controlled by digital locks and swipe card access, controlled via the Building Management system.
- All ground floor windows with the exception of those to the meeting area are high level and would be glazed using security laminated doubled glazed units .
- The meeting area will exit into a secure area which will be controlled by gates or secure fencing to either end.
- The constrution of the walls at gound floor is of a secure/ robust masonry construction.
- Externally the building will be covered by the Campus CCTV security system, which is manned 24hrs every day.
- External lighting will be positioned so that there is good visability around the building and no dark areas.
- The facades are generally flat with no concealed recesses.

11.0 Elevational treatment

A number of existing buildings surround the new Workshop building, displaying an extensive palette of materials and finishes.

It was felt important to relate to this palette, particularly to those elevations facing the Mancunian Way, from which the only substantial view of the proposals is available. The East bound carriageway affords an excellent view of this part of the Campus, and as such it is important that this building brings together the key elements of its surroundings.

With this in mind, the primary element of the Green Copper rainscreen cladding is used on the South elevation. The other elevations, more enclosed by the existing buildings, have kept to a simpler palette incorporating the dark grey and red facing brick used on the surrounding building.



Figure 7 Proposed South elevation

Modelling to the façade has been achieved by the use of overlapping plates of copper, red and grey brick, with the first floor height emphasised by the height of the copper cladding. This horizontal line also assists in relating to the height of the adjacent IT centre.



Figure 8 Proposed West elevation

Glazing will retain the use of mid grey polyester powder coated glazing system used elsewhere

The window module expresses the internal functions of the building, the high level windows in the Ground floor workshop areas to the strip windows at first floor captures as much natural light as possible into the laboratories. The punched hole windows to the Forensic Flat add a domestic scale to a otherwise large scale elevation.

The roof level plant room is set back so that the impact at ground level is reduced. The plant will be contained within this room and/or the adjacent vertically enclosed chillers area.



Figure 9 View from street level looking West



Plant room set back from building perimeter

12.0 Landscaping

The landscaping around the building is intended to fit into the strategic pattern proposed by John McAslan Partnership i.e. in improving connections/ linkage under the Mancunian way between the University faculties and enhancing linkages to Chester Street.

The immediate perimeter of the building is proposed to be hard paved and planted with low level shrubbery where possible, mainly to the Mancunian Way frontage.

13.0 Sustainability

The University has a robust sustainability policy which aims to capture the spirit of an excellent BREEAM rating building where possible despite the financial/ practicality constraints.

Although the nature of this building suggests this may be difficult to achieve, it is proposed that all practical steps should be taken to ensure that this is a low energy building.

Amongst other issues which will be addressed, the following steps will be taken towards this aim:-

- The thermal performance of the external envelope will be super insulated where possible.

- Natural ventilation will be used wherever possible.

- Mechanical and Electrical systems will be designed to be as energy efficient as possible.