

Edgbaston Central Campus Development Hybrid Planning Application

March 2012

Design and Access Statement Appendix E **New Main Campus Library** Project 13



**UNIVERSITY OF
BIRMINGHAM**

Design & Access Guidelines

University of Birmingham

Edgbaston Central Campus Development - Hybrid Planning Application - New Library

3170 4A February 2012

Revision E 06.03.2012

1.0 Introduction

1.1 Purpose and Structure of the Design & Access Guidelines

1.1.1 In accordance with Section 42 of the Planning and Compensation Act 2004, this design and access statement has been drafted to support the outline proposals for the provision of a New Library with additional landscape alterations, situated at the centre of the campus adjacent University Centre, as part of the Edgbaston Central Campus development hybrid application. The purpose of this statement is to communicate how good design has been considered from the outset of the development process in accordance with the requirements of the Act and is structured as follows:

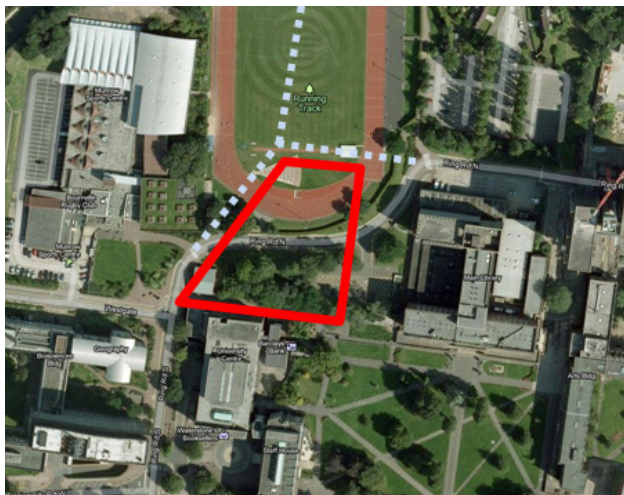
- **Section 2. Context** - A description of the contextual elements influencing the proposal.
- **Section 3. Design Development** - A summary of the design process.
- **Section 4. Design** - A description of the scheme's design.
- **Section 5. Access** - A description of the scheme's access arrangements.

This is an Outline Application with reserved matters for

- (a) Appearance
- (b) Access
- (c) Landscaping
- (d) Layout; and
- (e) Scale, within the upper and lower limit for the height, width and length of the building stated in the outline application

1.2 Summary of Proposed Scheme

1.2.1 The site to which this application relates consists of a triangular area north of the University Centre and west of the site of the existing main library. The site is currently occupied by the southern edge of the running track and is split by the Ring Road North. Both the running track and the Ring Road North will be relocated as part of the hybrid planning application. Following construction of the new library, the existing library will be demolished to enable the creation of the 'Green Heart' landscaped open space at the centre of the campus.



Position of the site adjacent to University Centre. Existing road layout shown on the campus, proposed ring road layout shown dashed.

2.0 Site Context

- 2.1.1 Good design relates positively to its situation and surroundings. The foundation to such an approach is to examine a site's context in order to define any opportunities or constraints that will inform design principles and development of the proposals. This section summarises the influences from the site and its surroundings.
- 2.1.2 The proposed site for the New Library has been selected by the University following an appraisal of three sites on the main campus. Firstly the suitability of refurbishment of the existing Library building was explored in 2009 and extension and refurbishment in 2011. Both studies concluded that the original inflexible design of the building prevent its economic refurbishment into a first class facility. The original 1950's parts of the building are very narrow and not suitable for modern library planning. Sufficient space had not been originally provided for study adjacent to the collections. The building was designed primarily to house the University collections rather than taking full consideration of the various study environments required of students. In the 1960's the original architects attempted to improve the building by inserting small mezzanine study floors adjacent shelving, and adding a large reading room on the ground floor. This had the impact of making the building difficult to navigate due to disconnected intermediate levels, unsafe hidden study areas and multiple changes in level. The building also suffered from lower ceiling heights reducing the quality of the internal environment. Further shelving areas were provided to the north. This did little to improve the mix of spaces and the building has remained largely unaltered since.
- 2.1.3 Two potential new build sites have been explored by the University, one to the north taking up the area of the current north car park and the other to the west on an adjacent car park, part of the Ring Road North and the University running track. The Library has to retain a central location on Campus and therefore peripheral sites would not be suitable and were not explored. The New Library has a connection and preferred adjacency with Muirhead Tower; where Special Collections facilities are located and with the Arts Building where the highest library users are located. with Subsequent listing of the north gate house lodges and the ambition to extend the central landscape space up to the Metallurgy and Materials (M&M) Building favoured the west site. The new build sites have the added advantage of allowing a new library to be developed without disruption to the student experience. The collections would be transferred to the new building over the summer period. This is a similar approach to the New Library of Birmingham in the City Centre.
- 2.1.4 The proposed site is currently a mix of open spaces; car parking, University Ring Road and running track, without significant features, or built context to draw upon. The major influences therefore remain as Muirhead Tower, and the Aston Webb Buildings including the University Clock Tower. These listed buildings are the jewel in the University's Estate, the dominating and most impressive built structures.
- 2.1.5 The New Library site east boundary draws on this context and is therefore positioned to enable the continuation of the frontage line established by buildings facing onto University Square, notably Staff House. This line is terminated by the ERI Building to the north to the side of the listed M&M Building. Locating the New Library fronting the proposed Green Heart will enable views out across landscaping. This is an improved orientation as the existing library faces south having solar glare and gain issues. Due to these environmental constraints study spaces could not be provided facing into University Square towards the clock tower as would be expected. Maximising views towards the heritage buildings on campus will be a major influence on the design of the new building.
- 2.1.6 The dominant building material in this part of the campus is brick in particular the red brick of the Aston Webb Buildings. At this early stage in the design process it is recognised that this will be the main influencing factor on the choice of material in terms of colour, and format. Other buildings comprise of render, concrete (Muirhead Tower) and blue engineering brickwork but these are not as dominate at this location. The Arts Buildings to the East of University Square is a back drop building which holds the edge of the open space but is submissive in terms of scale and architectural detailing. The New Library will compliment the existing buildings in form and appearance, the relatively long low form of the Library providing a counterpoint to the height of Muirhead Tower and the mass of Aston Webb. The importance of the Library a key building on Campus will be recognised by a more intricate layered façade treatment, an increase in height at the buildings entrance, and transparency giving legibility and a contrast to the solidity of Muirhead Tower and Aston Webb. The client's ambition for the new library is to provide a modern aesthetic, with materials that reflect the contemporary construction methods of the day, and appropriate options will be developed and reviewed as the design develops.

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The Dominant Red Brick of Aston Webb; (South Aspect of The Great Hall, C Block & Clock Tower)

3 Outline Design Proposals

- 3.1.1 Please refer to drawings 3170 AL (0) 001B, 002B, 003B, 004B and 005B.
- 3.1.2 The outline proposals are seeking permission for a New Library building on this site, of an appropriate height and massing which has been developed taking into account the context of the adjacent buildings. All matters are reserved for future determination. Parameters plans showing maximum and minimum heights and widths for the proposed building are submitted.
- 3.1.3 The eastern boundary of the New Library site will respond and exploit the formal landscape space. As a frontage building this will help to enclose the 'Green Heart' and maximises views into it helping surveillance. It is envisaged that at the base of the building a route will be developed underneath similar to the arrangement of M&M marking the importance of the north to south route leading to the Vale student halls beyond. To the west the building geometry changes to front the re-aligned Ring Road North and maximise views towards the canal, railway and mature landscape of the Edgbaston Conservation Area. Closer to the site there is the opportunity to exploit views across the repositioned running track, and have accessible balconies to encourage surveillance.

4 Design

- 4.1.1 **Building Use:** The new building will replace the existing out of date library. Refurbishment of the existing library has been assessed and discounted by the University. This is due to the physical constraints of the existing building, the layout of which would require the majority of it to be demolished and surrounded by new structures. Refurbishment would result in a compromised solution which would not be cost effective and would be disruptive to students. Further information relating to the condition of the existing library is submitted elsewhere in the hybrid application.
- 4.1.2 **Amount:** The library will comprise of 14,750sq.m. Gross External Area on a site footprint of 5,491sq.m. The maximum building height proposed will be 6 levels above ground including any plant room levels with an overall height of 33 metres, viewed from the Green Heart. There will be a lower ground floor level which will provide discrete service vehicle access from the University Ring Road making the building a maximum of 7 levels when

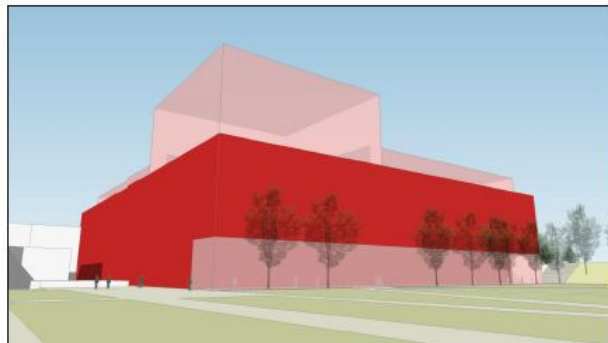
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viewed from the west. The maximum width of the building will be 95 metres. This is detailed on the Parameters Plan drawing number 3170 AL (0) 001A.

- 4.1.3 **Layout:** The site footprint has been determined by a frontage line struck from European Research Institute to the north and the re-alignment of the ring road to the west side of the site. To the south the plot extends down towards University Centre, and to the north it fronts a new pedestrian and service vehicular route landscaped as an integrated street aligned with the current ring road passing underneath Muirhead Tower.



- 4.1.4 **Scale:** The proposal is envisaged to comprise around 5 occupied levels above ground with the potential for a taller element extending one or two levels further to signify the entrance. A services (plantroom) area will be integrated within this overall height set back from the frontage to minimise its impact. The plantroom material treatment will compliment the rest of the façade. Please refer to views 1 to 10 on drawing 3170 AL (0) 003A. A fundamental aspiration is to make the library entrance legible from various approaches a difficult issue to resolve with an island plot with a frontage to the new landscaped 'Green Heart Space'. Views 2 and 10 show the identified zone where a taller element could be located to mark the entrance.



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It is envisaged that a lower ground level will provide service and deliveries access from the ring road adjacent the current University Centre delivery yard. This will help to group service functions which can be screened from general view at this level.

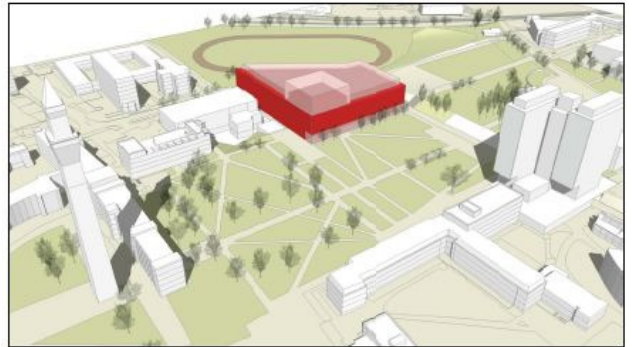
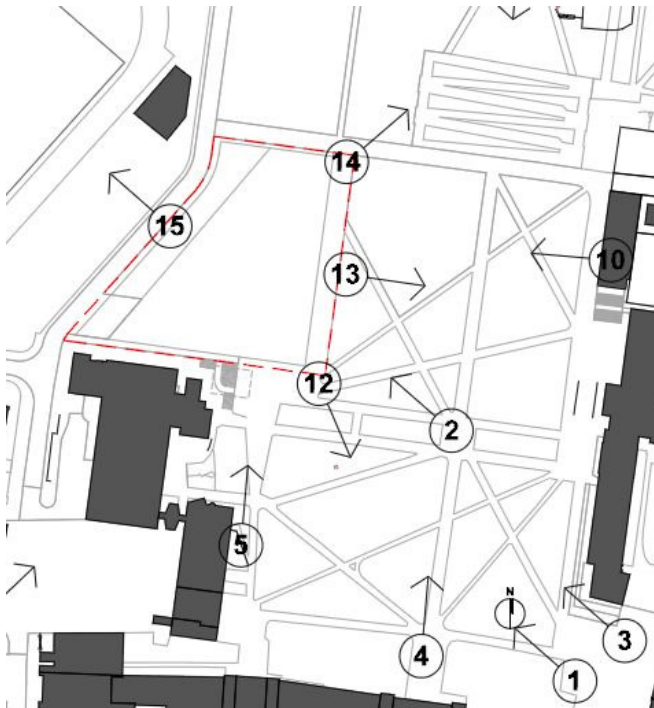
- 4.1.5 **Appearance:** Approval of the appearance of the building is not being sought as part of this outline application. However, it is envisaged that the new building will have a façade treatment that respects the context of the listed Aston Webb buildings. Each façade will be developed to these key principles;

- To maximise natural light
- To control and exploit solar gain
- To maximise opportunities for natural ventilation
- To make the building legible its uses and organisation understood by its users as they approach it
- To give the appropriate quality and gravitas of a leading University with a tradition of research

- Respond to PassivHaus principles of design with carefully controlled amounts of glazing, high levels of airtightness and thermal insulation to reduce energy requirements.

5 Access

- 5.1.1 The Disability Discrimination Act 1995: Parts 2 and 3 place obligations and duties where services and facilities are provided for the public. In this respect all publicly accessible areas within the development are required to be DDA compliant and have regard to Building Regulations Part M (2004), which necessitates Building Control approval.
- 5.1.2 Pedestrian access onto the site will be provided via a number of pathways from the Green Heart landscape area. Accessible parking spaces will be provided adjacent the library on the ring road and adjacent the running track Sports Pavilion. The pedestrian route to the north of the site will be developed to afford access to the New Library entrance. Delivery vehicles will access the service level on the lower ground floor at the south-west corner of the site directly off the University Ring Road.



Network of indicative pedestrian routes across the Green Heart in plan & three dimensions (view 3)

- 5.1.3 The proposal will accomplish these standards through providing the following:
- Convenient and legible entrances that relate to arrival points.
 - Level or ramped circulation routes and egress points.
 - DDA compliant disabled parking spaces
- 5.1.4 The following design criteria will also be applied as part of the full design of the development:
- Any external furniture, paving and landscape features placed in external circulation routes, such as bollards at the edge of the traffic / pedestrian zones, will not create barriers or hazards for disabled people with impaired vision.
 - All pedestrian access routes will have clear directional signs, be evenly lit and barrier free. Night illumination will be suitably designed for pedestrian pathways especially the approach to the main entrances and specific entry points from accessible parking areas.
 - All surfaces will have known slip resistance in either dry or wet conditions.
 - Surfaces will be durable, even and slip resistant.
 - Drainage will avoid ponding and areas where freezing may create hazardous surfaces.

- Changes in surface treatments will be logically arranged and should assist direction finding for partially sighted people.

6 Sustainability:

- 6.1.1 The University is aiming for a BREEAM target of 'Excellent' and an Energy Performance Certificate target rating of A for the New Library building. These aims will make the library one of the most energy efficient buildings on campus, and within the region. This will mean a reduction of building energy use and CO2 emissions of approximately 55% over the existing library.
- 6.1.2 The key sustainable design principles for the new building include:
- High quality glazing with solar control combined with good light transmittance
 - Elimination of 'cold bridges' using bridge-free connection details at the facade
 - Very low target u-values and air permeability rates to reduce heat loss from the building fabric
 - Heavy mass building principles to 'dampen' peak temperature loads
 - Provision of opening windows to allow natural ventilation in the mid-seasons
 - Mixed mode ventilation to minimise energy consumption by not running mechanical ventilation
 - Displacement ventilation to optimise free cooling
 - Good day-lighting
 - Solar control to south façade glazing to minimise unwanted summer heat gains
 - Connection to the University Combined Heat & Power System
 - Use of some renewable energy for electricity generation 'Photovoltaic Panels'
 - Low energy lighting linked to daylight diming and proximity sensors
 - There is a possibility to utilise Ground water cooling the viability will be investigated further
 - Ventilation systems with high efficiency heat recovery to utilise waste heat from building occupants
- 6.1.3 Appropriate drainage design will ensure that the impact of the development has not impact in terms of flooding down stream including provision of Sustainable Urban Drainage systems as required by the Water Utilities Companies and Local Authority.

7 Transport:

- 7.1.1 The Transport Assessment submitted with the hybrid application provides the transport context for new library proposals. The new site is marginally closer to the University station than the existing library and remains central to other public transport links including buses running along Bristol Road. The New Library is intended to form part of the north-south pedestrian route to student residential accommodation at the Vale with a colonnade similar in principle to that of the M&M Building.
- 7.1.2 Cycle parking provision will be provided around the perimeter of the building, and within the 'Green Heart' areas as part of a cycling strategy detailed by the transport consultant.
- 7.1.3 The new facility replaces the existing library, comprised of approximately 16,000sq.m's with a smaller facility of 14,068sq.m's GIA. Car parking is currently available to the rear of the existing library. It is available to all permit holders and is not exclusive to Library staff. The loss of existing parking here is to be replaced elsewhere on campus and will not have an adverse effect on overall parking provision.