WMI & WRH Design Statement

Introduction

The location and design of the new building for WRH & WMI reflect the underlying principles of interaction & connectivity, flexibility & adaptability and the idea of 'seeing the science' – the intention of expressing the workings of the building through its expression. Also fundamental to the design of the new building is its ability to respond to the site and its context within the Westmead Hospital campus, the project budget and the requirement to provide a realistic and workable framework for the staging of construction.

Interaction & Connectivity

At the site level, the building has been located to provide maximum connection between the existing research institutes (CMRI and KRI) and the core hub platforms accommodated in the new building. The new building allows bridge links from the adjacent institutes to the hub platforms, from laboratory to laboratory, and anticipates additional bridges in future stages.

Appropriately, the building is also located in the 'future research precinct' set out in the SWAHS Future Directions Strategy. The design anticipates the development of this precinct and acknowledges its potential benefits as a significant research community.

Connections through the site were main drivers in establishing the design of the primary ground floor plan which provides social interaction spaces for the building and the emerging precinct alike (refer to Drawing DA-D-01: Level 01 Upper Ground Floor Plan). In order to facilitate future connections, this floor level is set at the same level as the upper floor of the existing KRI, the ground floor of the DA approved CMRI and the existing 'skywalk' linking Westmead Hospital and Westmead Children's Hospital.

Two main corridors are reinforced in the plan of the upper ground floor: north-south, from Hawkesbury Road to the new green space incorporated in the design at the northwest corner of the development; and east-west, from the new green space to the existing courtyard between CMRI and KRI. The north-south corridor, conceived as a circulation spine through the building, links all the social activities of the ground floor including entry, WMI & WRH reception and waiting areas, café and conference rooms. It also provides ramp access from Hawkesbury Road in response to the level change. The east-west corridor, to the north of the building, provides the opportunity to connect the social spaces of CMRI and KRI (focused on the existing courtyard area between the institutes) and the new green space of the WMI & WRH building. This east-west corridor provides the potential for the establishment of a future 'research promenade' providing a key space of interaction between the different institutes and groups of researchers.

The expression of the building owes much to its internal workings and, hence, expresses the functions of the different areas within the building whether they be laboratory, write up, administration or social spaces. In the context of the site the building responds to the different precincts of the hospital campus, which can be seen as differentiated through the expression of the buildings. The existing campus is seen to have two parts: the Westmead Hospital precinct, the expression of which is dominated by the original concrete-framed buildings; and the Westmead Children's Hospital precinct, including its associated research institutes CMRI and KRI, which is characterised by more playful, colourful and articulated built forms.

In order to retain the legibility of the campus, the expression of the new WMI & WRH building responds to the expression of these different precincts. It is seen as the first stage of Westmead Hospital's 'future research precinct' (SWAHS Future Directions Strategy, as above), located between Westmead Hospital and Westmead Children's. The expression of the building is distinctive in the campus in response to this and is expressed in a simple form and material palette. The lightweight materials and simple form also respond to the building's scale. However,

façade elements such as the proposed external louvres share a similar language to the facades of the approved development of CMRI.

Flexibility & Adaptability

The design of the building has developed from the inside out and, in particular, in response to the development of the ideal arrangement of the lab areas, which constitute the greatest proportion of the project brief.

The building provides generic wet lab modules incorporating a general lab, lab support spaces and write up space. Adaptable to different research groups and to future research projects, these modules have been designed to achieve the optimal space for all scientific disciplines and their foreseeable expansion and change.

Having defined the generic wet lab module, its physical and spatial characteristics were used to determine its best organisation in relation to flexibility, adaptability, interaction and expansion. A linear arrangement of lab spaces followed, flanked by a dedicated services spine rationalising mechanical risers and/or on-floor plant areas.

On each floor a PC2 corridor connects the labs maintaining maximum flexibility of the lab spaces themselves. It also allows for the maintenance of labs and associated services and provides for effective connections to all PC2 areas throughout the height of the building and facilitates bridge links to the adjacent research institutes. Goods lifts and stairs incorporated in the services spine connect the WMI wet labs at the top floors of the building to the core hub facilities at the lower floors.

Write up areas, offering optimum physical and visual connection to the lab spaces can be accommodated at the ends of the labs or adjacent to and along the length of the labs. In the case of the latter, an atrium has been introduced to provide appropriate natural daylight to what would otherwise be a deep floorplate. This atrium also offers the opportunity for vertical interaction – both physical and visual – between the different floors of the building in the non-PC2 areas.

The prevalent theme of flexibility within the building extends to the fitout of the mechanical and electrical servicing of the labs as much as it does to the lab spaces themselves. The services can be added to or manipulated depending on the future necessities of the building. The typical floorplate also allows for numerous staging scenarios in response to varying construction budgets, both current, projected and future brief requirements.

Seeing the Science

The definition of the building envelope gains form in response to the broader setting (as discussed above), the orientation of the different elevations and the display of the functions of the building. The spaces within become legible on the façade.

The expression of the building reflects the different uses within and the environmental requirements depending on the orientation of their associated facades. Vertical external screening devices are incorporated on the south-western and south-eastern facades of the write-up areas due protecting the workspaces from low morning and afternoon sun. The screening devices and façade system generally allow for maximum flexibility for the fitout of the workspace and ensure that visual interaction between interior and exterior is maintained.

At Hawkesbury Road, the program of the building is clearly expressed through its facades. To the west, the vertical louvres define the write up, office and dry lab areas. To the east the translucent facade defines the PC2 laboratory areas and prevent direct sunlight to these spaces. The services zone (at the western edge of the Hawkesbury Road frontage), which runs

the length of the building along the East Elevation will describe the highly serviced nature of the building while still allowing light through to the PC2 corridor.

The internal planning and facades describe a rational design approach. The building's arrangement and its façade treatment respond to functional requirements and hence expresses a clear logic akin to the nature of the scientific research it houses.

As a symbol and the face of this research precinct and community, the idea of 'seeing the science' is to be realised in the external form of the building along with a rational approach to dealing with the realities of the location, orientation and requirements of the different workspaces.