

Johanna Sewell Adolescent Oncology Unit (JSAOU) Paediatric Haematology/Oncology Total Care Unit Child and Adolescent Health Service Princess Margaret Hospital

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Completed Demolition of the Original Ward 3B

The Paediatric Haematology/Oncology Total Care Unit (Ward 3B) at Princess Margaret Hospital is the sole tertiary referral centre in Western Australia for the diagnostic and therapeutic management of children diagnosed with all forms of malignant and non-malignant haematological disorders. In addition, the total care unit has an active haemopoietic stem cell transplant facility. Adolescents comprise 20-25% of the unit's caseload but only approximately half of the expected cases diagnosed yearly in WA are referred.

There were a number of deficiencies within the current ward which needed to be addressed in the proposed alterations to the ward. The major ones being:-

1. Inadequate outpatient consultation facility and same day care facility.
2. Current four single rooms too small.
3. Modernisation of laminar flow area needed.
4. Poor sound attenuation particularly in staff areas.
5. Poor condition of flooring and painted surfaces.
6. Poor air conditioning.

There is growing evidence in the literature that adolescents with paediatric malignancies managed in paediatric facilities, on clinical trials have superior outcomes and quality of life

measurements. It was proposed to create a self contained adolescent oncology unit, which will permit the delivery of optimal management to the current adolescent referrals in an age-appropriate facility.

Facility solution

Project description

The project will facilitate the establishment of the new adolescent oncology unit in association with the existing oncology unit in Ward 3B, and rationalising the use of the Ward 3B to cater for current deficiencies as identified by the project team. The existing Ward 3B will be partially re-organised to include a paediatrics school and play area and rationalised use of the existing space to accommodate data, registrar and records rooms and the conversion of the existing nurse's room and staff room to a 1-bed day care room and a consulting room. Existing parent accommodation will be extended to provide additional sleeping areas and replace the existing Ronald McDonald Parents' Retreat accommodation unit which will be demolished to make way for the JSAOU. The existing bathroom will be refitted with new fixtures and fittings to accommodate the fully assisted bath and WC. The existing laminar flow room, the 5-bed ward and the ante room will be redesigned to form two single bed Type 3 isolation rooms and a 2-bed ward.



External view of the site looking south – note the steep bank and retaining wall. With a major arterial road to the east.



Concrete pour for the new Johanna Sewell Adolescent Oncology Unit

The second part of the project is the establishment of the new Adolescent Oncology Unit to accommodate two 'type 3' single bed isolation rooms, three 2-bed wards, treatment room, lounge kitchen and school room, ancillary service facilities, seminar room, quiet room, offices and staff room. This section will be located in the present amphitheatre area to the east of Ward 3B. In order to create this new unit it was necessary to demolish the existing amphitheatre and re-use the existing limestone blocks to form a new retaining wall.

Scope of work

The scope of the project included the re-organisation and refurbishment of the existing Ward 3B to provide the above required spaces with the minimum of disruption. All internal alteration work has been done to match existing; albeit that a

more attractive colour scheme, with artwork and murals, was included to provide a more restful child-friendly atmosphere. All existing engineering services were maintained and extended and upgraded as required to provide for the new spaces.

The new addition of the JSAOU stands alone with some overlapping of services for efficient and economical functioning. The whole of the construction is in lightweight stud framed partitioning set in a structural concrete floor and a steel framework attached to the existing building but acting independently of its structural integrity. The North wing of the existing building and the new additions are isolated by a fire rated wall located in front of the existing concrete panels thus eliminating any demolition work to the existing



Almost completed single bed room



Partially completed nurses base for JSAOU. Note interior design scheme

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Closeness of retaining wall to building causes landscaping challenges.



Building site before the amphitheatre is demolished

building components. The interior design is warm and bright and reflects a teen theme; it includes artwork and sculptures designed by teenagers from Perth College. The external fabric of the building comprises compressed fibre cement panelling with a texture coat over, panels are divided such that they match the existing building.

The entire new addition is thermally and acoustically treated to achieve the required levels of insulation and to achieve individual space separation within the building. The works included the establishment of a major retaining wall and landscaping to isolate the unit from the major road above.

Spatial design considerations

The location of the JSAOU was dictated by site limitations and the availability of the external site area and linkages required to existing entry and service areas. This included consideration of the low site and close proximity to a major city road route, which required major earth works and



Old amphitheatre



Demolished Ward 3B



New day care unit

negotiations with the Main Roads Department and two local authorities re site access and traffic management.

The basic design was derived through the provision of easy access to all facilities and the dual use of existing facilities in the functioning of the new ward. Two distinct areas were considered - the existing Ward 3B and the new JSAOU. Specific considerations were given to the privacy of patients, staff and the public. These include allowances for proper screening and acoustic treatments to sensitive areas. External areas and

spaces have been integrated with the internal common rooms to provide relief from the enclosed environment.

The building has been designed to comply with the Building Code of Australia, Australian Standards in relation to design for access and mobility and Health Department of WA standards. The aesthetics of the new extension reflects some aspects of the existing building façade and emulates the basic principles, not necessarily the materials. Materials used in the project are generally steel-framed metal stud frame,



Murals in the treatment rooms

plasterboard walls, concrete floor, and sheet-metal roof within external CFC cladding with an applied finish to match existing building facades.

Ward 3B : an Australian first

On the 12th December, the Minister for Health, Jim McGinty, opened Princess Margaret Hospital's new total care unit known as Ward 3B. The \$5 million upgrade of PMH's cancer unit includes Australia's first specialised oncology wing for teenagers. Known as the Johanna Sewell Adolescent Wing, the dedicated adolescent oncology wing will treat about 50 young people with leukaemia, brain tumours, lymphomas and other cancers every year.

In the past, only about a third of teenagers with paediatric cancer were treated at PMH but they were mixed in with very young children. The rest of the teenagers were treated in adult facilities which was not ideal. "Teenagers with cancer will now be able to be treated in a dedicated adolescent facility which provides specialist treatment in an environment they can feel comfortable in", said Mr McGinty.

The new wing is named after teenager Johanna Sewell, who lost her battle with cancer in an adult hospital in 1989. Her mother, Helen Sewell, donated \$3 million for the development of the adolescent wing to ensure her daughter's wishes were fulfilled.

The new wing includes:

- Two single rooms and three double rooms exclusively for teenagers – a total of eight beds;
- A new school room plus a fully operational kitchen for patients to use and participate in cooking and social activities;
- An office, so that a clinical psychologist can be based on the ward;
- A 'quiet room' for time out for parents and patients; and
- new flat screen TV's with DVD players at the foot of each bed.

Design Team

<i>Architects</i>	Bollig Design Group
<i>Contractor</i>	Jaxon Constructions
<i>Mechanical Consultant</i>	SGK
<i>Electrical Consultants</i>	BCA
<i>Hydraulics</i>	Wood and Grieves Engineering
<i>Quantity Surveyor</i>	Page Kirkland Ward
<i>Structural</i>	Maunsell

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