

Department: SA HEALTH - COUNTRY HEALTH SA LOCAL HEALTH NETWORK

1. Title: Whyalla Regional Cancer Centre Redevelopment Project

2. Issue:

Whyalla Hospital is one of four designated country General hospitals in rural SA. The Whyalla General Hospital redevelopment project aims to increase the capacity to provide high quality, safe, sustainable services, which complement local health services in meeting the majority of the health needs of the target community, and incorporating the first purpose designed regional Cancer Centre.

The key objectives are to:

- Establish a regional Cancer diagnostic and treatment centre
- Establish a Mental Health Limited treatment centre for inpatient care
- Enhance inpatient and ambulatory Rehabilitation services
- Expand priority health services in line with Statewide Plans
- Repatriate appropriate activity from metropolitan health services
- Ensure capacity to support management of some of the inpatient activity within the catchment area if required for workforce, quality and safety reasons
- Address functional and standards compliance issues with the existing facility
- Reflect the new patient-centred Model of Care, maximising single rooms
- Provide an appropriate environment as a teaching and research facility and accommodate an increasing number of clinical placements.

As outlined in *South Australia's Health Care Plan 2007-2016*, the four Country General Hospitals will form the backbone of a rural health service network that will reduce the need for country patients to travel to metropolitan hospitals. They will provide increased capacity, enhanced and sustainable services to their catchment areas. This hinges fundamentally on the recruitment, retention and development of additional specialist skills across the medical, nursing and allied health professions.

The Regional Cancer Centre will improve access to essential cancer services and coordination of care for people in country SA and help address poorer cancer outcomes observed for rural and Aboriginal patients. The Regional Cancer Centre will be a key hub within SA's country cancer service, operating as an integrated service within the South Australian Cancer Clinical Network.

Following the establishment of an integrated Mental Health Unit, designated as a Limited Treatment Centre under the new Mental Health Act, it is anticipated that only half as many mental health patients from the broader catchment area would need to be transferred to Adelaide.

The redevelopment of Whyalla Hospital and Health Service (WHHS) to fulfil an expanded Country General Hospital role is defined within the planning framework of the SA Health Care Plan, the *Strategy for Planning Country Health Services in SA* and the Statewide Clinical Networks and Service Plans.

The hospital campus is spread over 3 main adjoining buildings, ranging in age from 32 to 72 years, varying in condition from average to poor, with a significant component of the services infrastructure nearing the end of its service life. A considerable backlog of work exists to address essential compliance and maintenance issues, with much of the existing infrastructure unsuited for major redesign and refit.

3. Region(s)

The catchment area for the Whyalla General Hospital varies depending on the service type, elective or emergency nature of treatment, distance and transport links, the developing roles of other health units within clinical networks and outreach services historically provided from Whyalla.

Port Lincoln is also being developed as a Country General Hospital and Port Augusta is already a large country health unit.

- The core catchment area is considered to be the eastern Eyre Peninsula, where Whyalla supports the smaller local health units within the administrative cluster with provision of more complex services.
- Whyalla allied health professional staff have traditionally provided specialised outreach services to the upper Eyre Peninsula, Far West and Far North.
- The Whyalla General Hospital also supports a broader catchment area for orthopaedic surgery now, including the Eyre Peninsula, Port Augusta, Flinders Ranges and the Far North. One third of orthopaedic separations are from outside of the cluster.
- The Whyalla integrated Mental Health Unit with the Limited Treatment Centre will be able to support more acute mental health care for the core catchment and the Port Augusta and Flinders Ranges area, where transport is appropriate.
- Whyalla's specialised rehabilitation service is part of a clinical network with outreach staff also based in Port Lincoln and Port Augusta. Development of inpatient rehabilitation services also at those two sites is proposed.
- The Whyalla Regional Cancer Centre will be a key hub for the northern area of the State in the country cancer care services network, linking with hubs at Port Augusta and Port Lincoln.

The core catchment area includes the Statistical Local Areas (SLA) of Whyalla, Unincorporated Whyalla, Cleve, Kimba and Franklin Harbour.

The broader catchment includes the additional SLAs of:

<u>Core:</u>	<u>Broader</u>	<u>Northern & Far Western</u>
Whyalla (C)	Port Augusta (C)	Port Lincoln
Cleve (C)	Flinders Ranges (DC)	Ceduna
Franklin Harbour (C)	Cooper Pedy (DC)	Elliston
Kimba (DC)	Roxby Downs (M)	Le Hunte (Wudinna)
Unincorporated	Unincorporated Far North	Lower Eyre Peninsula
Whyalla	Unincorp. Flinders Ranges	Streaky Bay
	Unincorporated Lincoln	Tumby Bay
	(excludes APY Lands)	Unincorp. West Coast
		Maralinga Tjarutja

According to the ARIA+ Remoteness scores, Whyalla and Port Augusta SLAs are classified as Outer Regional, whilst the remaining SLAs are classified as Remote.

Distances & Transport Access

Town	Key Health Services	Distance
Iron Knob	Whyalla Hospital	54 km
Cowell	Whyalla Hospital	107 km
Kimba	Whyalla Hospital	143 km
Cleve	Whyalla Hospital	149 km
Coober Pedy	Whyalla Hospital	611 km
Roxby Downs	Whyalla Hospital	328 km
Port Augusta	Whyalla Hospital	76 km
Quorn	Whyalla Hospital	116 km
Hawker	Whyalla Hospital	182 km
Whyalla	Royal Adelaide Hospital	382 km

Source: <http://travelmate.com.au/Home/Home.asp>

Regional Express (Rex) airlines provide 5 daily flights from Whyalla to Adelaide, return, with flight time approximately 45 minutes. There are no flights connecting any other town in the catchment area with Whyalla; flights from Ceduna, Port Lincoln, Port Augusta and Roxby Downs connect only to Adelaide.

Catchment Population - Population profile of the catchment area

Estimated Resident Population June 2009	Cluster No.	Cluster %	Broader Catchment*	Northern & Far Western
Total Population	27,617		55,694	86,959
0-14 years of age	5,719	20.7	11,666	18,249
15-24 years	3,603	13.0	7,258	10,922
25-44 years	7,409	26.8	15,575	23,459
45-64 years	6,921	25.1	14,164	22,671
65-84 years	3,559	12.9	6,344	10,381
85 years and over	406	1.5	687	1,277

Census 2006	No.	%		
Aboriginal & Torres Str. Isl.	1,217	3.7%	3989	5893
CALD (Speaks a language other than English at home)	1,660	5.1%	2530	3355

*Whyalla, Eastern Eyre, Far North, Port Augusta and Flinders Ranges total; Excludes APY Lands

Source: 2006, 2009 ABS Census

After some earlier declines, the population of the core catchment has started to grow slowly, increasing from 25,900 at the 2006 Census to 27,800 estimated resident population in June 2010 (ABS). The smaller inland towns have declined slightly, with some movement from farming communities to the coast.

The broader catchment has experienced a similar pattern, with a progressive downsizing of communities in the Flinders Ranges and Outback over the last thirty years. The annual growth rate of 0.9% at Whyalla over the past 5 years (2005 – 2010) is similar to that of Port Augusta and Port Lincoln at 0.8%. In the three years 2005-2007, there were an average of 349,000 domestic overnight visitors per annum to Eyre Peninsula.

4. Stakeholders

Broad consultation formed part of the first stage of design of the new health facilities commencing in 2010 and involved staff of both Whyalla Hospital & Health Services (WHHS) Nunyarra Aboriginal Wellbeing Centre, medical officers, other associated health providers, end users (clients), SAPOL, SA Ambulance officers, MFS, Whyalla Council elected members and management, architects, Department of Health Executive officers, structural and civil engineers.

5. Consulted

Groups and organisations consulted include:

- Department of Health
- CHSA Executive
- DTEI
- State Wide Cancer Clinical Network
- CHSA Cancer Services Committee
- Whyalla Redevelopment Project Workgroup members
- Whyalla City Council
- Whyalla, Far Northern, & Eastern Eyre Health Advisory Councils
- Whyalla resident and visiting medical specialists
- Whyalla Hospital Staff - Nursing, Allied & Community Health, Patient Services, ICT, Services Department, Supply, Maintenance
- Whyalla based SA Pathology, Medical Imaging & Pharmacy Services
- Disabilities SA
- Eyre Peninsula Division of General Practice
- Whyalla Hospital Volunteers
- Whyalla Branch of Heartbeat
- Whyalla Hospital Ladies Auxiliary
- Health In Our Hands self help group
- Emergency Services – SAPOL, MFS, SA Ambulance Service
- Regional Development Australia – Whyalla & Eyre Peninsula
- Nunyarra Aboriginal Wellbeing Centre – Board, Staff & Consumers
- Whyalla Health Services Consumer Advisory Workgroup

6. Consultation

Broader consultation and transfer of information regarding the progress of the project has been implemented through local media and will be expanded on in the near future, with an aim to continue throughout the entire project.

Extensive consultation has taken place to date with stakeholders and staff of Whyalla Hospital to ascertain requirements for design and functionality of the new facility. Five staff user groups were formed in November 2010. These groups comprise staff from Medical, Surgical, Rehabilitation, Allied & Community Health, Day Surgery, CSSD, Mental Health, Cancer Services, ICT, Maintenance, Patient Services, Services Department, Infection Control, and Supply. With Executive support, each group is actively involved in every phase of the planning process, including the concept and design development stages.

All Whyalla hospital staff are regularly updated through reports in the hospital newsletter, the 'Oracle'.

Consideration of the Aboriginal perspective of the redevelopment is currently underway. The architect and redevelopment project officer have held meetings with representatives from the Aboriginal community and this will continue.

7. **Project Background**

The aim of the Whyalla Regional Cancer Centre Redevelopment is the provision of higher quality and better coordinated services.

The Cancer Services Centre

- Provision of comprehensive cancer care for newly diagnosed people with cancer, and a range of services for those living with cancer. The centre will incorporate the following service components:
- A new building housing main entrance foyer and reception,
- Cancer Wellness Centre accommodating ambulatory services, including outpatient consultations, counselling, patient education, resource rooms, space for research, training and education activities
- Chemotherapy unit
- Inpatient accommodation including medical, surgical and palliative care beds
- Upgrade to 3 operating theatres, and repositioning of the day procedure unit next to theatres
- Increased accommodation for patients, family/ carers, and more on site parking space
- Enhanced telemedicine facilities.

Rehabilitation Unit

Provision of complex and specialised rehabilitation services, incorporating the following service components:

- Inpatient Rehabilitation beds
- Outpatient Rehabilitation services
- Specifically built gymnasium
- Activity rooms, including purpose built area for activities of daily living
- Purpose built courtyard area

Mental Health Unit

Provision of specialised services to meet the defined needs of mental health clients, incorporating the following service components:

- Inpatient Mental Health beds
- Enhanced telemedicine facilities
- External court yard.

Other

The Proposal objectives are congruent with the State Strategic Infrastructure Plan and Government Policy by:

- Providing a facility that meets quality standards and statutory requirements
- Providing a facility that improves functionality and enhances workflow
- Enhancing the continuum of care for patients through a better design and layout of the facility

- Improving the systems of care through establishing appropriate short stay and Day Surgery capacity
- Improving efficiencies for access to primary health care services and offering services in facilities acceptable to the Aboriginal population.

8. Summary of Impacts and Analysis

8.1. Economic Factors

This project will continue to generate a range of building works that will support local businesses and industry.

As required by the SA Government's Industry Participation Policy, a Local Industry Participation plan will be prepared to provide for fair opportunity for South Australian industry to tender for all aspects of the project.

Regular reporting on local industry participation performance measures will be undertaken.

The life projection of the redeveloped facilities is 20-30 years which ensures on-going employment for local people within the facility and services provided to the Health Services into the future.

8.2. Social Factors

The alignment of the desired state for Whyalla Health Services to the SA Strategic Plan is as follows:

- Improving wellbeing through services
- Providing health services close to home
- Repatriation of services wherever possible from metropolitan health units
- Meeting new health challenges
- Addressing the challenge of an ageing population
- Meeting community expectations for healthcare
- Reducing the gap between health outcomes and life expectancy for South Australia's Aboriginal population, and those of the rest of South Australia.

8.3. Environmental Factors

The current health facility does not recycle water, has some solar boosted hot water heating, all independent air conditioning systems and has minimal use of rain water. All services will be designed in conjunction with the appropriate Ecological Sustainable Development requirements as set out by the Green Building Council of Australia, Healthcare Version 1, to achieve a 5 star design rated building. This will incorporate high efficiency equipment with particular emphasis on the reduction of energy and potable water use throughout the development.

Proposed ESD initiatives in the new facility include the following:

Indoor Environment Quality

- Ventilation rates more than 35% above the minimum requirements by Code to clinical areas.
- Natural daylight to patient accommodation and work spaces.
- Daylight glare controlled external fixed louvers.
- Access to external views via the vision glazing.

- High frequency ballasts in fluorescent light fittings to reduce flicker.
- Indoor air pollutants minimised by use of low VOC paints, adhesives and sealants, low formaldehyde composite wood products and low VOC floor coverings.

Energy

Energy reduction initiatives to achieve the SA Government target reduction of 25% include:

- R3.0 wall and R3.5 roof insulation
- High performance low E glass
- External shading of windows, also providing access for window cleaning
- Variable air volume chilled water air conditioning system
- Solar hot water generation system to reduce total energy consumption by 10%
- Chiller set condenser heat recovery to further reduce hot water generation energy consumption
- Chilled water storage (utilising fire sprinkler storage tanks) for peak demand reduction and reduced energy consumption
- Air to air heat exchangers to pre-condition incoming outside air from the heat recovered from toilet exhaust air
- Direct digital control Building Management System
- Economy cycle systems
- High efficiency T5 lighting to non-patient treatment areas
- Low face velocity low pressure drop HEPA filters
- Variable speed drive (VSD) fans
- Variable volume exhaust systems
- High efficiency air cooled chiller set
- Motion detector controls to luminaries in non-treatment areas.
- Energy sub-metering linked to the BMS to enhance energy management and monitoring.
- Lighting circuits zoned to suit functional spaces and not exceeding 70m².

Water

- Rainwater harvesting with approximately 100 kL of water storage and treatment to reduce annual potable water consumption
- Use of 4 star WELS rated low flow tap ware
- Use of 4 star WELS rated sanitary fixtures (toilet suites and urinals)
- Rationalisation of water efficiency through indigenous planting and sub soil irrigation
- Use of waterless urinals in construction amenities
- Recycling of renal reverse osmosis reject water back into the water storage tanks
- BMS linked water meters from underground storage tank and potable mains supply to monitor reduction in potable water use.

Materials

- “Intelligent Integrated Systems” (IIS) are integrated via a high capacity copper and fibre optic cable system that is designed to be flexible for future device

applications and expansions without the need for re-cabling. The IIS cabling serves:

- air conditioning controls
 - security
 - lighting controls
 - standby power control
 - nurse call system
 - patient and administration data transfer
 - telephones
 - television.
- Provision of waste handling facilities for the efficient segregation of operational waste for recycling
 - Reduced PVC materials use through substitution with HDPE drainage and PP water piping
 - Use of fly ash in 20% of concrete to reduce the use of embodied energy in Portland cement production
 - Use of recycled stone and masonry in base course under slabs and roadways
 - Use of floor finishes with 25% to 50% recycled content
 - Use of timber from sustainable plantation forests
 - Use of self finished and pre-finished material to reduce through life maintenance.

Emissions

- Use of refrigerants with zero ozone depletion potential
- Stormwater detention and filtration prior to discharge from the site
- Use of insulation products manufactured with zero ozone depletion potential agents.

Global Warming and Increased Flood Risk:-

The new building and existing and new infrastructure will be protected from elevated sea level rise flood risk by maintaining the highest natural ground level on site throughout the redevelopment.

Global Warming and Increased Mean Temperatures:-

The building designs provide for an increase of 2 degrees Celsius in average temperatures to allow for future climate change scenarios. Also included are the enhanced passive treatments in the designs, comprising high UV insulation, high performance glazing and comprehensive solar shading.

There will be no impact on environmental aspects such as soil and vegetation.

9. Solutions

Once all of the impacts have been identified it will then be necessary to develop strategies of how to deal with them. Some impacts can be addressed by bringing attention to issues early on, while others may only be recognised after an alternative has been chosen. Solutions to adverse impacts fall into four categories:

- Avoid - alter the project so the impact does not occur;
- Minimise - modify the project to reduce the severity of an impact;
- Mitigate - alleviate or offset an impact or replace an appropriated resource;
- Enhance - add a desirable or attractive feature to the project

- Avoid** Interruption of services while building works are undertaken including loss of four acute beds and lounge while stage 1 is underway.
- Minimise** Ensure community and co-located offices and residents are fully aware of works and stages of redevelopment.
- Mitigate** Use of other acute areas, changes to work areas, prepare staff and clients well in advance.
- Enhance** Ensure overall design is one of welcoming to Aboriginal clients, theme the building with an Aboriginal influence i.e. art works, mural, indigenous artefacts.

10. Coordination

Key personnel from Department of Transport, Environment and Infrastructure, Country Health SA, Department of Health, Whyalla Hospital & Health Services will be involved at various levels in the redevelopment project throughout the life of the project. Representatives from these departments are involved in the project Integrated Management Team and Executive Leadership Teams.

An Advisory Group has been formed which includes Executive staff, one elected member of the Whyalla City Council, Health Advisory Council Members, Nunyara Aboriginal Wellbeing Centre, Whyalla Cancer Support Group and representatives from the local health service.

The Advisory Group is kept informed on a regular basis and is required to make decisions on local issues which potentially affect local government and capital works programs.

The new buildings will incorporate both indigenous and non indigenous local artworks as a design feature.

11. Local Government

It is anticipated there will be no significant impact on local council resources.

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