Environmental Assessment Report
Project Application

Tamworth Regional Cancer Centre

Tamworth Hospital

Submitted to
Department of Planning
On Behalf of NSW Health Infrastructure

November 2010 ■ 10583

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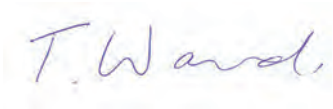
This report has been prepared by: Tim Ward

Signature  Date 23/11/10

This report has been reviewed by: Vivienne Goldschmidt

Signature  Date 23/11/10

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Statement of Validity

Prepared under Part 3A of the Environmental Planning and Assessment Act, 1979 (as amended)

Environmental Assessment prepared by	
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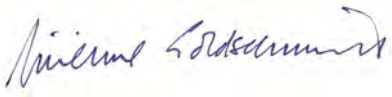
Address	Level 7, 77 Berry Street, North Sydney
In respect of	a Project Application for a Medical Facility
Project Application	
Applicant name	NSW Health Infrastructure
Applicant address	Level 8, 77 Pacific Highway, North Sydney
Land to be developed	Lot 2 DP 533835, Tamworth Hospital, Johnston Street, Tamworth
Proposed development	The New England and North West Regional Cancer Centre
Environmental Assessment	An Environmental Assessment (EA) is attached.
Certificate	I certify that I have prepared the content of this Environmental Assessment and to the best of my knowledge: ▪ It is in accordance with the Environmental Planning and Assessment Act and Regulation. ▪ It is true in all material particulars and does not, by its presentation or omission of information, materially mislead.
Signature	
Name	Vivienne Goldschmidt
Date	23 November 2010

Executive Summary

This Environmental Assessment Report in relation to the development of a new Regional Cancer Centre at the Tamworth Hospital (the Tamworth RCC) is submitted to the Minister for Planning pursuant to Part 3A of the E*nvironmental Planning and Assessment Act 1979* and St*ate Environmental Planning Policy (Major Development) 2005*. The proponent is NSW Health Infrastructure.

Overview of project

The Tamworth RCC is specialist regional facility for the treatment of cancer patients from the New England and North west areas of NSW. Primarily an ambulatory facility, it will build on existing chemotherapy and medical oncology services provided at Tamworth Hospital, and form an integral part of the Hunter New England Health Cancer Clinical Services Network. The proposal addresses critical service gaps in cancer care services, particularly for radiotherapy, and provides a fully integrated model of care to enable residents in the region to access most of their cancer care closer to where they live.

With an estimated capital investment value is $31.82 million, the project involves:

- A standalone building consisting of two (2) storeys plus roof plant room, and varying in height above ground level from 7 to 11.5 metres.
- Provision of two (2) radiation bunkers and one linear accelerator.
- Floor area of 3,696 square metres, including space for:
  - Radiation Oncology;
  - Day Infusion/Chemotherapy;
  - clinics; and
  - a cafe.
- 30 new parking spaces for patients (including 3 disabled spaces).
- Relocation of 8 car parking spaces for the Red Cross Blood Collection Centre.

The Site

The Tamworth RCC site is located in the southern portion of the Tamworth Hospital campus, in the Tamworth local government area. The area of the site being developed is approximately 4,383 square metres.

The proposal is entirely permissible under the planning controls for the site in the Tamworth Local Environmental Plan.

Environmental assessment

The environmental assessment of the project concludes that:

- The site is suitable for the proposed development as it is in close proximity to other facilities at Tamworth Hospital, is easily accessibility, has the necessary utility infrastructure available, and is of a size and configuration able to accommodate the facility.
- There are no significant environmental constraints to the proposed development and no impacts on the environment as a result of the proposed construction works and operation of the facility.

- The building is modest in scale, bulk and height and the setbacks compatible with the site and surrounding hospital buildings. The slope of the site is used to accommodate the bulk of the radiation bunkers, and natural light into, and views from, the neighbouring Brudelin Building are sensitively managed. Access to views and natural light for patients being treated in the RCC has been maximised.
- Suitable landscaping in keeping with existing landscaping is provided around the building and within the proposed carpark and courtyard.
- New carparking to be provided for patients will adequately cater for increased parking demand and parking will be provided for RCC staff.

A detailed construction management plan will be prepared prior to works commencing to manage the potential impacts of construction activities in accordance with relevant standards.

Conclusion

The Draft Statement of Commitments has been prepared to inform the detailed design of the development and manage construction and any potential environmental impacts.

The environmental assessment addresses the Director-General's Environmental Assessment Requirements and demonstrates the impacts of the proposal can be satisfactorily managed. Given the planning merits above, the proposed development is justified and warrants the approval of the Minister for Planning.

1.0 Introduction

This Project Application and Environmental Assessment Report (EAR) is submitted to the Minister for Planning pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The Project Application seeks approval for the development of the New England and North West Regional Cancer Centre (hereafter referred to as the Tamworth RCC) at the Tamworth Rural Referral Hospital (Tamworth Hospital).

The report has been prepared by JBA Urban Planning Consultants Pty Ltd, for the proponent, NSW Health Infrastructure, based on architectural plans prepared by Silver Thomas Hanley (STH) and the supporting technical documentation provided by the expert consultant team (see Table of Contents).

This EAR describes the site, its environs and the proposed development, and includes an assessment of the proposal in accordance with the Director-General's Requirements (DGRs) under Part 3A of the EP&A Act. It should be read in conjunction with the information appended to this report.

1.1 Overview of Approval Sought

This Project Application seeks approval for a new regional cancer centre at Tamworth Hospital. In summary, the development involves:

- A standalone building consisting of two (2) storeys plus roof plant room, and varying in height above ground level from 7 to 11.5 metres.
- Provision of two (2) radiation bunkers and one linear accelerator (with provision for a second to be installed in the future).
- Floor area of 3,696 m^2, comprising:
  - 1,790 m^2 for Radiation Oncology;
  - 635 m^2 for Day Infusion/Chemotherapy;
  - 970 m^2 for clinics;
  - 61 m^2 for a cafe; and
  - 240 m^2 for roof plant room.
- 30 new parking spaces for patients (including 3 disabled spaces).
- Relocation of 8 car parking spaces for the Red Cross Blood Collection Centre.

1.2 Background

Tamworth Hospital is a 265 bed Rural Referral Hospital providing 24 hour Emergency Services and high level surgical and medical services, including a cardiac catheterisation laboratory, burns service, rehabilitation services, a diabetes centre, mental health unit, renal services, oncology, radiology and pathology.

Medical Oncology services are currently provided by a fulltime staff specialist and the hospital has eight chemotherapy chairs with medical oncology outpatients clinics held onsite. However, all patients needing radiation therapy are currently required to travel to Newcastle or Sydney for treatment. The closest comprehensive Cancer Care Centre is located at Calvary Mater Newcastle, an approximately four hour drive from Tamworth, and longer from towns such as Narrabri and Moree.

The Tamworth RCC will provide the necessary infrastructure to enhance the delivery of, and improve access to, multi-disciplinary cancer care including haematology, medical oncology and cancer surgery.

Primarily an ambulatory facility, it will build on existing chemotherapy and medical oncology services provided at Tamworth Hospital, and form an integral part of the Hunter New England Health Cancer Clinical Services Network.

This proposal addresses critical service gaps in cancer care services, particularly for radiotherapy, and provides a fully integrated model of care to enable residents in the region to access most of their cancer care closer to where they live. Moreover, as Tamworth Hospital covers a very large geographical area with a relatively large indigenous population, the facility will help improve the health outcomes for Aboriginal people by providing a greater proportion of health care closer to where they live.

When highly specialised cancer services are required, formal networks with the well established cancer centres in Newcastle - the Calvary Mater and John Hunter Hospitals - will be used.

1.3 Service Drivers and Project Objectives

The key service drivers for the project are:

- The need to continue to improve access to services for rural and remote communities and extend the continuum of cancer services available to these communities.
- Increasing demand for cancer services due to the ageing population in the region.
- Existing unmet cancer care demand due to the lack of proximate radiotherapy services which impacts on clinician and patient treatment decisions and choice.
- A utilisation rate of around 30% - well below the national target of 52.3%.

In addition, the literature on effective health service delivery for Aboriginal people indicates that if the outcomes of cancer treatment are to be improved, the issue of geographical proximity needs to be addressed along with social and cultural proximity.

The primary objectives of this Tamworth RCC project are to:

- Enhance the delivery of, and improve access to, existing multi-disciplinary cancer care services including haematology, medical oncology and cancer surgery to the rural communities across the New England and North West region of NSW;
- Address essential service gaps in the continuum of cancer care, particularly radiotherapy service, to provide a fully integrated model of care accessible to residents of this region;
- Establish radiotherapy services to increase cancer patients' treatment rates from the current level of 30% toward the 52.3% national target rate; and
- Ensure the best possible cancer journey and provide improved access to treatments closer to where people live.

The proposal, the subject of this application, is considered to be a high priority by the Commonwealth government, NSW Health, the Hunter New England Area Health Service, and the Tamworth Hospital.

It has been subject to the internal review and approval processes of NSW Health and NSW Treasury, been endorsed through both quantitative and qualitative assessment, and is documented in a Business Case. The proposal is also consistent with the future redevelopment of the Tamworth Hospital campus (see Tamworth Health Services Redevelopment Combined Services Procurement Plan & Project Definition Plan[1]).

The project is jointly funded by the Commonwealth and NSW governments.

1.4 Capital Investment Value

The estimated capital investment value is $31.82 million as detailed in the Quantity Surveyor's Certificate, attached at **Appendix O**.

1.5 Environmental Assessment and Approval Process

The *State Environmental Planning Policy (Major Development) SEPP 2005* (the Major Development SEPP) identifies development to which Part 3A of the EP&A Act applies, and for which the Minister is the consent authority. Clause 6 of the Major Development SEPP states that development, which in the opinion of the Minister is development of a kind referred to in Schedule 1 (Classes of Development) of the SEPP, is declared to be a project to which Part 3A applies.

In relation to this health project, clause 18 of Schedule 1 of the Major Development SEPP states that the Minster may declare as a Part 3A development:

> *"(1) Development that has a capital investment value of more than $15 million for the purpose of providing professional health care services to people admitted as in-patients (whether or not out-patients are also cared for or treated there), including ancillary facilities for:*
>
> *(a) day surgery, day procedures or health consulting rooms, or*
>
> *(b) accommodation for nurses or other health care workers, or*
>
> *(c) accommodation for persons receiving health care or for their visitors, or*
>
> *(d) shops or refreshment rooms, or*
>
> *(e) transport of patients, including helipads and ambulance facilities, or*
>
> *(f) educational purposes, or*
>
> *(g) research purposes, whether or not they are used only by hospital staff or health care workers and whether or not any such use is a commercial use, or*
>
> *(h) any other health-related use."*

In accordance with Section 75B of the EP&A Act and Clause 6 of the Major Development SEPP, the proponent requested that the Minister:

- declare the project to be a Major Project subject to Part 3A of the EP&A Act; and
- issue Environmental Assessment Requirements for the Project Application.

[1] Combined Services Procurement Plan & Project Definition prepared by Coffey projects (Australia) Pty Limited, March 2010

On 13 October 2010, the Director General of the Department of Planning, as delegate of the Minister, formed the opinion that the proposal is a Major Project. Subsequently, on 9 November 2010 in accordance with Section 75F of the EP&A Act, the Director-General issued the requirements for the preparation of the Environmental Assessment of the project.

A copy of the Director General's Environmental Assessment requirements (DGRs) for the Project Application is included in **Appendix A**.

1.6 Project Team

An expert project team has been formed to deliver the project and includes:

Project Manager	Coffey Projects
Urban Planning	JBA Planning
Architects	Silver Thomas Hanley
Quantity Surveyors, Access and BCA	Davis Langdon
Geotechnical	Regional Geotechnical Services
Civil and Structural Engineering	Sinclair Knight Merz
Hydraulic and Fire Engineering	SPP Group
Mechanical and Electrical Engineering	Steensen Varming
Traffic and Transport	Sinclair Knight Merz
Environmental Sustainability	Steensen Varming
Acoustics	Acoustic Studio
Surveyor	Bath Stewart Associates

2.0 Site Analysis

2.1 Site Location and Context

The Tamworth RCC development site is located within the Tamworth Hospital campus in the Tamworth Regional local government area (LGA). The hospital is located at the corner of Dean Street and Johnston Street, Tamworth North, approximately 2.5 kilometres from the Tamworth central business district.

The hospital forms part of the transition between the residential suburb of Tamworth North and the rural fringe of the city. Rural properties bound the Hospital to the north while the area to the south is characterised by low density housing. To the west of the hospital is the Tamworth Correctional Centre and to the east is a former quarry.

The Hospital's location is shown at **Figure 1**. The proposed Tamworth RCC site is located within the southern part of the Hospital campus – see **Figures 2** and **3**.

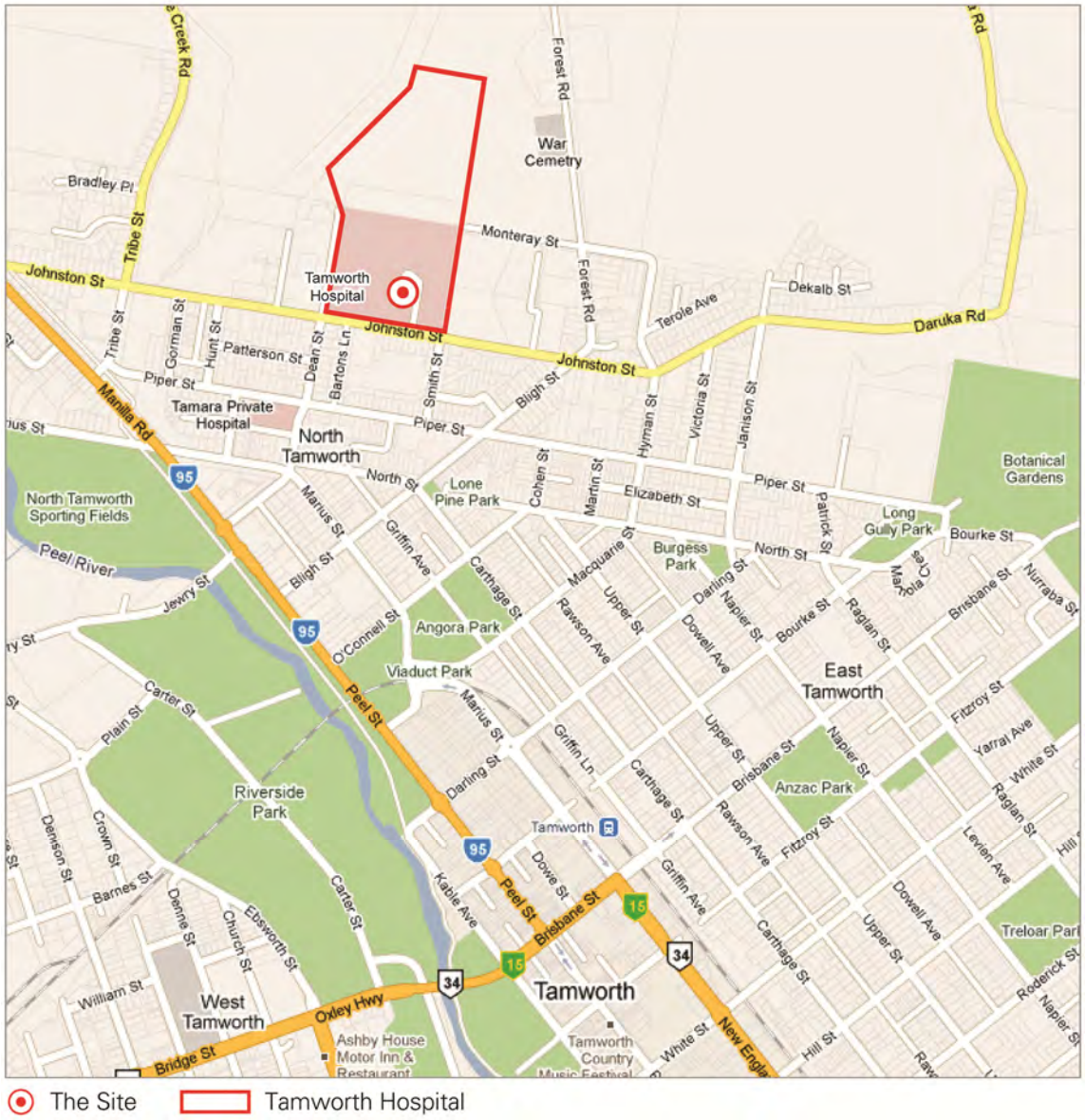


Figure 1 – Locality Plan

2.2 Land Ownership

The site for the proposed development is shown in **Figure 3** and in the site survey at **Appendix B.** While Tamworth Hospital occupies four land titles, the RCC development will be on one lot only, legally described as Lot 2 in DP 533835 (in the name of the New England Health Service), owned and controlled by the Hunter New England Health Service.

The land occupied by the proposed Tamworth RCC is currently zoned Residential 2 under the *Tamworth Local Environmental Plan 1999.* The land is zoned R1 General Residential under the draft *Tamworth Local Environmental Plan 2009*. The proposed development is permissible with consent in both instruments.

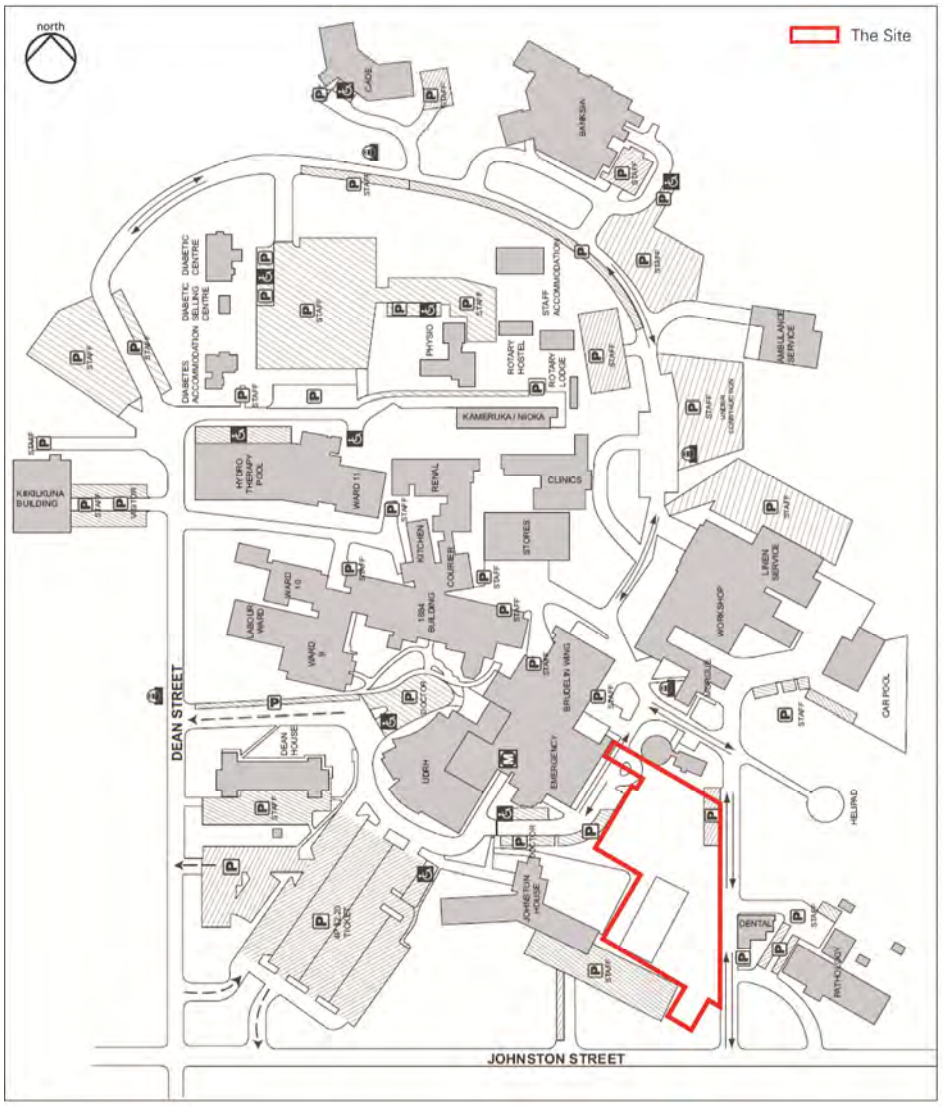


Figure 2 – Tamworth Hospital Site Plan showing location of Tamworth RCC

Figure 3 – Aerial Photo showing the location of the Tamworth RCC

2.3 Existing Development

With an area of 4,383 square metres, the irregularly shaped development site is located within the southern part of the Tamworth Hospital campus (see **Figure 3**). As shown in **Figures 4** to **6** below, the land is currently occupied by:

- a large area of lawn with scattered ornamental and native trees;
- a gazebo and a tennis court; and
- eight parking spaces associated with the Red Cross Blood Collection Centre.

A Site Analysis Plan is provided at **Appendix C**.

The Site Survey provided at **Appendix B** shows that there are a number of services and utilities across the site. These include:

- Stormwater: two existing stormwater drainage systems located across and adjacent to the site which connect into the Council stormwater drainage system at Johnston Street.
- Waste water: an existing sanitary drainage network across the site with the main service affecting this development running below the existing Brudelin Building and continuing to the south down to Johnston Street, wrapping around the eastern side of the existing Johnston House.
- Electricity and communications: a number of existing underground electricity and communications cables which cross the site.

Figure 4 – View of the site looking north west towards Emergency Services and the Brudelin Building

Figure 5 – View from the site looking south towards the gazebo, tennis court and Johnston House

Figure 6 –- Parking associated with the Blood Collection Centre

2.4 Surrounding Development

The development site is surrounded by various hospital related buildings and uses, and is immediately bounded:

- to the north-east and north west: by the Red Cross Blood Collection Centre, Emergency Services and associated access road (see **Figure 7**);
- to the west: by the 3-storeyJohnston House, used as a Community Health Centre, and associated swimming pool and outdoor area (see **Figure 8**);
- to the south: by a car park; and
- to the east: by an access road off Johnston Street.

The main hospital building - the Brudelin Building - is north west of the site behind Emergency Services, as is the main entrance to the hospital located on the southern elevation of the Brudelin Building near the entrance to the Emergency Services building (see **Figure 9**).

The '1884 Main Block' Hospital building, a local heritage item, is located some distance away from the RCC site to the north west behind the main hospital building (see **Figure 10**).

Further to the east of the site across an internal access road, is a the hospital's helipad (see **Figure 11**) and dental clinic and pathology laboratory.

Figure 7 – View of the site looking towards the Johnston Building with Blood Collection Centre and Emergency Services entrance in the foreground

Figure 8 – View of the Johnston Building from the site

Figure 9 – View of the main hospital entrance (left) and Emergency Department (right) looking north east

Figure 10 – View of the entrance to the 1884 Building

Figure 11 – View of the Helipad to the east of the site

2.5 Physical Characteristics

Tamworth Hospital is located on a south-facing hill. Topographically, the – Tamworth RCC development site has a fall of approximately 6m from the high point near the Blood Collection Centre in the north to the low point near the staff car park in the south (see survey plan at **Appendix B).** Drainage follows the natural slopes towards the south where water is channelled into the stormwater system.

The site is highly modified and generally cleared of natural vegetation. Several planted mature trees (21 in total) and low shrubs are set around and within the sloping grassed area.

Geologically, Tamworth Hospital is located within the Baldwin Formation comprising deposits of Argillite and Greywacke. The subsoil profiles comprise various clays, silt, and a mix of weathered shale and weathered mudstone/argillite. Part of the Tamworth RCC site contains a mix of fill materials to a depth of approximately 2 metres. Further information is provided in Section 5.8.

The Tamworth Regional Council Bushfire Prone Land Map does not record bushfire prone vegetation on, or within 100 metres of, the Hospital site. The site is not flood prone.

The development site is accessed via the Hospital's internal road and pedestrian network (see **Figure 2**) with the nearest vehicular access point from the local street network via a two-way driveway off Johnston Street.

3.0 Description of Development Proposal

This section of the report provides a detailed description of the proposed development and should be read in conjunction with the Architectural Plans prepared by Silver Thomas Hanley at **Appendix C** and the Landscape Concept Plan prepared by Greenland Design included at **Appendix D**.

3.1 Overview

The project consists of the construction of a two storey purpose built building on the Tamworth Hospital campus. The building is designed to maximise the potential of the limited site area (4,383 m^2) and will be constructed as a standalone structure with a connection provided to the main hospital buildings.

The development will provide 3,696 square metres of floor space spread over two levels (plus plant room on roof) for the following cancer care services, facilities and equipment:

- two radiotherapy bunkers (with provision in the design for a third);
- one linear accelerator (with provision for a second to be installed in the future);
- radiotherapy planning and support areas;
- expansion of chemotherapy treatment places to a total of 14;
- clinic areas;
- waiting, reception and cafe space;
- office and support accommodation;
- a range of associated treatment and planning equipment including a new computed tomography (CT) scanner and orthovoltage/ superficial x-ray machine;
- 30 parking spaces for cancer patients, including 3 disabled spaces.

The project also includes:

- landscaping;
- relocation of eight (8) Blood Collection Centre car parking spaces to a new location on the eastern side of the access road of their current location; and
- allocation of 36 spaces for RCC staff in the upper hospital campus carpark.

The development will increase overall staff numbers at the Hospital by approximately 40 full time equivalent positions and result in the relocation of 13 existing full time equivalent staff to the Tamworth RCC from elsewhere in the Hospital.

It is not intended to stage the delivery of the development. A 20 month construction period is proposed consisting of a 6 weeks for excavation and civil works and approximately 14 months for construction. This will be followed by a three (3) month period of internal hospital commissioning. Construction will commence in mid 2011, with completion expected in November 2012.

3.2 Numerical Overview

A numerical overview of the proposed development is provided in **Table 1** below.

Table 1 – Numeric overview

Component	Proposal
Building height	▪ 2 storeys plus roof plant room ▪ Up to 12 metres
Total floor space	▪ 3696 square metres
Level 1 (approximately 1,850 sqm)	▪ 1790 sqm - Radiation Oncology ▪ 2 radiation bunkers ▪ One linear accelerator (with provision for a second to be installed in the future) ▪ 61 sqm - cafe space
Level 2 (approximately 1,600 sqm)	▪ 970 sqm - clinics ▪ 635 sqm - Day Infusion/Chemotherapy ▪ 14 chemotherapy chairs
Roof	▪ 240 sqm plant room
Patient car parking	▪ 27 standard spaces ▪ 3 disabled spaces

3.3 Building Description

Architectural drawings of the proposed development prepared by Silver Thomas Hanley are located at **Appendix C**. The following information is derived from SHT.

3.3.1 Built Form

As shown in the photomontages at **Figures 12** to **14** the Tamworth RCC has been designed to sit comfortably within the existing slope of the site and respect its nearest neighbours. Relative to the Brudelin Building and Johnston House, the RCC is a modest building that uses the slope of the site to diminish the scale and bulk of its form. Across the length of the building, the site slopes downward by 4 metres from the north west (at the Emergency Services entrance to the Brudelin Building) to the south (at the proposed main entry to the RCC). The radiotherapy bunkers will be sunk into the highest part of the hill, thus reducing the dominance of their volume on the landscape. In contrast, rooftop mechanical services will be located to the south east of the building, thereby maintaining, as much as possible, vistas from, as well as solar access to, the Brudelin Building's upper levels.

The east elevation has a stepped and faceted façade, providing an orthagonal rhythm to the side of the building. This assists in both breaking down volumetric mass and resolving intersecting planes in both plan and section down the steepest part of the site.

The RCC is set back approximately 19 metres east off the 4 storey Brudelin Building and the west elevation height is less than two thirds that of the Brudelin building (9 metres versus 16.4 metres). The south facade of the RCC is set back 29 metres from the north east corner of Johnston House.

A covered pedestrian link between the RCC and the Brudelin Building will connect between Level 2 of the RCC and the ground level of the Brudelin Building (Emergency Services) - that is at RL 408.390.

The main entrance is at Level 1 (i.e. ground floor) with the patient car park directly opposite on two levels following the natural fall of the site.

3.3.2 Materials and Finishes

Large glazing areas are provided to the south and east facades to maximize views for patients while receiving treatment and during waiting periods (thus alleviating stress). Large masonry tile (or composite panel) 'blade walls' are proposed to highlight the east façade and frame the full length glazed sections. These blade walls extend to the south and north to integrate with the remainder of the building, which has aluminium strip windows within lightly coloured horizontal façade panels. The windows are stepped and staggered though the glazing zone, giving variation to each elevation without introducing additional materials. Where this is most prominent (specifically on the north, west and south facades) a triptych of bright colours are introduced in the form of opaque coloured strip windows. This strategy helps to vary each elevation, as well as break down notions of clinical austerity which tend to alienate and unsettle patients.

On the south and north, awnings framed in structural steel provide shelter to the entry and link-ways respectively.

The roof has been designed with careful consideration to its visual impact, particularly on the neighbouring buildings. The bunker's roof area will be hidden by extended parapet walls, and mechanical plant will be largely sheltered from view (from both Johnston House and Brudelin Building) by perimeter walls on its east and north elevation.

The concrete of the bunkers (and the barrier wall associated with them) will be treated with an applied texture finish where they protrude above grade on the north elevation. This element is intended to give an honest and raw edge to the lower half of the north elevation, which will be softened by the blade walls and strip glazed façade panels.

The west elevation is treated as complementary to the adjacent south and north elevations, but the articulation of this façade has been restrained to minimize overshadowing to the Brudelin Building and to allow for the future expansion and connection of the Brudelin and RCC buildings.

3.3.3 Building Functionality

The Tamworth RCC is primarily an ambulatory medical facility and is located so that it can be easily accessed from the main hospital while at the same time having its own identity and entry point.

An important key issue for the patient journey through the course of cancer treatment is that it be made as simple and easy as possible. The proposed access arrangements address this.

Approximately 90 - 95% of the patients using the facility will be ambulatory and will access radiation treatment on the first level of the building and chemotherapy treatment and clinics on the second level. Ambulatory patients have a separate entrance and will not need to use the main hospital grounds or entrances. A dedicated carpark (30 spaces) is provided along with a drop off point for private cars and hospital transfer vehicles so that patients can access their treatment without having to negotiate the hospital grounds to locate parking.

The remaining 5 –10% of the patients accessing the facility will be existing Tamworth Hospital in-patients or transfers from the community and outlying districts and centres. In-patients will be wheeled down to the facility through a dedicated entry point, while the transfers will arrive alongside the main ambulatory entry point.

Figure 12 – Photomontage of the Tamworth RCC from the SE looking across the visitor carpark

Figure 13 – Photomontage of the Tamworth RCC from the east looking across the internal Hospital access road.

Figure 14 – Photomontage of the Tamworth RCC from the NW looking towards the Brudelin Building connection.

3.4 Site Preparation and Earthworks

To accommodate the proposed development the gazebo will be relocated, the tennis court and other structures demolished and all vegetation removed. Earthworks will be undertaken to prepare the site for the proposed building and car parking areas. In general there will be an excess of material cut from the building site (which is up hill) and an excess of material used to fill the car park site (which is downhill).

The extent of the cut and fill balance for the site will depend on how much of the cut material from the building site can be reused at the car park site. Preliminary analysis of the bulk earthworks has identified a net cut/fill imbalance of approximately 700 m^3 (excess cut) and so this material would require off-site disposal. Some of the cut material will include topsoil. While the topsoil will not be suitable as engineering fill to support the Tamworth RCC building and carpark, the potential for reuse of this topsoil elsewhere at the Tamworth Hospital will be investigated as part of the detailed construction planning.

3.5 Landscaping

The Landscape Concept Plan for the site prepared by Greenland Design is located at **Appendix D**. Landscape treatments aim to complement the character of the existing native landscape setting and establish an appropriate identity, and will include native trees, shrubs and garden beds in accordance with the proposed plant schedule. In particular:

- The proposed carpark and ambulance access area are to be provided with native feature /shade tree canopy and low native grasses or groundcovers to the soften hardstand areas while still allowing visual surveillance /clear sight lines.
- The paved courtyard between the entry to the RCC from the Brudelin Building will have planter boxes filled with semi deciduous trees and shade tolerant shrubs.
- The area located east of the new building and carpark is to be planted with native buffer trees (adjacent to the carpark) and low shrub hedge (adjacent to the building) to soften and screen the proposed carpark and building.
- The existing Johnston Building landscaped area is to be buffered with significant garden bed areas planted with native trees, low shrubs and groundcover.
- The landscaped area adjoining the Johnston Street frontage and the existing and carpark are to be augmented with native trees to reinforce the buffer to the street.

3.6 Access and Parking

Vehicular Access

Vehicle access is proposed off the existing internal Hospital ring road via a proposed new car park on the southern side of the Tamworth RCC building.

Car parking

The proposed parking arrangements are as follows:

- 27 patient/visitor car spaces plus 3 disabled car spaces in the proposed new car park on the southern side of the Tamworth RCC building;
- one (1) ambulance space and a patient pickup/drop-off zone at the entrance on the southern side of the building;
- relocation of eight (8) existing car spaces used by the adjoining Red Cross Blood Collection Centre to the east side of the internal hospital ring road; and
- allocation of 36 designated car spaces for RCC staff in the upper campus car park (shown in drawing DoP06 at **Appendix C**).

Sign posting and display cards will be used in combination to designate staff and patient car parking spaces.

Pedestrian and disabled access

The main pedestrian and disabled access point is on the southern side of the Tamworth RCC building adjoining the new car park, and there is direct continuous level access on each level and lift access between levels. Fire stairs and emergency access are also provided between levels.

Designated pedestrian and disabled access will be provided between the new car park and the RCC building.

3.7 Infrastructure and Services

The following sections summarise the existing infrastructure and services information provided in **Appendix E** (Stormwater and Civil Report), **Appendix F** (Hydraulic and Fire Report) and **Appendix G** (Mechanical and Electrical Report).

3.7.1 Stormwater

The proposed development will impact on the existing hospital stormwater drainage system and new system will be provided to capture the stormwater runoff from the proposed buildings, roadways and car park. The new drainage system is then connected to the nearest Council's stormwater drainage pit. Consultation with Council has identified that on-site detention of stormwater will not be required.

Rainwater from the roof of the Tamworth RCC building will be collected for reuse. A gross pollutant trap will be provided at the end of the hospital stormwater drainage system to treat the early flows at stormwater outlet points prior to connecting into Council's system.

3.7.2 Water Supply

The proposed development will make a new connection to the existing 100mm cold water service. Tamworth Council has confirmed that the existing water main in Johnston Street has adequate capacity for the proposed development.

The new RCC development will not be connected to any of the existing non-potable water services on site and roof water will be collected for reuse on site irrigation and toilet flushing within the new building.

3.7.3 Waste Water

The proposed building footprint will be located above the existing sewer drainage pipe. As a result this pipe will need to be relocated around the southern side of the proposed building footprint before reconnecting to the existing drainage. Wastewater from the new building will be discharged into the diverted service.

3.7.4 Gas

The proposed RCC development will include a new connection to the gas main in Johnston Street which will run adjacent to the access road to the emergency department. The gas supply will serve all gas appliances in the new building as required.

3.7.5 Electricity

The existing Tamworth Hospital site is served from two separate 11KV supplies which terminate into the main substation located adjacent the existing ambulance drop off bay at the Brudelin Building. The existing electrical infrastructure has sufficient capacity to supply the requirements of the new facility.

The existing substation feeds onto existing main switchboards serving various locations around the site. As the main switchboard within the Brudelin Building does not appear to have the spare capacity to be used for the new RCC, a new feed from the existing substation to a new main switchboard within the RCC will be required.

The proposal would be to have two feeds into the new building with one supply feeding the general main switchboard and another specifically feeding the LINAC Units. This will allow for the existing spare capacity to be utilised and balanced over the two transformers.

There are various stand-by generators located around the hospital site. The closest generator to the new RCC is directly outside the substation at the Brudelin Building. The existing unit was recently replaced with a 380KVA Diesel Generator. From the most recent site tests carried out, this unit has spare capacity to serve the back-up power for the new RCC. The existing generator switchboard will be used to supply this back-up power to the new switchboards within the new building.

3.7.6 Communications

The existing telecommunications infrastructure has sufficient capacity to supply the requirements of the RCC.

3.8 Environmentally Sustainable Development

A summary of the ESD initiatives being considered in the design has been prepared by Steensen Varming (see**Appendix K**). The project will be designed to comply with the deemed-to-satisfy provisions of Section J - Energy Efficiency of the Building Code of Australia 2010. The development also incorporates ESD principles in the design. Furthermore, the ongoing operation phases of the building will be managed by the hospital in accordance with relevant maintenance manuals.

In accordance with NSW Health Guidelines, all projects with a budget greater than $10 M, must undergo the Green Star rating process, using the Green Star Healthcare Pilot Tool and achieve a minimum 4 star rating. Green Star initiatives are being incorporated in the current design to achieve a 4 star Green Star rating.

A range of ESD initiatives will be considered in relation to the provision of electrical, mechanical and hydraulic services to minimise the building's ongoing energy use and ensure an efficient and sustainable outcome, including:

- Metering and linking sub-mains servicing distribution boards, mechanical boards and other major control cabinets to the building management system (BMS) for energy auditing, energy monitoring and troubleshooting.
- Using motion sensors, timers and daylight sensors to control internal artificial lighting to reduce energy usage, and lighting circuit designs which avoid controlling large/multiple areas with one switch.
- A Central Air Handling unit plant with zone control to provide the minimum amount of heating or cooling to zones, thus minimising the possibility of reheating.
- A fully automated Building Monitoring and Control system to schedule and optimise plant to maximise efficiency.
- Incorporation of solar hot water plant with gas boost, aiming for a 50% contribution to hot water generation from the solar system.

In addition to the above, the Tamworth RCC has been designed to incorporate collection of rainwater from roof areas of the building.. The rainwater would be treated and reused for toilet flushing purposes and for up to 90% of landscape irrigation water requirements.

The environmental performance of the development will be assessed using the Environmental Performance Guide for Buildings, developed by the NSW Government.

It is a mandatory regulatory requirement for all NSW government buildings to provide an environmental performance report at the end of each design stage. This will be undertaken by the proponent and will address the following ESD categories:

- resource consumption;
- environmental loadings;
- quality of indoor environment;
- functionality; and
- wider planning issues.

3.9 Waste Management

All operational waste will be disposed of in accordance with NSW Health, Hunter New England Area Health Service and Environmental Protection Authority (EPA) requirements. Tamworth Hospital employs certified companies to dispose of chemical, biomedical, infection waste in accordance with EPA requirements.

It is noted that the linear accelerator, CT scanner and orthovoltage units do not produce any radiation waste that requires disposal.

3.10 Staging

The Tamworth RCC will be built in a single stage, commencing with an Enabling Works package to divert and relocate underground services, and prepare site safety and security provisions such as temporary fencing, wayfinding signage, and lighting. It is proposed that the Enabling Works package will include demolition of the tennis court to create a construction compound, temporary carpark, crane access, and construction materials storage area.

Staging of the implementation will be governed by Health Infrastructure's Project Delivery Standard. It is anticipated that excavation and civil works will take approximately 6 weeks and construction works will take approximately 14 months.

3.11 Developer Contributions

Being a key development within the Hospital the proposed development will clearly facilitate delivery of important health services to both the local community, and the wider New England and North West regions. The purpose of contributions is to cover the demand for additional services and facilities resulting from an increase in employment or residential population. The proposed development will assist in the provision of services, rather than creating additional demand.

Due to the nature of the public amenities and services provided by the development of the Tamworth RCC, no development contribution should be imposed for the development.

4.0 Environmental Assessment Requirements

This section of the report sets out the Director-General's Environmental Assessment Requirements (DGRs) for the Project Application. Table 2 sets out the matters listed in the DGRs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 2 – Director-General's Environmental Assessment Requirements

Requirements	Location in Report
General Requirements	
Environmental Assessment The Environmental Assessment (EA) must include: ▪ an executive summary;	See page vi
▪ a thorough site analysis including site plans, aerial photographs and a description of the existing and surrounding environment;	See Section 2 & Appendix C.
▪ a thorough description of the proposed development	See Section 3.
▪ an assessment of the key issues specified below and a table outlining how these key issues have been addressed;	See Section 5.
▪ an assessment of the potential impacts of the project and a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures to be implemented to minimise any potential impacts of the project;	See Sections 5 and 6
▪ the plans and documents outlined below;	
▪ a signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading;	See page i.
▪ a Quantity Surveyor's Certificate of Cost to verify the capital investment value of the project (in accordance with the definition contained in the Major Development SEPP; and	See Appendix O
▪ a conclusion justifying the project, taking into consideration the environmental impacts of the proposal, the suitability of the site, and whether or not the project is in the public interest.	See Sections 5.16 and 7.
Plans and Documents to be Included	
1. Existing Site Survey Plan An existing site survey plan drawn at an appropriate scale illustrating; ▪ the location of the land, boundary measurements, area (SQM) and north point; ▪ the existing levels of the land in relation to buildings and roads; ▪ location and height of existing structures on the site; and ▪ location and height of adjacent buildings and private open space. ▪ All levels to be to Australian Height Datum.	See Appendix B.

Requirements	Location in Report
2. Site Analysis Plan A Site Analysis Plan must be provided which identifies; ▪ existing natural elements of the site (including all hazards and constraints); ▪ existing vegetation; ▪ footpath crossing levels and alignments; ▪ existing pedestrian and vehicular access points and other facilities; ▪ slope and topography; ▪ utility services; ▪ boundaries; ▪ orientation; ▪ view corridors; and ▪ all structures on neighbouring properties where relevant to the application (including windows, driveways, private open space etc).	A Site Analysis Plan is provided as part of the set of drawings in Appendix C.
3. Locality / Context Plan A locality/context plan drawn at an appropriate scale should be submitted indicating: ▪ significant local features such as parks, community facilities and open space and heritage items; ▪ the location and uses of existing buildings, shopping and employment areas; and ▪ traffic and road patterns, pedestrian routes and public transport nodes.	See Section 2 and Appendix C.
4. Architectural Drawings Architectural drawings at an appropriate scale illustrating: ▪ the location of any existing building envelopes or structures on the land in relation to the boundaries of the land and any development on adjoining land; ▪ detailed floor plans, sections and elevations of the proposed buildings; ▪ elevation plans providing details of external building materials and colours proposed; ▪ fenestrations, balconies and other features; ▪ accessibility requirements of the Building Code of Australia and the Disability Discrimination Act; ▪ the height (AHD) of the proposed development in relation to the land; ▪ the level of the lowest floor, the level of any unbuilt area and the level of the ground; and ▪ any changes that will be made to the level of the land by excavation, filling or otherwise.	See Appendix C.
5. Other Plans Other plans to be required where relevant: ▪ Stormwater Concept Plan - illustrating the concept for stormwater management;	See Appendix E.
▪ Erosion and Sediment Control Plan – plan or drawing that shows the nature and location of all erosion and sedimentation control measures to be utilised on the site;	See Appendix E

Requirements	Location in Report
▪ Geotechnical Report – prepared by a recognised professional which assesses the risk of Geotechnical failure on the site and identifies design solutions and works to be carried out to ensure the stability of the land and structures and safety of persons;	See Appendix L
▪ View Analysis - Visual aids such as a photomontage must be used to demonstrate visual impacts of the proposed building envelopes in particular having regard to the siting, bulk and scale relationships from key areas;	Photomontages are provided as part of the set of drawings in Appendix C
▪ Landscape plan - illustrating treatment of open space areas on the site, screen planting along common boundaries and tree protection measures both on and off the site;	See Appendix D
▪ Shadow diagrams showing solar access to the site and adjacent properties at summer solstice (Dec 21), winter solstice (June 21) and the equinox (March 21 and September 21) at 9.00 am, 12.00 midday and 3.00 pm.	Shadow diagrams are provided as part of the set of drawings in Appendix C
Key Assessment Requirements	
1. Relevant EPIs, policies and Guidelines to be Addressed Planning provisions applying to the site, including permissibility and the provisions of all plans and policies including: ▪ Objects of the EP&A Act; ▪ State Environmental Planning Policy (Major Development) 2005; ▪ State Environmental Planning Policy No.55 – Remediation of Land; ▪ State Environmental Planning Policy No.33 – Hazardous and Offensive Development; ▪ State Environmental Planning Policy (Infrastructure) 2007; ▪ NSW State Plan; ▪ Tamworth Local Environmental Plan 1996; ▪ Tamworth Regional Development Strategy; ▪ Relevant Development Control Plans; and ▪ Nature and extent of any non-compliance with relevant environmental planning instruments, plans and guidelines and justification for any non-compliance.	The relevant provisions of the listed EPIs, policies and guidelines are addressed in **Section 5.1**.
2. Built Form and Urban Design ▪ Height, bulk and scale of the proposed development within the context of the Hospital Campus and surrounding residential development; ▪ Details of proposed open space and landscaped areas; and ▪ Design quality with specific consideration of the façade, massing, setbacks, building articulation, appropriate colours/materials/finishes, landscaping, safety by design and public domain.	See Section 5.2.

Requirements	Location in Report
3. Environmental and Residential Amenity ▪ Impacts of the proposal on solar access, acoustic privacy, visual privacy, view loss and wind impacts on surrounding development; and Details of the measures to be implemented to achieve a high level of environmental and residential amenity.	See Sections 5.3 and 5.5, and Appendix J.
4. Transport and Accessibility Impacts (Construction and Operational) ▪ Provide a Transport & Accessibility Study prepared with reference to the NSW State Plan, the NSW Planning Guidelines for Walking and Cycling, the Integrated Land Use and Transport policy package and the RTA's Guide to Traffic Generating Development, considering the following: - Demonstrate how users of the development will be able to make travel choices that support the achievement of relevant State Plan targets; - Detail the existing pedestrian and cycle movements within the vicinity of the site and determine the adequacy of the proposal to meet the likely future demand for increased public transport and pedestrian and cycle access; - Identify potential traffic impacts during the construction stage of the project, and measures to mitigate these impacts; - Describe the measures to be implemented to promote sustainable means of transport including public transport usage and pedestrian and bicycle linkages in addition to addressing the potential for implementing a location specific sustainable travel plan; - Daily and peak traffic movements likely to be generated by the proposed development, including the impact on nearby intersections and the need / associated funding for upgrading or road improvement works (if required). The traffic impact assessment should consider base models with future traffic generated by the proposal. - Details of the proposed access, parking provisions (if required) and service vehicle movements associated with the proposed development; and - Minimal levels of onsite car parking for the proposed development having regard to the public transport accessibility of the site, opportunities for car sharing, local planning controls and RTA guidelines (note: The Department supports reduced parking provisions, if adequate public transport is available to access the site).	See Section 5.4, Appendix H and Appendix I.

Requirements	Location in Report
5. Ecologically Sustainable Development (ESD) ▪ Detail how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development; ▪ Include a description of the measures that would be implemented to minimise consumption of resources, water and energy, including details of any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design; and ▪ Demonstrate that the development can achieve a minimum 4 Green Star rating, or any other suitably accredited rating scheme.	See Sections 3.8 and 5.6 and Appendix K.
6. Contributions ▪ Address Council's Section 94A Contribution Plan and/or details of any Voluntary Planning Agreement.	Council's Section 94 Contribution Plan does not apply and there is no Voluntary Planning Agreement.
7. Heritage ▪ A statement of significance and an assessment of the impact on the heritage significance of any heritage items and/or conservation areas should be undertaken in accordance with the guidelines in the NSW Heritage Manual, if required.	Heritage issues are considered in Section 5.7.
8. Aboriginal Heritage ▪ The EA shall address Aboriginal Heritage in accordance with the Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005.	Aboriginal Heritage issues are considered in Section 5.7.
9. Drainage ▪ Drainage issues associated with the proposal including stormwater and drainage infrastructure; and ▪ Detailed plans of the proposed erosion and sediment control measures during demolition, construction and operation.	See Sections 3.7 and 5.9. Appendix E provides further details of stormwater drainage, including and concept Erosion and Sediment Control Plan.
10. Utilities ▪ In consultation with relevant agencies, the EA shall address the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure works.	See Section 3.7.
11. Staging ▪ Details regarding the staging of the proposed development (if proposed).	See Section 3.10.
12. Noise and Vibration ▪ Provide a quantitative assessment of the potential demolition, construction, operation and traffic noise impacts of the project.	See Section 5.5 and Appendix J.

Requirements	Location in Report
13. Waste ▪ Identify, quantify and classify the likely waste streams to be generated during construction and operation; ▪ Describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste; ▪ Describe the measures to be implemented to manage the disposal of nuclear waste, if required; and ▪ Describe the measures to be implemented to manage the disposal of contaminated and potentially contaminated biological and sewage waste, if required.	See Sections 5.13 and 5.14.
14. Hazards ▪ A description of the proposed storage, use and management of any hazardous material and measures to be implemented to manage hazards and risks associated with the storage.	Consideration of hazards is provided in Section 5.10.
15. Consultation ▪ Undertake an appropriate and justified level of consultation in accordance with the Department's Major Project Community Consultation Guidelines October 2007.	See Section 5.15.

5.0 Environmental Assessment

This section of the report assesses and responds to the potential environmental impacts of the proposal. It addresses the matters for consideration set out in the DGRs (see Section 4.0).

The draft Statement of Commitments complements the findings of this section.

5.1 Consistency with Relevant Strategic and Statutory Plans and Policies

The DGRs require the following legislation, strategies and planning instruments, which are relevant to the proposed development to be addressed:

- The Objects of the Environmental Planning and Assessment Act 1979 (EP&A Act);
- State Environmental Planning Policy (Major Development) 2005 (SEPP Major Development);
- State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55);
- State Environmental Planning Policy No. 33 - Hazardous and Offensive Development (SEPP 33);
- State Environmental Planning Policy (Infrastructure) 2007;
- NSW State Plan
- Tamworth Local Environmental Plan 1996;
- Tamworth Development Control Plan No 1 – Parking Guidelines;
- Tamworth Regional Development Strategy 2008;
- Draft Tamworth Local Environmental Plan 2009; and
- Draft Tamworth Development Control Plan 2010.

The Project Application's consistency with the relevant strategic and statutory plans and policies is located in **Table 3** below.

There are no variations to, or non-compliances with, the key standards and guidelines as indicated in the table below.

Table 3 – Summary of consistency with key strategic and statutory plans and policies

Instrument/ Strategy	Comments
Strategic Plans	
NSW State Plan	The State Plan has been prepared by the NSW Government as a long term plan to deliver the quality services to the people of NSW. A section of the Plan is devoted to the delivery of 'Healthy Communities', and a key component of this is to improve and maintain access to quality healthcare facilities. By upgrading existing provision of cancer health services in the Tamworth Hospital catchment, the proposed development is evidently consistent with the "Healthy Communities" objectives of the State Plan, in particular the stated priority to "Improve survival rates and quality of life for people with potentially fatal or chronic illness". NSW Health is the responsible agency for meeting this priority.
Tamworth Regional Development Strategy 2008	The Tamworth Regional Development Strategy (RDS) was prepared to inform the preparation of the comprehensive Tamworth LEP. The RDS identifies that the ageing population will result in a significant demand in health services in the future and identifies the City of Tamworth as the location for higher order services such as hospitals. The Strategy identifies the need for community services and facilities to be accessible to all social groups while acknowledging that thresholds of population in some parts of the Region are insufficient to support a full range of health and community services and that alternative arrangements may be required to ensure access to facilities in some localities. The new facility will assist is meeting this demand for health facilities locally and reduce the need to travel to access cancer care services. The proposed development relates to the strategic direction for community services and delivery and is consistent with the RDS action to: "*(g) Facilitate improved community access and delivery of health and community services and facilities, particularly in areas with disadvantaged communities".*
State Planning Instruments and Controls	
EP&A Act	The proposed development is consistent with the objects of the EP&A Act as it will: ▪ Promote the orderly and economic development of land through utilisation of, and the concentration of health services, within an existing hospital site; ▪ Promote the provision and co-ordination of community services and facilities by locating the proposed cancer centre in the proximity of other medical services at Tamworth Hospital; and ▪ Promote Environmentally Sustainable Design through the measures set out in **Section 3.8**. ▪ Promote the social welfare of the community; Opportunity for public involvement and participation has been provided and will further be provided.

Instrument/ Strategy	Comments	
SEPP 55	An assessment of potential contamination on the site is located at **Section 5.8.4**. The Contamination Report provided at **Appendix M** did not find any material exceeding the land use guidelines.	
SEPP (Infrastructure)	The proposal does not fall within one of the classifications of Traffic Generating Developments in Schedule 3 of the SEPP, for which (under Clause 104), development applications must be referred to the Roads and Traffic Authority (RTA). The proposal is within a zone prescribed under Clause 56 of the SEPP and is therefore permitted with consent.	
SEPP 33	The proposal does not fall within the definitions of "potentially hazardous industry" and "potentially offensive industry" in clause 3 of the SEPP.	
SEPP Major Development	As discussed in **Section 1.4**, the project falls into the class of development described in clause 18 of Schedule 1 of the SEPP. Under delegation, the Minister has formed the opinion that the development is of a kind referred to in Schedule 1 of the SEPP and has is declared it to be a project to which Part 3A of the EP&A Act applies.	
Local Planning Instruments and Controls		
Tamworth Local Environmental Plan 1996	Clause 18 – Residential Zones	Hospitals are permissible within the Residential 2 zone with consent, by virtue of not being prohibited. The RCC is consistent with the objectives of zone, in particular: ▪ To permit full and efficient use of the existing social and physical infrastructure (being the Hospital) and provides future provision of services and facilities to meet demand. ▪ To permit development for other purposes where it can be demonstrated that suitable land or premises are not available elsewhere, and that the proposed use will not detrimentally affect the amenity of the residential locality.
	Clause 43	The proposal is not expected to impact on any heritage building at Tamworth Hospital, as described in **Section 5.7**.
Draft Tamworth Local Environmental Plan 2009	Zone R1 General Residential	Hospitals are permissible within the R1 General Residential zone with consent by virtue of not being prohibited.
	Clause 2.6C Earthworks	The proposed works require development consent. The assessment concludes that the proposal will have no detrimental impact on environmental functions and processes, neighbouring uses or heritage items and features of the surrounding land subject to the implementation of an appropriate Construction Environmental Management Plan.
	Clause 5.10 Heritage conservation	The proposal is not expected to impact on any heritage building at Tamworth Hospital, as described in **Section 5.7**.

Instrument/ Strategy	Comments	
Tamworth Development Control Plan No. 1 – Parking Guidelines	The DCP does not provide a specific parking rate for hospitals. An assessment of the proposed parking provision is located at **Section 5.4**.	
Draft Tamworth Development Control Plan 2010	**Step 3: General Development Specifications**	
	Parking	The DCP does not provide a specific parking rate for hospitals. Adequate carparking has been provided for the Tamworth RCC. An assessment of the proposed parking provision is located at **Section 5.4**.
	Landscaping	Proposed landscaping is shown in **Appendix D** and has been considered in **Section 5.2**.
	Soil and Erosion Control	A Construction Environmental Management Plan will be prepared to ensure that soil and erosion are managed during construction.
	Environmental Effects	This EAR identifies the potential environmental impacts of the development and demonstrates how they will be mitigated.
	Vegetation	The proposed development has been designed to minimise removal of significant vegetation. Proposed landscaping is shown in **Appendix D** and has been considered in **Section 5.2**.
	Waste Management	The waste storage and collection arrangements are detailed in **Section 5.13**. Waste will generally be managed in accordance with the existing waste management and handling practices at Tamworth Hospital.
	Noise	An Acoustic Assessment is located at Appendix J and summarised in Section 5.5. The noise assessment identifies project specific noise limits to protect the acoustic amenity of neighbours during construction and operation. No noise impacts to off-site residences are predicted.
	Geology	An assessment of geotechnical and contamination issues is at **Section 5.8**. The geotechnical report at **Appendix L** does not identify any significant geotechnical issues and provides recommendations for dealing with the range of ground conditions expected to be encountered. The Contamination Report at **Appendix M** did not find any material which exceeded the land use guidelines.

5.2 Built Form and Urban Design

The design and form of the new Tamworth RCC have been heavily influenced by its location within the Tamworth Hospital site. In particular:

- The Red Cross Blood Collection Building and the Emergency Department entry and drop-off are adjacent to the RCC will remain in their current locations and not be affected.
- The Emergency Short Stay carpark will remain in its current configuration and the RCC is positioned so that its operation will not be affected during construction.
- The RCC building is positioned so that it would not affect existing HV electrical lines, while other services traversing the site will be relocated to suit the new building and carparking.
- The carpark and building entry are located close to hospital entrance so providing convenient access to the facility for visitors and patients (including ambulant patients).
- The challenging slope through the site is managed by providing accessible drop-off and parking spaces at the building entry.
- The bunkers are buried in the ground to provide a stable foundation and to limit the overall impact of the building. Treatment areas have access to natural light and external views.
- Building materials blend with the other hospital buildings, but provide a more contemporary appearance.

5.2.1 Height, Bulk and Scale

The height, bulk and scale of the Tamworth RCC building are consistent with its location within the Tamworth Hospital campus and its proximity to a range of larger medical buildings. Relative to its closest neighbours, the Brudelin Building and Johnston House, the RCC is a modest building that uses the slope of the site to diminish the scale and bulk of its form.

The radiotherapy bunkers, for instance, are sunk into the highest part of the site slope, thus reducing the dominance of their volume on the landscape. The bulk and scale of the building have been designed to manage the cut and fill balance across the site while reducing the massing of the overall building.

Rooftop mechanical services are located to the southeast of the building, so maintaining visual vistas (as well as solar ingress) from the Brudelin Building's upper levels to the east as much as possible.

5.2.2 Open Space, Landscaping and Public Domain

Proposed landscaping, as per the Landscape Concept Plan at **Appendix D**, complements the existing native landscape setting through use of native trees, shrubs and garden plants whilst at the same time establishing an appropriate identity for the RCC. In particular, *Eucalyptus albens (*White Box) has been included in the proposed plant schedule since it is indicative of the vegetation community which may have once existed at the site.

Consultation with Tamworth Council has identified that none of the 21 trees that are required to be removed for the Tamworth RCC are listed on the Significant Tree Register.

5.3 Environmental and Residential Amenity

As the proposed building is contained wholly within the Tamworth Hospital campus its impact on neighbouring properties is anticipated to be negligible.

It is likely that the south east corner of the RCC building will be visible outside the hospital site from Johnston Street. Much attention has been paid to the design and finishes of this part of the building (which includes the entrance and outdoor café area) to create a favourable and positive impression. In addition, the trees around the southern boundary of the Tamworth Hospital site along Johnston Street will be augmented, and the edges of the proposed new carpark will be landscaped. This will buffer the views towards the new RCC building from Johnston Street and residential areas to the south of Johnston Street.

The RCC primarily overshadows the internal access road to the Emergency Department and to a limited extent the single storey Dental Clinic building on the opposite site of the road. No residential areas are affected by overshadowing.

5.4 Access, Transport, Traffic and Parking

A Traffic & Transport Report prepared by Sinclair Knight Merz (SKM) is included at **Appendix H**. The report concludes that the development will have no impact on the local road network, hospital parking and public transport. The main findings of the report are summarised below.

5.4.1 Traffic Impact Assessment

Tamworth Hospital currently has direct access off the surrounding roads of Dean Street and Johnston Street through a network of internal access roads, car parks and pedestrian paths. This includes a main internal hospital ring road extending from Dean Street in the north to Johnston Street in the south. There are six internal roads with access off Dean Street and five internal roads with access off Johnston Street.

The site of the proposed RCC is bound on all sides by internal access roads and car parks, all with access off Johnston Street.

Based on intersection counts in September 2009, Johnston Street has an estimated daily traffic volume of 4,500 to 5,000 vehicles per day between its intersections with Dean Street and Smith Street with an hourly traffic volume of 341 vehicles. Dean Street has an estimated average daily traffic volume of 6,000 to 7,000 vehicles per day south of the intersection with Johnston Street with an hourly traffic volume of 476 vehicles.

The Traffic & Transport Report finds that the proposed Tamworth RCC will generate an additional 36 staff vehicle trips in the morning peak and that this is not expected to have a noticeable impact on the road network operations. Accordingly, the existing road network in and around Tamworth Hospital has the capacity to accommodate the additional traffic generated by the proposed development.

5.4.2 Car Parking Assessment

The Traffic & Transport Report concludes that the car parking proposed for the development is adequate to cater for the particular staff and visitor parking requirements of the Centre. The proposal includes 30 new visitor spaces (including 3 disabled car spaces), one (1) ambulance space and a patient drop-off zone at the entrance to the Tamworth RCC. In addition, 36 spaces in the existing upper campus carpark will be allocated to RCC staff (see drawing DoP06 at **Appendix C**).

To maintain the existing car parking designated for the Blood Collection Centre, to be lost as a result of the Tamworth RCC, the proposed development also involves the relocation of eight car spaces to the east side of the internal hospital ring road.

A combination of sign posting and display cards will be used to designate the staff and patient parking spaces. All new parking areas and access roads will be designed in accordance with the RTA's Guidelines, Australian Standards and Council Codes.

5.4.3 Public Transport

Tamworth Hospital is served by Tamworth Buslines Route 430 and 431 connecting the hospital with the Tamworth CBD. There are 17 services Monday to Friday between 9am and 6pm (approximately 2 services per hour) and 5 services on Saturdays. All buses serve the hospital in a clockwise loop starting at the intersection of Dean and Johnston Streets and then following Dean Street northbound around the hospital ring road back to Johnston Street with four stops along the route. The Hospital will continue to be served by the local existing bus service.

5.4.4 Pedestrian and Disabled Access

Pedestrian and disabled access is included throughout the proposed Tamworth RCC building with direct continuous level access on each level and lift access between levels. Fire stairs and emergency access are also provided between levels.

Designated pedestrian and disabled access is also provided through the proposed new car park to and from the RCC building. Davis Langdon have conducted a review of the access arrangements (see **Appendix I**) and concluded that the proposed building has been designed in accordance with the spirit and intent of the *Disability Discrimination Act 1992* (DDA), Building Code of Australia 2009 (BCA), and Australian Standards (as they relate to access for people with disabilities). Davis Langdon has identified a number of measures to be further incorporated into the subsequent phases of design to ensure compliance with the BCA and the spirit and intent of the DDA.

5.4.5 Construction Traffic

The peak workforce will be approximately 80 construction workers. Peak vehicle numbers will occur during the bulk excavation and concrete pours and this will require approximately 10 - 15 trucks per hour, but this will occur over short periods of time.

The management of vehicle and pedestrian traffic will be addressed in the Construction Traffic Management Plan to be prepared prior to the commencement of works as part of the Construction Environmental Management Plan described in **Section 5.14**.

5.5 Noise and Vibration

An Acoustic Report has been prepared by Acoustic Studio (see **Appendix J**). The acoustic issues addressed in this assessment include:

- The impact of noise and vibration from the construction of the Tamworth RCC on the nearest residences and existing hospital buildings.
- The impact of noise from the operation of the Tamworth RCC on the nearest residences and existing hospital buildings. It is anticipated that operational noise levels will be dominated by noise from air conditioning plant associated with the building.

- The impact of noise on the nearest residences from any additional traffic movements on the surrounding streets generated by the operation of the RCC.
- The affect of helicopter noise on the design of the new building in regards to the provision of acoustic treatments.

5.5.1 Existing Noise

Existing background / ambient noise was measured at five (5) locations on the site as well as at the closest affected residential receivers, which are located on Johnston Street to the south of the Hospital.

The daytime and night time continuous background noise environment on the site of the RCC building is dominated by road traffic on the access road to the hospital campus (to the east of the proposed RCC) and plant from existing buildings.

Background noise levels at the closest residence on Johnston Street are dominated by traffic on Johnston Street. The background noise levels measures for Johnston Street residences were:

- 42 dBA for the Day (7am to 6pm).
- 37 dBA for the Evening (6pm to 10pm).
- 37 dBA for the Night (10pm to 7am).

5.5.2 Construction Noise

DECCW's *Interim Construction Noise Guideline* provides construction noise management levels for construction works and compliance with these limits is considered best practice. These are as follows:

- During standard construction work hours $L_{Aeq,15min}$ should not exceed the background noise level by more than 10 dB(A) and should not exceed 75 dB(A).
- Outside recommended standard hours $L_{Aeq,15min}$ should not exceed the background level by more than 5 dB(A)

Construction vibration limits will be determined by the sensitive equipment areas of the existing hospital buildings and so potential impacts to nearby residential properties are expected to be imperceptible, and alsowell under AS 2670.2 criteria.

The proponent will prepare a Construction Noise and Vibration Management Plan to ensure that the noise and vibration limits are met.

5.5.3 Operational Noise

The operation of the proposed building will contribute noise to the ambient environment. Typically, this will result from steady sound levels generated by plant associated with the building services (generally emitted by externally located plant, or air intakes or discharge zones on the building façade, such as fresh air intakes, etc).

DECCW's Industrial Noise Policy sets out how project specific noise limits are devised, based on the criteria for protecting residents from intrusive noise and protecting amenity. In this case the criteria for protecting residents from intrusive noise are the more stringent noise limit and have been applied, as follows:

- $L_{Aeq,15min}$ 47 dBA for the Day (7am to 6pm).
- $L_{Aeq,15min}$ 42 dBA for the Evening (6pm to 10pm).
- $L_{Aeq,15min}$ 37 dBA for the Night (10pm to 7am).

Compliance with these noise limits for the closest residential receivers to the site will ensure compliance with the noise limits at all other residential receivers.

Source noise levels for plant associated with the building will be assessed and plant will be selected to meet these environmental noise criteria. Roof top plant will be enclosed or screened as required. If necessary, additional environmental noise control methods may include in-duct attenuators, acoustic louvres for plant rooms, and enclosures for noisy plant items.

Traffic generation by the Tamworth RCC is considered to be insignificant compared to the existing traffic levels on the surrounding roads. No significant increase in traffic noise is considered likely.

5.5.4 Impact of Helicopter Noise

The sound reduction of the building envelope will be determined during the detailed design taking account of helicopter operations and sound attenuation features of the roof and facade elements.

The sound reduction required will be met through increasing the sound attenuation characteristics of the roof and external walls, and by modifying the thickness of glass and air cavity dimensions of the glazing.

5.6 Ecologically Sustainable Development

Steensen Varming has prepared a summary of the ESD initiatives that are being considered in the design for the building to achieve a 4-star rating under the Green Star Healthcare Pilot Tool (refer to **Section 3.7** and **Appendix K**). These initiatives relate to all aspects of the RCC building, including:

- Electrical services.
- Mechanical services.
- Hydraulic services.
- Architectural design.
- Structural design.

Furthermore, the proposed development is consistent with the five accepted principles of ESD described below.

Integration Principle

The integration principle holds that decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations. Economic, environmental and social considerations have driven the decision to provide a regional cancer service at Tamworth Hospital, and have influenced the design of the building.

Precautionary Principle

If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

The proposal is supported by multiple environmental studies and technical reports which conclude that there are no environmental constraints that preclude the development of the site in accordance with the proposal, subject to appropriate management in future planning, design, construction and operational stages.

Intergenerational Equity

The principle of inter-generational equity holds that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations. The proposal as a whole will directly benefit current and future generations in that it contributes directly to the health outcomes of the New England and North West communities.

Biological Diversity

Under the biodiversity principle, the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making. There is no significant natural vegetation on the site and it does not contain any threatened or vulnerable species, populations, communities or significant habitats. Construction and ongoing operations of the facility will be managed in accordance with the draft Statement of Commitments, ensuring no significant indirect impacts on the surrounding environment.

Valuation and Pricing of Environmental Resources

Under this principle, improved valuation, pricing and incentive mechanisms should be promoted. The costs of infrastructure and measures to ensure an appropriate level of environmental performance on the site have been incorporated into the cost of development.

5.7 Heritage

5.7.1 European

The Tamworth Hospital site contains an item of local heritage significance known as the 'Main Block'. The Main Block is also listed on the Department of Health's section 170 Register.

The Main Block is the original 1884 building on the site, designed by JW Pender, with the addition of a 1906 wing to the south and further amendments by government architect Walter Liberty Vernon in 1909. It is a single storey Victorian face brick and painted brick building that is primarily rectangular in plan form with a series of hipped slate roofs and a long verandah with a corrugated iron roof along the main southern façade.

The Main Block is no longer visible in the round, due to the number of connections on the north, east and west facades and various surrounding infill buildings. The significantly larger four storey Brudelin Wing is situated between the proposed RCC and the Main Block and there is no physical or visual relationship between the buildings. As a result there will be no physical impacts or visual connection between the heritage item and the RCC.

The proposed RCC will therefore have no impact on the heritage significance of the Main Block and requires no further assessment.

5.7.2 Aboriginal

An Indigenous Archaeological Assessment was prepared for the entire Tamworth Hospital campus by McCardle Cultural Heritage for the proposed masterplan of the campus.

There were no Potential Archaeological Deposits identified on the Hospital site. As the Hospital is not situated near reliable water, and is therefore not well resourced in terms of water availability and associated floral and faunal resources, it was concluded that there is a low potential for archaeological sites.

Furthermore, as the site has been subject to wholesale clearing, cultivation and grazing, and then later excavation and reshaping of land for the construction of the Hospital and associated infrastructure, it is considered very likely that these activities have destroyed any cultural materials that may have been present on the site.

Should any Aboriginal remains be discovered during works, works should immediately cease and the National Parks and Wildlife Service should be contacted for further advice, as required under section 91 of the *National Parks and Wildlife Act 1974*. This is reflected in the Statement of Commitments.

5.8 Geotechnical Issues

A Geotechnical Investigation has been prepared for the Tamworth RCC site and is included at **Appendix L**. The report makes the following findings.

5.8.1 Geotechnical

The appended geotechnical reports find that the Tamworth hospital is located within the Baldwin Formation comprising deposits of Argillite and Greywacke. The subsoil profiles comprise of (from top down) gravelly clay fill, black sandy silt, colluvial sandy clay, residual clay, and a mix of weathered shale and weathered mudstone/argillite. The northern part of the Tamworth RCC site adjacent to the Blood Collection Centre contains a mix of fill materials to a depth of approximately 2m with mostly gravels and clay, and a distinct layer up to 0.7m thick of black sandy silt.

The fill encountered during the investigation cannot be considered Controlled Fill, and therefore should not be used for the support of structures. Further, as it is likely that the rear of the building will be founded on weathered rock, the report recommends that all footings be deepened to found uniformly on the weathered rock profile. On the downhill half of the building this may require the use of piles or piers taken through the fill and residual soil profile to found within the extremely weathered rock or better.

The investigations find that mass movement and soil instability are unlikely to be an issue for the proposed development given the geotechnical conditions.

5.8.2 Groundwater

The appended geotechnical investigations state that groundwater was not encountered during the investigations, and conclude that the proposed development is unlikely to adversely affect or be constrained by groundwater.

5.8.3 Soil acidity and salinity

The appended geotechnical investigations find that the soils are moderately acidic to moderately alkaline, and non-saline with no detrimental effect on plant growth or limitation on reuse.

5.8.4 Contamination

A Preliminary Site Contamination Assessment was carried out by Regional Geotechnical Solutions, and is provide in **Appendix M**. The assessment targeted areas of the site considered to have the potential to contain contamination resulting from past site activities. Samples were analysed for a broad suite of contaminants and the results were compared to guidelines for residential landuse, which are conservative guidelines for the proposed landuse scenario.

The assessment encountered no contamination exceeding the adopted guidelines, and no asbestos materials were detected in soil samples. The materials encountered are therefore able to remain on site for the proposed development. Should any of the fill material present be required to be taken off site, it will require classification under NSW DECCW waste classification guidelines.

5.9 Stormwater

The installation of a gross pollutant trap at the end of the hospital stormwater drainage system will ensure that the initial flush of surface stormwater from hard surface areas will be treated to remove nutrients, gross pollutant, suspended solids, hydrocarbons and other pollutants (such as metals) prior to leaving the site into Council's stormwater system.

A concept level erosion and sediment control plan has been prepared and is provided in **Appendix E**. An erosion and sediment control plan will be included as part of the Construction Environmental Management Plan to be prepared prior to the commencement of works.

5.10 Hazards

No hazardous goods are to be stored within the proposed Tamworth RCC.

The linear accelerator used in this facility produces X-Ray radiation by accelerating electrons into a target material. When the device is not in operation, it no longer emits this radiation. It does not contain any radioactive material such as that found in a nuclear reactor or a cobalt-60 based treatment unit, and there are no issues with disposal of any waste products.

Manufacturers of medical linear accelerators must meet certain requirements regarding the level of leakage radiation emitted from the treatment head during operation. The worst-case value will be taken into account when designing the radiation shielding for the facility. The occupancy-adjusted equivalent-dose rate at the areas surrounding the rooms will be within limits set by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

The CT Scanner and the Orthovoltage Units which will be used at the facility have a contained nuclear source which does not produce any radiation waste that requires disposal – when the units reach the end of their life they are returned to the supplier and reused, recycled or disposed of in accordance with the regulations which apply to the suppliers. These units are regulated by the EPA.

5.11 Social

Significant social benefits derive from the proposed project including:

- improved accessibility for patients and carers – measured as user accessibility cost savings or avoided patients' and carer's transport and accommodation costs;
- increase in equitable and affordable access to radiotherapy treatment services;
- decrease in family life disruptions;
- reduced distress and disability associated with having cancer and having to travel long distances for treatment;
- increased capacity for social support during treatment;
- significant improved access to cancer services for the Aboriginal and Torres Strait Islander communities.

5.12 Building Code of Australia

A BCA Report has been prepared by Davis Langdon and is located at **Appendix N**. The Report concludes that the building will rely upon alternate solutions to meet compliance the requirements BCA 2010. The Report also notes that confirmation from an accredited fire safety engineer in consultation with the NSW Fire Brigades will be required.

5.13 Waste

The following indicates the procedures to be implemented to manage waste through the construction and operational phases of the development. A formal Waste Management Plan will be prepared prior to the commencement of works, (as reflected in the draft Statement of Commitments at **Section 6**). It should be noted that that construction waste will be handled according to industry best practice and operational waste management will be incorporated into Tamworth Hospital's existing systems.

5.13.1 Construction Waste

No major demolition is required to accommodate the new building. Any material that cannot be recycled or reused will be disposed to an approved landfill facility. A Construction Waste Management Plan will be prepared by the proponent prior to the commencement of construction works.

Waste will be minimised during construction and that generated will be separated to maximise recycling. The highest waste production period will be during the construction of the structure. This will be approximately 16 weeks and will generate approximately two 10m^3 bins per week. The potential for reuse of the topsoil from the RCC site around the Hospital campus would be investigated as part of the construction planning.

5.13.2 Operational Waste

The existing hospital currently generates a number of streams of waste. The extension to the hospital for the Tamworth RCC will not generate any new streams of waste, rather more waste will be generated in each of these existing streams. All operational waste management practices of the new service will be in line with NSW Health and EPA requirements.

It should be noted that the proposed Tamworth RCC development will include the installation of one linear accelerator (with provision for a second to be installed in the future) for the treatment of cancer patients as well as a CT Scanner and Orthovoltage Units. The waste produced by the linear accelerator does not have any radiation content. The CT Scanner and the Orthovoltage Units have a contained nuclear source which does not produce any radiation waste that requires disposal – when the units reach the end of their life they are returned to the supplier and reused, recycled or disposed of in accordance with the regulations which apply to the supplier.

The Tamworth RCC will produce cytotoxic waste from chemotherapy. The contaminated and biological waste system is not connected to the sewage discharge system and consists of solids and liquid containers for the retention of wastes.

Tamworth Hospital has contracts in place with certified contractors to dispose of chemical, biomedical, infection waste in accordance with EPA and other requirements. The existing collection arrangements will be extended to cover the expanded operations of the hospital.

Measures to be adopted to ensure the appropriate disposal of waste will include:

- Training of staff to dispose of contaminated and potentially contaminated wastes (including biological hazard wastes) into the appropriate receptacles for collection by the biowastes and contaminated wastes contactor.
- Erection of signs at all discharge points to sewer indicating that "Non-Hazardous Wastes Only" shall be discharged to sewer points.

5.14 Construction Impacts

The main construction activities for the project include:

- Demolition of the existing structures including the tennis court, and car park, and removal of trees, and relocation of the gazebo.
- Earthworks for site preparation and basement excavation.
- Diversion of stormwater drainage affected by the construction works and improvements to the local building stormwater drainage systems.
- Construction of the building structure including piling.
- Surface car parking adjacent to the building and associated landscaping.

The most significant potential impacts associated with the construction of the Tamworth RCC are on Tamworth Hospital itself, including hospital staff, suppliers, contractors, patients and other hospital users. Health Infrastructure NSW will work with the site contractor to prepare a Construction Environmental Management Plan (CEMP) which protects the interests of the Tamworth Hospital and its users, and this will ensure that potential impacts to nearby residential properties will be minimised. Ongoing daily operations of the Hospital which must be maintained with minimal interruption during the construction phase include the following:

- maintenance of ambulance and ambulatory access to the Emergency Department (ED), particularly recognising the ED drop-off and pick-up zone;
- provision of short-term parking with easy access to the ED entry;
- maintenance of clear access from the helicopter pad to Emergency for patient transfers (by ambulance and trolley);
- maintenance of service vehicle access to the Brudelin Building;
- maintenance of access to the Brudelin Building plant rooms and egress doors and services ramp, in particular on the eastern face of the building;
- maintenance of service and donor access to the Red Cross Collection Centre;
- maintenance of vehicle and pedestrian access on the ring road between ED and the Services Building and Mortuary; and
- continued service and access by the local existing bus service.

The CEMP will be prepared prior to commencement of works and will include

- Details of construction methods;
- Measures to manage construction impacts; and
- A Communications Plan for communicating with staff, patients, visitors and residents in relation to construction activities and complaints handling.

Construction environmental management measures will generally be in accordance with the principles identified in **Table 4**.

Table 4 – Construction Environmental Management Measures

Environmental Issue	Measures to manage impacts
Site security and safety	▪ Fencing/ hoardings. ▪ Site management buildings. ▪ Access controls and security. ▪ OH&S Management Plan.
Construction traffic management	▪ Separation of construction traffic from hospital operations traffic. ▪ Temporary construction vehicle routes with most direct access to and from construction site off Johnston Street. ▪ Temporary pedestrian path safety diversions around construction site and traffic. ▪ Temporary car parking and loading areas for construction workers and activities off Johnston Street.
Noise and vibration	▪ Method and timing of demolition, excavation and construction to minimise noise and vibration impact. ▪ Acoustic screening with hoardings. ▪ Noise mitigation fitted to construction machinery and equipment. ▪ Machinery and equipment located to minimise noise and vibration impact on surrounding sensitive uses. ▪ Communications with potentially affected people and/or organisations.
Soil and water	▪ Erosion and sediment control plan.
Dust	▪ Perimeter dust screens. ▪ Hosing down of demolition and earthworks. ▪ Hosing down of construction vehicles and access routes. ▪ Any materials crushing to take place off site. ▪ Installation of additional filters on air conditioning systems of existing hospital buildings.
Waste management	▪ Demolished building material and excavated spoil will be reused on the hospital site where possible, or otherwise disposed to a construction materials recycling facility. ▪ Waste materials and packaging from construction activities will be sorted into materials for reuse and recycled where possible.
Hazardous materials	▪ A hazardous materials assessment will be prepared prior to demolition. Any identified hazardous materials will be managed and removed in accordance with relevant environmental standards and Work Cover requirements.

5.15 Consultation

Extensive and ongoing consultation to inform the project has been, and is being, undertaken with key agencies and stakeholders particularly within NSW Health, the HNEAHS and the Tamworth Hospital.

Communication and consultation with a vast range of stakeholders and groups has been undertaken. A Communications Plan has been provided to Hunter New England Health and Health Infrastructure. Consultation has occurred with Medical Staff Council, Clinicians and Staff Forums, Local Health Advisory Committee, Local Stakeholders, Members of Parliament.

Representatives of NSW Health have consulted with Tamworth Regional Council both at elected representative and senior staff level. The consultation included:

- A presentation on all aspects of the redevelopment of Tamworth Hospital to Council on 18 December, 2009. In particular, the design, staging and program were explained. Council has indicated its strongest support for the progression of the project.
- Meetings with Council's Director Planning and Development.
- Contact by the design and engineering team with the various divisions in Council to identify existing services and consult in relation to the proposed upgrade of services required for the redevelopment.

Public meetings were held in August 2009 and early 2010 in relation to the broader improvements to Tamworth Hospital. A community consultation meeting has been arranged for 2 December 2010 to present the proposed project to the Hospital and wider community. During the construction phase there will be regular newsletters and updates to the community to advise the progress of the works towards the completion date.

5.16 Site Suitability and Project Justification

The suitability of the site has been considered from a medical operational perspective as well as from a site, development and environmental capacity perspective. The site is considered suitable for the project for the following reasons:

- It is currently used for medical related purposes, being Tamworth Hospital.
- The building will occupy the vacant piece of land immediately adjacent to the main hospital building and is able to be easily and separately accessed.
- The site forms part of a medical and knowledge cluster that provides important economic and social benefits to the local community and more broadly to people from New England and the North West.
- The project improves health outcomes by providing treatment for cancer closer to patients place of residents - a particular benefit for the indigenous community.
- The area and shape of the site allows for the provision of a new hospital building that meets the special design requirements, while not resulting in any adverse impacts on surrounding hospital buildings or residential dwellings in terms of overshadowing or view loss.
- The environmental investigations of the site and soil conditions demonstrate that the proposed use and design of the building is suitable for the site.

6.0 Draft Statement of Commitments

In accordance with the Director-General's Environmental Assessment Requirements, the proponent is required to include a Draft Statement of Commitments in respect of environmental management and mitigation measures on the site. The following are the commitments made by Health Infrastructure to manage and minimise potential impacts arising from the project.

6.1 Ecologically Sustainable Development

The environmental performance of the new development will be assessed using the Environmental Performance Guide for Buildings which is an environmental performance guide for NSW Government Buildings.

A range of electrical, structural, mechanical, hydraulic and architectural ESD initiatives will be considered during the detailed design to minimise the buildings ongoing energy use and ensure an efficient and sustainable outcome. ESD design initiatives will be incorporated in order to achieve a 4 star rating under the Green Star Healthcare Pilot Tool.

6.2 Construction Management

A Construction Environmental Management Plan will be prepared prior to the commencement of construction activities. The Construction Environmental Management Plan will provide details of construction methods and measures to manage construction impacts, and will include the following sub-plans:

- Construction Waste Management Plan;
- Construction Noise and Vibration Management Plan;
- Construction Traffic Management Plan;
- Construction Dust Control Management Plan;
- Erosion and Sediment Control Plan; and
- Communications Plan

6.3 Aboriginal Heritage

Should any Aboriginal remains be discovered during works, works will immediately cease and the National Parks and Wildlife Service will be contacted in accordance with Section 91 of the *National Parks and Wildlife Act 1974*.

7.0 Conclusion

The Project Application seeks approval a new Regional Cancer Centre at Tamworth Hospital. This environmental assessment report provides detailed assessment and justification for the development. The proposal represents a significant upgrade to the health care services offered in the Hunter New England Area through the provision of a state of the art Regional Cancer Centre.

The assessment of the Project Application has demonstrated that the proposed development will have no adverse environmental effects. An assessment against the relevant State and local legislation and planning controls, including Tamworth LEP 1996 and draft Tamworth LEP 2009 demonstrate that the proposal complies with all the relevant provisions and controls.

The Draft Statement of Commitments has been prepared to inform the detailed design of the development and manage construction and on-going environmental impacts.

Given the environmental planning merits described above, and significant public benefits proposed, it is requested that the Minister approve the Project Application under Section 75J of the EP&A Act.