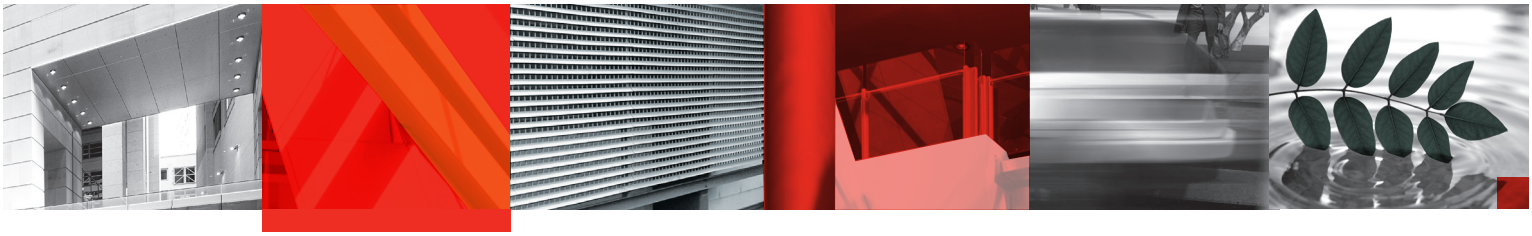
Review of Environmental Factors

Environmental Impact Assessment



Dubbo Base Hospital Redevelopment Stages 1 and 2

Dubbo Base Hospital

Prepared for NSW Health Infrastructure

July 2012 ▪ 12151

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Forward

This Review of Environmental Factors (REF) / Environmental Impact Assessment (EIA) has been prepared for NSW Health Infrastructure to assess the potential environmental impacts that could arise from the proposed works at Dubbo Base Hospital, Myall Street, Dubbo.

This REF / EIA has been prepared in accordance with the *Environmental Planning and Assessment Act 1979*, the *Environmental Planning and Assessment Regulation 2000*, State Environment Planning Policy (Infrastructure) 2007, and other applicable Commonwealth and State Legislation.

Based on the information presented in this REF and the mitigation measures indicated, it is unlikely that there will be any significant environmental impacts associated with the Proposal.

Certification

This REF / EIA provides an accurate review of the proposal in relation to its potential effects on the environment.

Endorsed by:

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1.0 Introduction

This Review of Environmental Factors (REF)/ Environmental Impact Assessment (EIA) has been prepared by JBA Urban Planning Consultants Pty Ltd (JBA Planning) for NSW Health Infrastructure to assess the potential environmental impacts that could arise from various works to be undertaken at Dubbo Base Hospital, Myall Street, Dubbo.

The project includes upgrades to the existing car parking and access arrangements, as well as stormwater and services infrastructure. The project also includes the construction of a new, standalone building for the hospital's Information Communication Technology (ICT) services, infrastructure and the demolition of various disused buildings.

We note that the new facility falls within the Dubbo Base Hospital's overall patient and staff thresholds, and therefore the 10 per cent intensification threshold identified in the Infrastructure SEPP will not be exceeded.

1.1 Background

The Dubbo Base Hospital 2010 Master Plan was prepared by Cox Richardson Architects (Cox) for NSW Health Infrastructure to facilitate the provision of essential clinical services to meet the needs of the Western NSW Local Health District. The Master Plan reflects the requirements of the Dubbo Health Services Plan 2010-2022 (DHSP), and together the two documents outline the modernisation and growth needs of the hospital over the coming two decades.

NSW Health Infrastructure is currently progressing Stages 1 and 2 of the proposed hospital upgrades identified under the DHSP with funding from the NSW Government and $7 million from the Commonwealth Government's Health and Hospitals Fund.

The 2010 Master Plan (which was updated in 2011) identified a number of early priorities for Dubbo Base Hospital requiring early attention which are included in Stage 1 of the overall hospital campus upgrades. The works contained within the scope of this REF are in accordance with the Master Plan.

2.0 Site Analysis

2.1 Regional and Local Context

The Dubbo Base Hospital is located on the northern fringe of the Dubbo town centre, approximately 1.5km north-east of Dubbo CBD. It is bounded by Myall Street and Cobbora Road to the south, River Street and the Charles Sturt University Campus to the north, Leonard Street to the east and the Coonamble rail line to the west (refer to **Figure 1**).

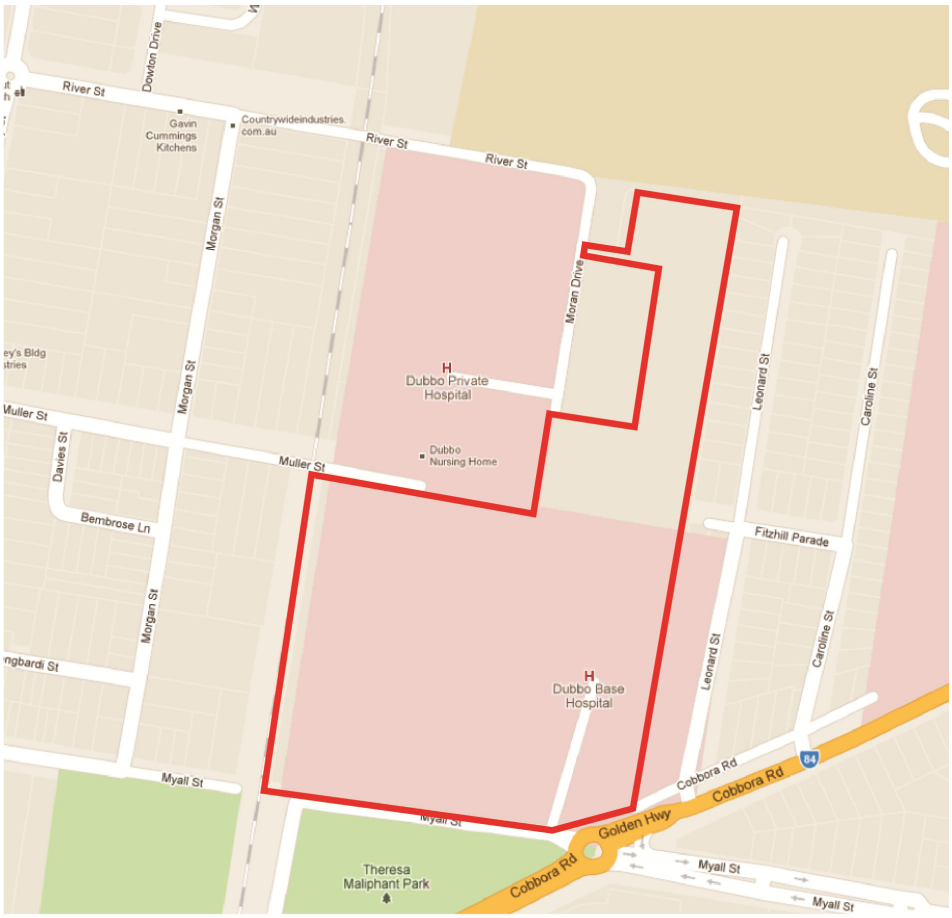

Figure 1 - Locality Plan

2.2 Site Description and Existing Development

The Dubbo Base Hospital site is L-shaped and covers an area of approximately 13.48ha. The site is owned by the former Macquarie Area Health Service, now known as the Western NSW – Local Health District, and is legally described as Lot 12 in DP 1159243. The site is zoned SP2 Infrastructure 'Hospital' in Dubbo Local Environmental Plan 2011.

Dubbo Base Hospital is an existing medical facility, comprising several buildings, including the main single storey Hospital building fronting Myall Street, the two storey building on the corner of Myall Street and Cobbora Road and the Nursing Home fronting Muller Street. The site operates 24 hours a day with visiting hours from 9am-5pm.

The existing buildings accommodate 160 beds and 485 full-time equivalent staff within various Hospital departments including:

- Mental health;
- Aboriginal health;
- Breast screening;
- Child care;
- Child health care;
- Community health;
- Coronary care;
- Accident/emergency;
- Day surgery;
- Intensive care;
- Alcohol/drug;
- Maternity;
- Mental health;
- Anaesthetics;
- Oncology;
- Ophthalmology;
- Orthopaedic;
- Paediatric;
- Pathology;
- Psychiatric;
- Psychology;
- Radiology;
- Audiometry;
- Renal unit;
- Sonography;
- Speech pathology; and
- Surgical and Women's health.

The Hospital also includes a main at-grade car park on the site's eastern boundary, as well as some parking on Myall Street and near the Dialysis unit. In total the Hospital provides approximately 350 existing car parking spaces for staff, patients and visitors.

The aerial photo at **Figure 2** illustrates the existing distribution of buildings and location of car parking areas across the site.

Figure 2 - Aerial Photograph

2.3 Surrounding Development

The site is bordered by low density residential development to the east, low density residential and further beyond, light industrial development to the west, Dubbo Private Hospital and Charles Sturt University Campus to the north, and Theresa Maliphant Park and the Golden Highway (Cobbora Road) to the south.

3.0 Scope of Works

This section of the report provides a detailed description of the proposed development.

3.1 Overview

The proposed works represent a broad upgrade of infrastructure and services within the west and north-west portions of the Dubbo Base Hospital site, including works for internal roads, car parking, utilities and hospital and support service operations. The proposed works will lead to the more efficient use of hospital land and enhance the functionality of the site as a whole and facilitating future enhancements to the hospital.

3.2 Description and Justification of the Activity

This proposed works for which approval is sought include:

- demolition of various structures including the existing Nurses Accommodation and Boiler House buildings;
- construction of a new electrical substation building (including switchboard and generators) and replacement of existing padmount substations;
- upgrades and expansion of the existing at-grade car park;
- termination and relocation of existing hydraulic, water, sewer, stormwater, gas and electrical infrastructure services across the site, including extension to the existing pump house near the hospital entry off Myall Street and Cobbora Road;
- relocation of sheds to accommodate a new link road and construction access road in the northern part of the site;
- construction of a new building for ICT infrastructure;
- minor reconfiguration of the Hospital's main entry and front of house areas; and
- provision of new landscaping.

Architectural drawings of the proposed development prepared by Cox are located at **Appendix A**.

3.2.1 Demolition and Excavation

The proposed works involve the demolition of the Nurses Accommodation and Boiler House buildings. These buildings are no longer required for the operations of the hospital and are being demolished to allow for the land occupied by the buildings to be reused as part of future hospital upgrade works.

Initial estimates of earthworks volumes for the new car park are calculated to result in approximately 500m^3 of surplus fill material being generated from the site.

3.2.2 Termination and Relocation of Services

Electrical Services

Existing electrical services will be upgraded and replaced in order to provide modern and reliable grid and back-up electrical services for hospital operations. These works are detailed in the Electrical Services Plan prepared by Sinclair Knight Merz (**Appendix B**) and include:

- Installation of new high voltage in-ground cables within a newly created 2m service easement for Essential Energy;
- Removal of existing capped/terminated service lines (extant);

- New low voltage in-ground cables to new ICT facility, Main Hospital, mammography and associated buildings; and
- Removal or relocation of two (2) existing 1000kVA kiosk substations from existing location adjacent to Stores and Boiler Room building; and
- Removal of existing standby generators and existing low-voltage switchroom from Stores and Boiler Room building.

Substation

Two new purpose-built single storey buildings (4 to 5.25m high) will be constructed within the centre of the hospital campus to the west of the existing assets maintenance facilities to house new and relocated generators and main switchboard for the campus. Details of the proposed buildings, which will be a maximum of 4m and 5.25m high, are shown in the Architectural Drawings prepared by Cox (**Appendix A**). The new substation comprises of the following elements:

- Building 1 will contain:
  - Two (2) new standby diesel generators (approximately 1500kVA capacity).
- Building 2 will contain:
  - New low voltage switchroom.
- Two (2) standalone new 1500kVA kiosk substations or two (2) relocated existing 1000kVA substations located between the two buildings.
- A 700L underground diesel storage tank located to the north of the generators with a new filling point adjacent to the tank.

Water, Hydraulic, Gas and Fire Services

New in-ground potable water, hydraulic and fire services with connections to existing supplies and existing and new buildings will be installed within limited areas of the hospital campus. The location and details of the proposed works are shown in the hydraulic services drawings prepared by Northrop (**Appendix C**) and include:

- Alterations and additions to existing hydraulic and fire services Pump House;
- Cap existing service connections to buildings to be demolished including capping of existing sewer lines; and
- New in-ground services and external site and internal building connections for:
  - 100mm potable water supply;
  - 100mm secondary cold water supply;
  - 100mm irrigation water supply;
  - 2x 100mm fire sprinkler supply;
  - 150mm fire hydrant supply; and
  - 75mm gas supply.

Lightning Protection

The existing chimney north of the boiler house (to be demolished) currently functions as the lightning protection to the Dubbo Base Hospital. SKM has confirmed the requirements for lightning protection based on the criteria listed in Australian Standard 1768:2007 'Lightning Protection' for existing buildings. Calculations made in accordance with the Australian Standard confirm that no additional lightning protection is required following the demolition of the existing chimney.

Stormwater

The proposed works include new stormwater drainage and detention services and upgrades to existing facilities in order to comply with the relevant Australian Standards, Dubbo City Council and Austroads standards. The stormwater works are detailed in the Stormwater Management Plan prepared by Enstruct Group (**Appendix D**) and include:

- Stormwater drainage and connections for new car park, roads, pedestrian footpath hardstand areas and new buildings;
- Expansion of the existing on-site stormwater detention basin adjacent to the Railway Corridor site discharge points to provide a minimum 115m^3 storage volume; and
- Construction of a new on-site stormwater detention tank adjacent to the Myall Street site discharge points to provide a minimum 125m^3 storage volume.

3.2.3 Car Parking and Access

Vehicular Access

The proposed works seek to reconfigure and upgrade the existing internal road network which connects to Muller Street and Myall Street.
In order to facilitate the proposed amplifications to the site access a number of existing temporary metal-clad sheds used for maintenance storage will be relocated a short distance to new zones identified in **Drawing ARC-SI-11-001** prepared by Cox (**Appendix A**).

A temporary construction access road will be constructed to the works site from River Street in order to minimise the impact of construction traffic on general and emergency hospital traffic and on nearby residential areas.

Car Parking

The proposed works include the regrading of 251 car spaces in the existing main car park area and the administration building and oncology building parking space, and the construction of a new main car park and parking bays along the new internal road with a total of 289 spaces, resulting in a net gain of 48 spaces within the hospital campus.

Pedestrian Access

New pedestrian footpaths and access routes will be provided along the internal road and within the new main car parking area to provide access to existing and new buildings within the hospital campus.

3.2.4 Construction of ICT Building

A new one-storey building will be constructed to the east of the existing maintenance workshops adjacent to the new internal road. This building will provide a purpose-built facility for the hospital's information communications technology (ICT) services which play a significant role in managing the hospital's data systems and electronic records storage. The layout and details of the proposed building are shown in the Architectural Drawings prepared by Cox (**Appendix A**).

The proposed ICT building will be constructed in two stages subject to the timing of funding, comprised of:

- Stage 1
  - Server room
  - Server power units
  - Data switches
  - Two (2) workstations
  - Shower and bathroom
  - Carrier room
- Stage 2
  - Meeting room
  - Office
  - Store room
  - Workstations
  - Breakout space
  - Kitchenette

3.2.5 Minor 'Front of House' Works

The proposed works include minor internal alterations to the existing entry to the main hospital building requiring the demolition of some internal walls to improve circulation within the building and provide a new hospital foyer area and waiting area as detailed in the Architectural Plans prepared by Cox (**Appendix A**).

3.2.6 Landscaping

Landscape Plans have been prepared for the proposed works by Oculus (**Appendix E**) which detail proposed works including indicative planting species, materials and landscape treatments. The main features of the proposed Stage 1 landscape works include:

- new outdoor forecourt and gathering area adjacent to main eastern hospital entry;
- new tree planting to Leonard Street property boundary;
- upgrades to recreation area landscaping; and
- trees and landscaping along new internal road and within proposed car park.

3.3 Construction Management

As part of early works, a Preliminary Construction Management Plan has been prepared by TSA Management and is included at **Appendix F**. This provides the broad construction methodology, construction traffic arrangements and mitigation measures to be undertaken to support the delivery of the proposed works. Additional project management protocols for construction traffic have been identified as part of the Preliminary Construction Traffic Management Plan prepared by Cardno (**Appendix G**).

3.4 Justification and Consideration of Alternatives

The catchment of the Dubbo Base Hospital includes the Dubbo, Gilgandra, Narromine, Wellington, Warrumbungle and Cabonne Local Government Areas (LGAs). Population projections for these LGAs are included in the NSW Statistical Local Area Population Projections (April 2010) released by the Department of Planning, now the Department of Planning and Infrastructure (DoPI).

On the basis of DoPI projections for these areas, the catchment of the Dubbo Base Hospital will increase from 41,100 in 2011 to 43,700 in 2021, rising to 45,600 in 2036. The 11% increase in the population of the Hospital's catchment to 2036 will result in an increased need for medical and health services generally. Accordingly, the need for specialist mental health care and accommodation will also proportionally increase during the same period.

Justification

Whilst the proposed works will support the future (and as yet unapproved) works on the hospital site, they in themselves provide immediate and significant improvements to the delivery of existing services and patient care by:

- improving the quantum and quality of parking currently available on the site;
- improving the amenity of the site; and
- expanding the capacity of existing services infrastructure.

In our opinion, the proposed works are suitable for the site, on the basis that they:

- will be carried out over a short period of time and involve minimal disturbance to the site and its surrounds;
- are situated within parts of the hospital site that will not impede current activities of the hospital;
- will not alter the use of the hospital site; and
- will greatly improve the current operation of the hospital by providing additional and formalised car parking / access, improved and purpose-built buildings and services and new site landscaping.

Consideration of Alternatives

It is noted that the proposed works could be delayed and carried out as part of future broad-scale hospital redevelopment works with approval as State Significant Development (SSD) under the Part 4 of EP&A Act. However, the delivery of these works ahead of any future SSD approval will enable the delivery of these stand-alone infrastructure and campus upgrade works to commence in a timely fashion and deliver immediate benefits that will assist in the current operation of the hospital.

By undertaking the works in the short term, the following positive outcomes will be achieved:

- provision of additional car parking on the site, and formalisation of existing ad-hoc parking arrangements;
- removal of out-dated and redundant nurses accommodation;
- replacement / relocated of dated services and infrastructure; and
- enhancement of the amenity of the hospital site through the provision of landscaping, and upgrades to the main entry and front of house areas.

4.0 Planning Context

4.1 Dubbo Local Environmental Plan 2011

4.1.1 Zoning

Dubbo Base Hospital is zoned SP2 Infrastructure 'Hospital' in Dubbo Local Environmental Plan 2011 (DLEP 2011). Permissible uses in the SP2 zone include *"the purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose"*. As the works are considered to be an ancillary function of the main use of the site, the proposed works are therefore permissible.

This development is also consistent with the zone objectives for the SP2 Infrastructure zone, as it will provide for infrastructure and related uses, and the development is compatible with, and supportive of the provision of infrastructure.

4.1.2 Heritage

Dubbo Base Hospital is identified as a heritage item of local significance in DLEP 2011. The proposed works will not adversely affect the heritage significance of the Dubbo Base Hospital (refer to Section 5.11).

4.1.3 Aviation Airspace

The site lies below the prescribed airspace for Dubbo Regional Airport which consists of the Obstacle Limitation Surface (OLS) Map. The proposed ICT Building and electrical services buildings are significantly lower in height that the existing buildings which are to be demolished, and as such the proposed works will not impact upon the safety, efficiency or regularity of existing or future air transport operations out of Dubbo Airport. Demolished items including the chimney are also below the OLS.

4.1.4 Groundwater Vulnerability

The site is identified as having moderate to high groundwater vulnerability (the lowest level of vulnerability) under DLEP 2011. The LEP requires the consent authority to consider:

- whether or not the development (including any on-site storage or disposal of solid or liquid waste chemicals) will cause any groundwater contamination or any adverse effect on groundwater dependent ecosystems; and
- the cumulative impact (including the impact on nearby groundwater extraction for potable water supply or stock water supply) of the development and any other existing development on groundwater.

A Groundwater Impact Assessment undertaken for the site by Douglas Partners (refer to **Appendix H**) indicates that groundwater has not been encountered within 5 metres of the ground surface. As the groundwater surface is well below the ground surface levels on the site, the proposed development will not involve groundwater extraction, and so will not reduce groundwater yields in the area. On this basis, the Assessment confirms that any groundwater impacts associated with the proposed development would be very low.

4.1.5 Flood Prone Land

The western edge of the site is identified as being in an 'extreme flood' zone in the Dubbo Draft Floodplain Management Plan Map. This flood zone has a peak discharge of 3 x 1% AEP Event (Flood Planning Level for Essential Services).

The Dubbo Draft Floodplain Management Plan Map also identifies the same area as the 'extreme flood' zone on the western edge of the site as being within the extent of a 1955 Flood in Non-Urban Areas, as depicted in the "Macquarie Flood Atlas". However, the map states that this information is not as accurate as the mapping that shows the extreme flood zone.

No areas within the site are identified as being flood prone on the Flood Planning Maps included in DLEP 2011. The area proposed to be developed is not identified as flood prone, and therefore no flood impacts are anticipated to the proposed development.

4.2 Dubbo Development Control Plan

4.2.1 Flooding

A small portion of the western edge of the site is within the mapped Probable Maximum Flood (PMF) area. No development is proposed in this area of the site and therefore the land subject to the construction of the MHU is not flood prone. This land is approximately one metre higher than the land in this PMF area.

4.2.2 Access and Mobility

The relevant Australian Standards, including AS1428 – Design for Access and Mobility and AS2890.1 – Off Street Car Parking Facilities, will be complied with to ensure that disabled access and car parking provision is of an acceptable standard (refer to mitigation measures at Section 7.0).

4.3 *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

The provisions of the Commonwealth EPBC Act do not affect the proposed works as it is not development that takes place on or affects Commonwealth land or waters. Further, it is not development carried out by Commonwealth agencies; nor is the proposed development a matter considered to be of national environmental significance; and there are no critical habitats or threatened species on the site.

4.4 *Environmental Planning and Assessment Act 1979* (EP&A Act)

Duty to Consider Environmental Impact (Section 111)

This REF considers the requirements of Part 5 of the EP&A Act, as well as clause 228 of the Environmental Planning and Assessment Regulation 2000 (refer to Section 5.1).

For the purpose of attaining the objects of the EP&A Act relating to the protection and enhancement of the environment, a determining authority in its consideration of an activity shall, notwithstanding any other provisions of the Act or the provisions of any other Act or any instrument made under the EP&A Act or any other Act, examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity (refer to sub-section 1 of section 111).

This REF report addresses the above provisions of section 111 of the EP&A Act. **Table 1** below demonstrates the effect of the proposed activity on the matters listed for consideration in sub-sections 2, 3 and 4 of Section 111.

Table 1 - Matters for consideration under section 111 of the EP&A Act

Matters for consideration under sub-sections 2, 3 & 4 of section 111 of the EP&A Act	
Matter for consideration	Impact of Activity
Sub-section 2 (a) any conservation agreement entered into under the *National Parks and Wildlife Act 1974* and applying to the whole or part of the land to which the activity relates, and	No effect, as the site is not subject to any conservation agreement or any plan of management under the *National Parks and Wildlife Act 1974*.
(b) any plan of management adopted under that Act for the conservation area to which the agreement relates, and	No effect, as stated above in sub-section (a) the site isn't under any conservation agreement.
(c) any joint management agreement entered into under the *Threatened Species Conservation Act 1995*, and	No effect, as the site is not subject to any joint management agreement entered into under the *Threatened Species Conservation Act 1995*.
(d) any biobanking agreement entered into under Part 7A of the *Threatened Species Conservation Act 1995* that applies to the whole or part of the land to which the activity relates	The site is not subject to any biobanking agreement entered into under the *Threatened Species Conservation Act 1995*.
Sub-section 3 Without limiting subsection (1), a determining authority shall consider the effect of an activity on any wilderness area (within the meaning of the *Wilderness Act 1987*) in the locality in which the activity is intended to be carried on.	No effect, the site is not located within or in the vicinity of a wilderness area as defined under the Wilderness Act 1987.
Sub-section 4 Without limiting subsection (1), a determining authority must consider the effect of an activity on: (a) critical habitat, and	No effect, as the proposed works will not affect critical habitat, nor cause significant effect on any threatened species, populations and ecological communities, and their habitats, nor are there any protected fauna or native plants on the site.
(b) in the case of threatened species, populations and ecological communities, and their habitats, whether there is likely to be a significant effect on those species, populations or ecological communities, or those habitats, and (c) any other protected fauna or protected native plants within the meaning of the *National Parks and Wildlife Act 1974*.	
Note. If a biobanking statement has been issued in respect of a development under Part 7A of the *Threatened Species Conservation Act 1995*, the determining authority is not required to consider the impact of the activity on biodiversity values.	

4.5 State Environmental Planning Policies

The following SEPPs apply to the site; however, many apply to the site only by virtue that they apply to the State.

- State Environmental Planning Policy No.1— Development Standards
- State Environmental Planning Policy No 4—Development Without Consent and Miscellaneous Exempt and Complying Development
- State Environmental Planning Policy No 6—Number of Storeys in a Building
- State Environmental Planning Policy No 21—Caravan Parks
- State Environmental Planning Policy No 22—Shops and Commercial Premises
- State Environmental Planning Policy No 30 — Intensive Agriculture
- State Environmental Planning Policy No 32—Urban Consolidation (Redevelopment of Urban Land)
- State Environmental Planning Policy No 33—Hazardous and Offensive Development
- State Environmental Planning Policy No 50—Canal Estate Development
- State Environmental Planning Policy No 55—Remediation of Land
- State Environmental Planning Policy No 62—Sustainable Aquaculture
- State Environmental Planning Policy No 64—Advertising and Signage
- State Environmental Planning Policy No 65—Design Quality of Residential Flat Development
- State Environmental Planning Policy (Major Development) 2005
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
- State Environmental Planning Policy (Temporary Structures) 2007
- State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
- State Environmental Planning Policy (BASIX) 2004
- State Environmental Planning Policy (Rural Lands) 2008
- State Environmental Planning Policy (Affordable Rental Housing) 2009
- Orana Regional Environmental Plan No 1– Siding Spring (deemed SEPP)

The SEPPs which apply (and not yet addressed) to the site and are relevant to the assessment of the proposed works are outlined below.

4.5.1 State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)

Division 10 of the ISEPP deals with health services facilities development. Clauses 56 and 58 are of particular relevance to the proposed development.

Under clause 56 of the ISEPP, health services facilities are defined as (emphasis added):

> ***"health services facility*** *means a facility used to provide medical or other services relating to the maintenance or improvement of the health, or the restoration to health, of persons or the prevention of disease in or treatment of injury to persons, and includes the following:*
>
> *(a) day surgeries and medical centres,*
>
> *(b) community health service facilities,*
>
> *(c) health consulting rooms,*
>
> *(d) facilities for the transport of patients, including helipads and ambulance facilities,*
>
> *(e)* ***hospitals****."*

Further, certain development specified under clause 58 of the ISEPP is considered 'development permitted without consent' (emphasis added):

> *"(1)* ***Development for any of the following purposes may be carried out by or on behalf of a public authority without consent on land in a prescribed zone****:*
>
> *(a) minor alterations of, or* ***additions to an existing hospital****, including internal fitouts or provision of access for persons with a disability,*
>
> *(b)* ***restoration or replacement of accommodation, administration or other facilities*** *within an existing hospital,*
>
> *(c)* ***demolition of buildings*** *if the development is in connection with a health services facility.*
>
> *(2) Development of a kind referred to in subclause (1) may only be carried out without consent under that subclause* ***if the development will not allow for an increase in:***
>
> ***(a) the number of patients accommodated at the facility, or***
>
> ***(b) the number of staff employed at the facility,***
>
> ***that is greater than 10 per cent (compared with the average of each of those numbers for the 12 month period immediately prior to the commencement of the development).****"*

The works are proposed within Dubbo Base Hospital, and so the provisions of the ISEPP, in particular Division 10, are available to the proposed works.

Under Division 10 clause 58 of the ISEPP, development for additions to an existing hospital, work to restore or replace existing hospital facilities or demolition of buildings in connection with a hospital may be carried out by a public authority on any land without consent. However, under clause 58(2) for development to be able to qualify as 'Development without Consent' it must not increase the number of patients accommodated at the facility or the number of staff employed at the facility by greater than 10%.

Accordingly, as NSW Health Infrastructure is a public authority, the land is in a prescribed zone (SP2 Infrastructure under DLEP 2011), and the works will not generate an increase in the number of patients or staff at Dubbo Base Hospital, the proposed works are able to be carried out as 'Development without Consent'.

The other main component of the proposed works, provision of car parking, is able to be carried out as 'Exempt Development' under Part 2, Division 4 of the ISEPP. Notwithstanding this, rather than splitting the various components of the works, all proposed works under this REF are to be treated as 'Development without Consent'. In light of the above, development consent under Part 4 (Development Assessment) of the EP&A Act is not required in relation to the proposed works. However, an assessment under Part 5 (Environmental Assessment) of the EP&A Act is required, and as such, this REF has been prepared.

Consultation

Clauses 13 – 17 of SEPP Infrastructure outline the level of consultation required with Council and other public authorities, based on the level of impact arising from the works. The proposed works are considered to be minor and inconsequential in the context of Council related infrastructure or services, local heritage and flood liability as they will not:

- impact on stormwater management services;
- generate an amount of traffic which would strain the existing system;
- impact on council sewerage or water supply systems;
- involve the installation of temporary structures that would impact vehicle/ pedestrian movements;
- involve any excavation;
- have an adverse impact on the local heritage value of the Dubbo Base Hospital;
- impact on a conservation area; or
- occur on flood liable land.

Further, the site is not located:

- adjacent to land reserved under the *National Parks and Wildlife Act 1974*;
- in a marine park declared under the *Marine Parks Act 1997*;
- in an aquatic reserve declared under the *Fisheries Management Act 1994*;
- in the foreshore area within the meaning of the *Sydney Harbour Foreshore Authority Act 1998*; or
- on bushfire prone land.

As such the works do not require consultation to be undertaken with Council or any other authority.

Notwithstanding this, as part of the works, general (non-legislated) consultation has been undertaken with Dubbo City Council and occupants of adjoining hospital buildings.

In addition, a Noise Complaints Register will be in place throughout the duration of the works to address any issues that arise during the construction process (see Section 5. 4 and Section 7.0 Mitigation Measures).

4.5.2 State Environmental Planning Policy No 55 – Remediation of Land

SEPP 55 aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. The SEPP specifies when consent is required for remediation of contaminated land.

As detailed in Section 5.3 of this report, a Phase 1 Site Contamination Assessment has been conducted which confirms that the area of the proposed works is suitable for continued hospital use, and that site remediation is not required.

4.5.3 Orana Regional Environmental Plan No 1– Siding Spring (deemed SEPP)

This deemed SEPP applies to the Dubbo Base Hospital site only because this deemed SEPP applies to the entire Dubbo LGA. Clause 6 of this deemed SEPP requires consent for development within 18km of the Siding Spring Observatory, particularly to assess the impacts of light spill from development on the observatory. As the Siding Spring Observatory is over 100km from the subject site, the amount and type of light likely to be emitted by, and from, the development and the probable effect of that emission on the level of artificial sky glow at the Observatory is expected to be extremely minimal. Accordingly, no consultation or concurrence is required under this deemed SEPP for the proposed works.

4.6 Other NSW Legislation

4.6.1 Rural Fires Act 1997

The requirement to obtain a Bushfire Safety Authority under s100B of the *Rural Fires Act 1997* is triggered by works that involve the subdivision of land or a special fire protection purpose. The proposed works are classified as a special fire protection purposes, however, the site is not identified as being bush fire prone. The *Rural Fires Act 1997* therefore does not apply to the proposed development.

4.6.2 Threatened Species Conservation Act 1995

The proposed works, whilst involving removal of vegetation, are not likely to cause significant effect on any threatened species, populations or ecological communities, or their habitats as listed under the *Threatened Species Conservation Act 1995* (the TSC Act). The landscape of the subject site has been heavily modified, and no threatened species have been found on the site.

As detailed in Section 5.8 of this report, the proposed works require the removal of a number of trees, none of which are threatened or endangered species or which form part of an endangered ecological community for the purposes of the TSC Act.

4.6.3 Contaminated Land Management Act 1997

As the subject land is not subject to any declarations, orders, or voluntary management proposals, as defined in the Act, the *Contaminated Land Management Act 1997* does not apply.

4.6.4 *Heritage Act 1977*

The nearest State heritage item is the Macquarie River Rail Bridge (approximately 450m to the South). Given the large separation distance between the site and that State Heritage item, it is not expected that the proposed development will have an adverse effect on the Macquarie River Rail Bridge.

There are no known archaeological sites in the vicinity of the proposed development.

4.6.5 *National Parks and Wildlife Act 1974*

The s149 certificate obtained from Council reveals that the site does not have the potential to contain items of Aboriginal heritage.

4.6.6 *Roads Act 1993*

The proposed works do not relate to a public road, nor will the works involve the pumping of water onto a public road or involve the connection of a road to a classified road. This development relies on existing accessways and no road related works are proposed that would trigger s138 or s143 of the *Roads Act 1993.* Accordingly, consent is not required under this Act.

4.7 Approvals

There are no separate approvals, authorisations or notifications required in relation to the proposed development activity prior to determination under Part 5 of the EP&A Act. Certification under section 109R of the EP&A Act will be required before work commences on site

5.0 Environmental Impact Assessment

The following section provides an outline of the potential impacts of the activity on the environment, and how these potential impacts will be managed.

5.1 Environmental Planning and Assessment Regulation 2000

Table 2 below provides a summary checklist of matters to be considered under clause 228 of the *Environmental Planning and Assessment Regulation 2000*.

Table 2 - Summary checklist of matters to be considered

Factor	Impact
(a) any environmental impact on a community There may be minor environmental impact on residents to the east of the site during the construction works due to noise and dust from construction and vehicle movements. However, these impacts will be temporary and minimal with the implementation of mitigation measures.	-ve ☐ Nil ☒ +ve ☐
(b) any transformation of a locality The proposed development involves the upgrade and expansion an existing hospital car park, demolition of existing hospital buildings and construction of new services and support buildings. These works are part of the normal regeneration of hospital services and facilities and will contribute to a higher quality public domain and the improved delivery of hospital services.	-ve ☐ Nil ☐ +ve ☒
(c) any environmental impact on the ecosystems of the locality There are no known or potential sensitive ecosystems on the subject site, and the loss of existing vegetation of the site will be mitigated by the introduction of new landscape plantings which are more appropriate for the site's context.	-ve ☐ Nil ☒ +ve ☐
(d) any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality The removal of existing structures, buildings and vegetation within the subject site and the provision of new internal roads, car parking and landscaping will not reduce the quality or value of the locality.	-ve ☐ Nil ☒ +ve ☐
(e) any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations The site is not considered significant in any of these respects, and the buildings of heritage significance within the site will not be affected by the proposed works. There is a large separation distance between the site and items identified to have heritage significance. Therefore, the development will not increase or decrease the significance of these surrounding sites or the locality. Similarly, the site of the proposed works is not known to have any archaeological significance.	-ve ☐ Nil ☒ +ve ☐
(f) any impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974) The site is not located in a habitat area of protected fauna. The proposal will not impact upon any protected fauna.	-ve ☐ Nil ☒ +ve ☐
(g) any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air	-ve ☐ Nil ☒ +ve ☐

The proposed works involve the removal of a number of existing trees, which are not of endangered or protected species or ecological communities, and the provision of new landscape plantings. As such the proposal will not endanger any species of animal, plant or other form of life.	
(h) any long-term effects on the environment There will be no long term effects on the environment as the site is already extensively modified. Mitigation measures will ensure construction and any ongoing operational impacts are temporary and will not lead to longer term effects.	-ve ☐ Nil ☒ +ve ☐
(i) any degradation of the quality of the environment There will be a minor, but temporary degradation of the quality of the environment while construction is being carried out. Mitigation measures will be put in place to reduce impacts on noise, air and water quality.	-ve ☐ Nil ☒ +ve ☐
(j) any risk to the safety of the environment There will be minimal risk to the safety of the environment. Any risk would be associated with the construction works. Risk measures will be put in place to manage potential impacts.	-ve ☐ Nil ☒ +ve ☐
(k) any reduction in the range of beneficial uses of the environment There will be no reduction in the range of beneficial uses of the environment. This portion of the site is currently inefficiently and the proposed works will improve utilisation of the land, consistent with the objects of the EP&A Act, which promote the efficient and orderly development of land in a sustainable manner.	-ve ☐ Nil ☐ +ve ☒
(l) any pollution of the environment Minor air, noise, and water quality impacts from construction site runoff may be generated during construction. Mitigation measures are proposed to minimise pollution to the environment.	-ve ☐ Nil ☒ +ve ☐
(m) any environmental problems associated with the disposal of waste The site is suitable for continued hospital use, and appropriate policies and procedures are in place for the disposal of hazardous materials such as asbestos.	-ve ☐ Nil ☒ +ve ☐
(n) any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply No increased demands will be made on resources which are or likely to become in short supply. Appropriate levels of parking for staff will be maintained.	-ve ☐ Nil ☒ +ve ☐
(o) any cumulative environmental effect with other existing or likely future activities The environmental impacts during the construction works will be temporary, and proper mitigation measures will be undertaken to reduce the temporary impacts on air, water and noise. The proposed works are considered to have positive cumulative effects in the long term. It benefits the community in making more efficient use of existing hospital land and contributing to future improvements to hospital facilities and services.	-ve ☐ Nil ☒ +ve ☐

5.2 Groundwater

The site is identified as having moderate to high groundwater vulnerability (the lowest level of vulnerability) under DLEP 2011. The LEP requires the consent authority to consider:

- whether or not the development (including any on-site storage or disposal of solid or liquid waste chemicals) will cause any groundwater contamination or any adverse effect on groundwater dependent ecosystems; and
- the cumulative impact (including the impact on nearby groundwater extraction for potable water supply or stock water supply) of the development and any other existing development on groundwater.

A Groundwater Impact Assessment undertaken for the site by Douglas Partners (refer to **Appendix H**) indicates that groundwater has not been encountered within 5 metres of the ground surface. As the groundwater surface is well below the ground surface levels on the site, the proposed development will not involve groundwater extraction, and so will not reduce groundwater yields in the area. On this basis, the Assessment confirms that any groundwater impacts associated with the proposed development would be very low. No further mitigation measures are required.

5.3 Contamination

5.3.1 Site Contamination

A Phase 1 Contamination Assessment has be prepared by Douglas Partners (**Appendix I**) which considers the assessment potential of the site of the proposed works. This report was based on a desktop assessment of existing and historical information and photographs and limited site investigations. Of the ten soil samples obtained and tested from the site, nine were obtained from the filling profile and one from the natural soils. All samples had concentrations of contaminants below the adopted levels. Asbestos was not encountered in the boreholes analysed, however the presence of asbestos should not be discounted given the presence of filling and asbestos within existing buildings on site.

The report concludes that the subject site is suitable for continued use in the hospital environment, and recommended further investigation including a Hazardous Building Materials Assessment and targeted investigation for waste and ash-dumps from incinerators. Nonetheless, Douglas Partners recommend the incorporation of an Unexpected Finds Protocol in construction management documents, and this is included as a Mitigation Measure at Section 7.0.

5.3.2 Hazardous Materials

Douglas Partners has prepared a Hazardous Building Materials Assessment (refer to **Appendix J**) which assesses the impacts of demolition of the buildings included in this REF's scope of works. This assessment identified the presence of bonded and friable asbestos within the impacted buildings which must be removed in accordance with the requirements of WorkCover NSW and the National Occupational Health and Safety Commission's *Code of Practice for the Safe Removal of Asbestos 2nd Edition*.

Due to the age of buildings within the Dubbo Base Hospital, Douglas Partners' report recommends that all paint be assumed to be lead-based and appropriate precautions be adopted during its removal.

Several Bakelite light fittings were identified within the Nurses Accommodation Building, which should remain intact during removal and disposed of at a landfill facility which is appropriate for the disposal of materials which contain asbestos and phenolic compounds.

Polychlorinated Biphenyls (PCBs) may be found in electrical infrastructure within the buildings to be demolished which will be most appropriately determined as demolition progresses. Appropriate storage and disposal measures should be adopted where this is found.

These recommendations have been incorporated into the Mitigation Measures in Section 7.0.

5.3.3 Targeted Contamination Assessment

Following on from the findings of the Phase 1 Contamination Assessment, Douglas Partners have undertaken a Targeted Contamination Assessment (**Appendix K**) of the former coal bunker adjacent to the Boiler House Building. Based on detailed site investigation, the assessment found that the filling and soils below the coal bunker do not appear to have been impacted by heavy metal or polycyclic aromatic hydrocarbons (PAH). As such, specific management practices to address this type of contamination were considered to be unnecessary at this stage.

5.4 Traffic and Access

A combined Traffic Impact Assessment for the Stage 1 and Stage 2 upgrade works for Dubbo Base Hospital has been prepared by Cardno (**Appendix L**).

5.4.1 Traffic Generation

The only new building proposed under this REF is the ICT Building, which will provide a purpose-built facility for staff and services which are already located within the existing hospital buildings, and as such there will be no additional traffic generation as part of the proposed Stage 1 works.

5.4.2 Car Parking

Stage 1 works will result in the replacement of 241 consolidated and ad-hoc parking spaces currently within the eastern half of the hospital with 289 spaces located within a newly constructed main hospital car park at the location of the existing main car park and as limited kerbside parking along newly constructed internal roads. The proposed changes will result in a net gain of 48 spaces within the hospital site and provide for a more efficient, functional and safe car parking system within the hospital grounds.

Whilst the only new building within the scope of this REF is the ICT building, it is anticipated that the Stage 1 works will facilitate future development and expansion of the main hospital facilities. In this context, as assessment of the potential parking demand generated by Stage 2 hospital upgrade works has been conducted by Cardno. The Traffic Impact Assessment found that the proposed provision of 48 additional parking spaces within the site is sufficient to accommodate an anticipated provision of 19 additional beds and 46 additional hospital staff as part of future Stage 2 hospital upgrade works. The proposed parking increase is in accordance with the requirements of the relevant Dubbo City Council and RTA parking rates, and is near to the increased demand calculated by Cardno based on similar hospital developments in NSW regional cities. As such the Stage 1 parking provision is expected to provide a sufficient increase in site parking to accommodate the anticipated future needs of Dubbo Base Hospital, without in itself resulting in the generation of an (10%) increase in staff or patients.

5.4.3 Staging

A Staging Strategy has been prepared by Cardno as part of the Preliminary Construction Traffic Management Plan (**Appendix G**) to ensure that car parking facilities provided within the hospital campus are not diminished as a result of the proposed works, and this is included as a Mitigation Measure at Section 7.0.

The car park expansion to the north of the main north-east car park will be undertaken in three stages to occur ahead of works on the existing main car park, allowing a minimum of 235 parking spaces to be provided within the main car park area throughout the car park construction period.

5.5 BCA and Accessibility

BCA

A BCA Assessment Statement has been prepared by BCA Logic (**Appendix M**) which finds that the proposed works are capable of complying with the relevant provisions of the Building Code of Australia, subject to the recommendations and notations contained in that report.

Access

An Access Assessment Statement has been prepared by BCA Access (**Appendix N**) which has considered the proposed works and their compliance with the relevant access provisions of the Building Code of Australia and the Disability (Access to Premises) Standards 2010. The statement finds that the proposed works comply or are capable of complying with the applicable provisions of these codes, subject to the recommendations and notations contained in that report.

5.6 Stormwater and Drainage

A Stormwater Management Plan has been prepared for the proposed works by Enstruct Group (**Appendix D**). As described in Section 3.0 of this report, the proposed works involve the upgrade and replacement of existing stormwater services present within the site and the provision of new services where none currently exist.

The proposed stormwater drainage systems will continue to drain via existing connection points to Council's stormwater system. Proposed on-site drainage systems have been designed with capacity to convey 20-year stormwater design flows, which is an improvement from the current system which has capacity to convey only the 10-year design flow.

On-site stormwater detention facilities proposed on the site, including extension of the existing Railway Corridor detention basin, have been assessed as suitable to accommodate the volumes generated by events up to the anticipated 20-year design flow.

5.7 Noise and Vibration

An Acoustic Assessment has been prepared for the proposed works by Norman Disney & Young (**Appendix O**). This assessment finds that the key noise emitters associated with the proposed works shall be mechanical plant associated with the new ICT Building and traffic noise associated with the upgraded and expanded car park.

Whilst detailed noise levels for mechanical plant associated with the ICT Building are unable to be determined prior to detailed design, the Acoustic Assessment finds that the final plant will be capable of meeting the relevant noise criteria subject to the implementation of standard noise control measures. Appropriate Mitigation Measures are included at Section 7.0 of this report to ensure that appropriate noise mitigation is provided to achieve the required noise criteria are met.

Based on the offset distances from the proposed substation and diesel generators to nearby sensitive receivers outside of the hospital campus, including dwellings on Leonard Street (135 metres away) and Morgan Street (235 metres away), the Acoustic Assessment prescribes a maximum aggregate sound power level of 87dBA Lw (assuming that the generators are run for 1 hour or less during maintenance procedures). In order to achieve this level the substation and diesel generator plant will require noise attenuation measures to reduce emissions by 20-30dB. This can be achieved through employment of standard noise control measures such as large attenuators (silencers), physical shielding, exhaust mufflers, acoustic access doors or acoustic enclosures. Mitigation Measures are included at Section 7.0 which require the employment of suitable noise attenuation measures to achieve the upper aggregate sound power levels.

Based on modelling of worst-case traffic movements within the site, a noise wall with a height of 1.8 metres will be required to be provided along the eastern site boundary adjacent to the upgraded car park to ensure that noise emissions comply with the applicable criteria for nearby sensitive receivers. A requirement for this noise wall is included as a Mitigation Measure at Section 7.0 of this report.

5.8 Tree Removal

An Arborist's Report has been prepared for the proposed works by Outback Tree Services Dubbo (**Appendix P**) which considers the trees currently present on the site, including those to be retained and those to be eventually removed. The report determined that 123 trees will be required to be removed over the course of the proposed works on the site and makes recommendations for appropriate species which may be incorporated in new landscaping across the site that are compatible with the proposed buildings, roads and carpark. Of the trees to be removed:

- 62 are in good condition;
- 40 are in fair condition;
- 20 are in poor condition; and
- 1 is dead.

The report identifies 43 trees which are proposed to be retained across the site (retention of 15 trees subject to positioning of footpath and detailed design) and makes appropriate recommendations to ensure these trees are protected during and post-construction. The proposed Stage 1 works includes the planting of approximately 90 new trees within the subject site as well as shrubs and groundcover selected from species which are suitable for the site and which are compatible with ongoing growth and survival within the hospital campus.

It is considered that the proposed landscaping works will provide a significant environmental improvement in terms of local amenity, appropriateness and functionality within the site and species selection for the local area.

5.9 Construction Impacts

5.9.1 Air

The proposed earthworks and demolition works are likely to result in some dust generation. Where this occurs, it is proposed under the Preliminary Construction Management Plan prepared by TSA Management (**Appendix F**) to implement water spraying and pro-active management measures such as the covering of loads and monitoring of weather patterns.

5.9.2 Noise and Vibration

An Acoustic Assessment has been prepared for the proposed works by Norman Disney & Young (**Appendix O**) which takes into account noise emissions and vibrations generated during construction.

Worst-case noise levels predicted to be generated by the proposed demolition, earthworks and construction works are likely to impact upon nearby sensitive receivers including residential dwellings on Leonard Street and Morgan Street, and medical and hospital uses within Dubbo Base Hospital. The Acoustic Assessment identifies noise control measures which should be implemented for works when noise is expected to exceed the Noise Management Levels, and these measures are included in the Mitigation Measures at Section 7.0 of this report and in the Preliminary Construction Management Plan prepared by TSA Management (**Appendix F**).

In order to minimise the impacts of construction-related vibration on nearby sensitive receivers, the Acoustic Assessment recommends minimum safe working distances which should be observed for certain activities to ensure that works comply with the relevant vibration criteria. These safe working distances have been included as a Mitigation Measure at Section 7.0 of this report.

5.9.3 Water

An Erosion and Sediment Control Plan has been prepared by Enstruct Group (**Appendix Q**) which provides details regarding erosion and sediment control measures to be utilised during the construction phase of the proposed works. This plan details proposed sediment basins, silt traps, sediment fencing and vehicle wash-down facilities which shall be installed on the site for the relevant period of the works in order to prevent sediment runoff leaving the site.

5.9.4 Waste

The Preliminary Construction Management Plan (CMP) prepared by TSA Management (**Appendix F**) identifies practices and procedures for the identification, management and reuse (where practical) of waste streams and materials resulting from the demolition of existing structures. The CMP identifies strategies to deal with potentially hazardous and contaminated waste materials as recommended in the Douglas Partners reports (refer Section 5.3).

5.9.5 Construction Traffic

A Preliminary Construction Traffic Management Plan (PCTMP) has been prepared by Cardno (**Appendix G**) to establish principles for the management of up to 50 heavy vehicle movements per day during the peak construction phase.

Construction traffic routes have been designed to facilitate heavy vehicle manoeuvres, segregate and reduce conflicts with patient and staff traffic entering the hospital via the main hospital areas, and to minimise impacts on residential areas.

Local access routes have been designated which ensure that local construction vehicle movements will be limited to the Newell Highway, Golden Highway, Fitzroy Street and River Street. All construction traffic will enter the site via a temporary site access road from River Street to the REF works area. The PCTMP recommends the establishment of a 'Driver Code of Conduct' to ensure that the designated routes and Dubbo City Council's heavy vehicle schedules are abided by.

The PCTMP finds that onsite parking will be sufficient to accommodate demand generated by the anticipated construction traffic, as the bulk of vehicle movements will occur outside of the surveyed peak periods experienced within the hospital.

5.10 Natural Resource Use

The proposed works will not result in any significant impacts in relation to the following:

- natural resources including ground and surface water;
- fuels;
- timber;
- extractive material;
- minerals; or
- prime agricultural land or areas important for fishing, agriculture, forestry or mining.

As such no mitigation measures are required.

5.11 Heritage Assessment of Heritage Significance

The nearest State heritage item is the Macquarie River Rail Bridge (approximately 450m to the South). Given the large separation distance between the site and the above mentioned heritage item, it is not expected that the proposed development would adversely affect this item's State heritage significance.

The Dubbo Base Hospital site is listed as a local heritage item in its entirety. However, the site and the immediate area do not include any places currently listed on the National Heritage List (NHL), the Commonwealth Heritage List (CHL) or the Register of the National Estate (RNE). The site is not located within or adjoining a heritage conservation area.

The 'two storey brick hospital building' within the Dubbo Base Hospital site is identified as a heritage item of local significance under DLEP 2011. A Heritage Impact Statement (HIS) has been prepared by Adaptive Architects (**Appendix R**) which considers the impact of the proposed works on the heritage significance of the listed item, its curtilage and the heritage significance of non-listed buildings within the site. The HIS finds that the works proposed in Section 3.0 of this report will have no impact upon the significance or curtilage of heritage buildings within the Dubbo Base Hospital site given the isolation of the works from the heritage zone on the site and the compact nature of the heritage precinct towards Myall Street.

A separate assessment of the additions to the existing pumphouse building has been conducted by Adaptive Architects as an addendum statement to the HIS (**Appendix R**). This statement finds that the proposed additions to the pumphouse will have minimal impact upon the heritage curtilage of the site as they are minor works and will be consistent with the existing scale and materials of the pump house building.

Whilst there are no locally listed heritage items directly adjoining the hospital site, there are a handful of locally listed items in the generally vicinity of the site which are not directly affected by the proposal.

5.12 Archaeology

European

A Non-Aboriginal Heritage Assessment for Dubbo Base Hospital has been prepared for the proposed works by BIOSIS Research (**Appendix S**). Whilst Dubbo Base Hospital has undergone continuous changes and additions since the mid-1800s, and as a result there are areas of potential archaeological resource located within the hospital site, these areas are located well away from the proposed works described in Section 3.0 of this report. Based on this assessment the proposed works will not result in any likely impact on sensitive areas, however Mitigation Measures are included to address the potential discovery of unanticipated historical relics.

Aboriginal

An Assessment for Aboriginal Archaeological Heritage has been prepared for the proposed works by BIOSIS Research (**Appendix T**). No Aboriginal sites or objects have been recorded within the proposed works site or within the Dubbo Base Hospital site, however a search of the Aboriginal Heritage Information Management System has identified 8 sites within an 2 kilometre radius of the subject site, of which the predominant type is 'Open Camp Sites'.

As assessment of the site, including by visual inspection, found that the majority of the proposed works area is already highly disturbed and is subsequently of low archaeological potential. The northern section of the site, which is well outside of the proposed works area, is considered to have high archaeological potential, and should be avoided during the period of construction.

Therefore, no further investigation is required prior to development provided that the works are limited to the areas described in the description of development. Should works or construction activities extend to the northern portion of the site that further detailed archaeological investigation will be required. Should an item of archaeological significance be found during excavation or construction, work would cease immediately, the site would be closed and the Office of Environment and Heritage would be informed. The Mitigation Measures includes this action.

5.13 Environment Protection and Biodiversity Conservation Checklist

Table 3 - EPBC Checklist

Factor	Impact Assessment
Any significant impact on a declared World Heritage Property?	N/A
Any significant impact on a National Heritage place?	N/A
Any significant impact on a declared Ramsar wetland?	N/A
Any significant impact on Commonwealth listed threatened species or endangered community?	N/A
Does any part of the proposal involve nuclear actions?	N/A
Any significant impact on Commonwealth marine areas?	N/A
Any significant impact on Commonwealth land?	N/A

5.14 Cumulative Environmental Impacts

The environmental impacts from the proposed development are considered to be temporary and minimal and proper mitigation measures are outlined in Section 7.0 to mitigate those impacts on the community.

The proposal is considered to have positive cumulative effects in the long term as the works provide more efficient use of existing hospital land and will improve the operation of the hospital generally through upgrades to infrastructure, utilities and support services. These works will allow Dubbo Base Hospital to continue provide a high level of service which is relevant to the community into the future.

5.15 Impact on the Community

The proposed works will result in minor but temporary impacts to the surrounding sensitive receivers as a result of demolition noise, vibration and generation of dust during demolition works as detailed above.

A range of mitigation measures are to be implemented in order to minimise the above potential adverse impacts, including:

- controlling the hours of construction activities;
- fencing off the site and providing secure storage for operations;
- protective fencing is to be installed around the demolition and construction areas to prevent public access to the site and assisting with reducing noise, vibration and dust impacts;
- implementing construction traffic management measures in Sections 3.0 and 5.4 ensuring the safety and security of all persons moving in proximity to the site;
- management of noise and vibration levels;
- implementing methods for noise suppression (where appropriate);
- containing dust within the site (e.g. through dampening methods) in accordance with OH&S and statutory requirements;
- open communication and dialogue with surrounding sensitive receivers; and
- notification of noisy works to sensitive receivers.

Further details in relation to mitigation measures are included within the attached Appendices and Section 7.0. Subject to implementation of these measures, the proposed works are considered acceptable and will not give rise to adverse impacts on the community.

5.16 The Public Interest

The proposal is expected to only have a minor temporary impact to the environment during the construction period including dust generation, noise and vibration generation and construction traffic movements. Appropriate mitigation measures have been included at Section 7.0 to minimise these impacts.

As the anticipated works are only temporary in nature, and will facilitate the provision of long-term and ongoing benefits to the community through the provision of a higher quality public hospital campus, it is considered that the benefits of the proposed works significantly outweigh any adverse impacts, and as such the proposed works are considered to be in the public interest.

6.0 Summary of Impacts

The objective of the works is to provide staged upgrades and more efficient support services and infrastructure within the existing Dubbo Base Hospital campus and to permit the progression of future upgrade works. This will provide for a more functional and efficient use of hospital land and facilities and will contribute to the delivery of high quality health outcomes to the community into the future. It will serve the growing demand for health services in the Dubbo LGA and surrounding region.

The preceding sections of this REF have assessed the impacts of the proposal. The impacts resulting from the proposed works are generally only related to the physical construction and can be summarised below.

Biophysical Impacts

The proposed works largely relate to the consolidation, upgrade and amplification of existing services, utilities and operations within the Dubbo Base Hospital site.

Potential impacts as a result of the proposed works on the biophysical environment during the construction-phase are minor and include short-term impacts on nearby sensitive receivers in terms of noise and construction traffic impacts. In order to address these impacts, a range of mitigation measures are to be implemented, including the adherence to a detailed construction management plan and notification of the work program to neighbours.

Upgrades to the stormwater management and detention facilities within the affected portions of the site, including on-site detention and discharge facilities in accordance with Dubbo City Council policies, will provide a substantial improvement to the management of stormwater flows from existing car parking and internal roads within the hospital campus and will provide a superior environmental outcome.

Subject to the implementation of the mitigation measures set out in Section 7.0 of this REF, the proposed works are not considered to significantly impact upon the biophysical environment.

Social Impacts

The proposed construction works will result in relatively minor temporary impacts to surrounding sensitive receivers, including impacts associated with construction noise and dust. A range of mitigation measures are proposed to be implemented in order to minimise social impacts to an acceptable level. The proposed Stage 1 works will benefit existing and future patients of Dubbo Base Hospital by providing for upgraded and more reliable infrastructure and support services.

The proposed works will not impact upon the heritage significance of locally listed heritage items present within the southern portion of the Dubbo Base Hospital site.

Economic Effects

The construction of the Stage 1 upgrade works within the existing Dubbo Base Hospital satisfies EP&A Act objects which promote the orderly and efficient use of land, and will provide an economic benefit to the community through the creation of construction-phase employment.

7.0 Mitigation Measures

7.1 Mitigation measures to be implemented

This REF / EIA applies to the development of infrastructure, parking, access and building upgrades and the development of new ICT and services buildings for Dubbo Base Hospital as outlined above and is consistent with the ISEPP provisions. Activities undertaken during construction would require environmental safeguards to a suitable standard to be implemented through a detailed Construction Management Plan to reduce any potential adverse impacts arising from the proposed works on the surrounding environment.

This REF has been prepared in accordance with the following plans and supporting information:

Table 4 - Relevant Reports and Documentation

Report / Plan Number	Plan Date/ Revision	Description	Prepared By/Client
ARC-SI-10-001	17/07/2012	Site Plan (South)	Cox Richardson
ARC-SI-10-002	17/07/2012	Site Plan (North)	Cox Richardson
ARC-SI-11-001	17/07/2012	ICT Centre & Substation Location Plan	Cox Richardson
ARC-SI-15-001	17/07/2012	Demolition Plan	Cox Richardson
ARC-SI-21-001	06/07/2012	ICT Centre Stage 1 & 2 Floor Plans	Cox Richardson
ARC-SI-21-002	22/06/2012	Substation Floor Plan	Cox Richardson
ARC-SI-21-003	22/06/2012	Fire Pump Room Existing and Proposed Floor Plans	Cox Richardson
ARC-SI-30-001	06/07/2012	ICT Centre Stage 1 & 2 Elevations	Cox Richardson
ARC-SI-30-002	22/06/2012	Substation Elevations	Cox Richardson
ARC-SI-30-003	22/06/2012	Fire Pump Room Existing and Proposed Elevations	Cox Richardson
ARC-SI-40-001	06/07/2012	ICT Centre Stage 1 & 2 Sections	Cox Richardson
ARC-SI-40-002	22/06/2012	Substation Sections	Cox Richardson
ARC-SI-40-003	22/06/2012	Fire Pump Room Existing and Proposed Sections	Cox Richardson
ARC-FH-15-000	22/06/2012	Front of House Existing and Demolition Ground Floor Plan	Cox Richardson
ARC-FH-21-000	22/06/2012	Front of House Proposed Ground Floor Plan	Cox Richardson
S12_003_100	13/07/2012	Landscape Concept Plan	Oculus
S12_003_101	13/07/2012	Indicative Planting Species	Oculus
S12_003_102	13/07/2012	Indicative Planting Species + Materials Pallet	Oculus
CV-SI-001	05/07/2012	Stormwater General Arrangement Plan Sheet 1	Enstruct Group

Report / Plan Number	Plan Date/ Revision	Description	Prepared By/Client
CV-SI-002	05/07/2012	Stormwater General Arrangement Plan Sheet 2	Enstruct Group
CV-SI-003	05/07/2012	Stormwater General Arrangement Plan Sheet 3	Enstruct Group
CV-SI-004	05/07/2012	Stormwater General Arrangement Plan Sheet 4	Enstruct Group
CV-SI-011	05/07/2012	Sediment and Erosion Control Plan and Details Sheet 1	Enstruct Group
CV-SI-012	05/07/2012	Sediment and Erosion Control Plan and Details Sheet 2	Enstruct Group
CV-SI-013	05/07/2012	Sediment and Erosion Control Plan and Details Sheet 3	Enstruct Group
CV-SI-014	05/07/2012	Sediment and Erosion Control Plan and Details Sheet 4	Enstruct Group
HYD-SI-10-01	12/07/2012	Hydraulic Services Enabling Works Sheet 1	Northrop
HYD-SI-10-02	12/07/2012	Hydraulic Services Enabling Works Sheet 2	Northrop
HYD-SI-10-03	12/07/2012	Hydraulic Services Enabling Works Sheet 3	Northrop
HYD-SI-10-04	12/07/2012	Hydraulic Services Enabling Works Sheet 4	Northrop
HYD-SI-10-05	12/07/2012	Hydraulic Services Enabling Works Sheet 5	Northrop
HYD-SI-10-06	12/07/2012	Hydraulic Services Enabling Works Sheet 6	Northrop
HYD-SI-10-07	12/07/2012	Hydraulic Services Enabling Works Sheet 7	Northrop
ELE-SI-010	13/07/2012	Electrical Services Site Plan	Northrop
ELE-SI-014	13/07/2012	New ICT Building Layout	Northrop
ELE-SI-015	29/06/2012	New Carpark Lighting Layout	Northrop
ELE-SI-017	13/07/2012	ICT Centre Security Layout	Northrop
	08/06/2012	Hazardous Building Materials Assessment	Douglas Partners
	18/04/2012	Phase 1 Contamination Assessment	Douglas Partners
	20/06/2012	Targeted Contamination Assessment of Former Coal Bunker	Douglas Partners
	26/07/2012	Groundwater Impact Assessment	Douglas Partners
	05/07/2012	Access Assessment Statement	BCA Access
	05/07/2012	BCA Assessment Statement	BCA Logic
	05/07/2012	Stormwater Management Plan	Enstruct
	09/06/2012	Arborist's Report	Outback Tree Services

Report / Plan Number	Plan Date/ Revision	Description	Prepared By/Client
	10/07/2012	Preliminary Construction Traffic Management Plan	Cardno
	10/07/2012	Traffic Impact Assessment	Cardno
	22/06/2012	Preliminary Construction Management Plan	TSA Management
	11/07/2012	Acoustic Assessment	Norman Disney & Young
	18/06/2012	Heritage Impact Statement	Adaptive Architects
	June 2012	Non-Aboriginal Archaeological Heritage Assessment	Biosis Research
	25/06/2012	Assessment of Aboriginal Archaeological Heritage	Biosis Research

1. Design

1.1 The surface of any material used or proposed to be used for the paving of thoroughfares, courtyards and the like must comply with AS/NZ 4586:2004 (including amendments) "Slip resistance classification of new pedestrian surface materials".

2. Community Consultation

2.1 Prior to commencement of work, the Proponent must notify the Council and occupier of any land within 40 metres of the property boundaries of the project site, providing a project description and the expected dates for commencement and completion of construction works and details of the construction program.

2.2 Complaints received shall be recorded and attended to promptly. On receiving a complaint, works shall be reviewed to determine whether issues relating to the complaint can be avoided or minimised. Feedback shall be provided to the complainant explaining what remedial actions were taken.

2.3 The Proponent shall develop a complaints management system and record details of all complaints received and the means of resolution of those complaints. The Complaints register shall be made available to Council on request.

2.4 A site notice board must be located at the main entrance to the site in a prominent position and must include the following:

a. 24 hour contact person for the site;

b. telephone and facsimile numbers and email address; and,

c. site activities and time frames.

2.5 The site notice must be erected no less than 2 days prior to the commencement of works.

3. Construction Work Site

3.1 All relevant legislation and associated regulations would be complied with.

3.2 Best management practices would be implemented as specified by any codes of practice or guidelines that are recognised by the Office of Environment and Heritage.

3.3 Traffic during construction would be managed in accordance with AS 1742.3 - 1996 "Manual of Uniform Traffic Control Devices Part 3: Traffic Control Devices for Works on Roads".

3.4 Construction vehicle access to the site would be via a temporary vehicular access road from River Street to the works area. Public use of this road would not be permitted.

3.5 Protective site safety fencing would be installed around the construction site. Vehicle and workforce access points to the construction compounds would be controlled.

3.6 The hours of demolition or construction, including delivery of materials to and from the site, shall be restricted as follows:

a. between 7.00am and 7.00pm, Monday to Saturday, inclusive; and

b. no work or deliveries on Sunday and/or public holidays.

3.7 The worksite would be left tidy and rubbish free each day prior to leaving site and at the completion of the works.

3.8 No hazardous materials or dangerous goods would be used or stored on site.

3.9 No plant and equipment storage areas or bunded areas for storage of petroleum, distillate and other chemicals would be permitted within the site.

3.10 The contractor would meet all workplace safety legislation.

3.11 Undertake dilapidation reporting of Council assets (e.g. footpath) prior to commencement of construction works.

3.12 Undertake dilapidation reporting of Council assets and where necessary adjacent private properties (e.g. footpath) prior to commencement of construction works.

3.13 All materials on-site or being delivered to the site must be contained within the site. The requirements of the Protection of the Environment Operations Act 1997 are to be complied with when placing/stockpiling loose material or when disposing of waste products or during any other activities likely to pollute drains or watercourses.

3.14 The public way must not be obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances.

4. Plant and Equipment

4.1 In accordance with WorkCover all plant and equipment used in construction work must comply with the relevant Australian Standards and manufacturer specifications.

4.2 No vehicle maintenance would be permitted in the demolition and construction areas except in emergencies.

4.3 All plant/equipment would be inspected daily to avoid leakage of fuel, oil or hydraulic fluid to the work sites. Machinery found to be leaking would be repaired or replaced.

4.4 All machinery would be secured against vandalism outside working hours.

4.5 No batching plant would be permitted on site.

5. Demolition, Excavation and Construction

5.1 A copy of the approved and certified plans, specifications and documentation shall be kept on site at all times and shall be available for perusal by any officer of Council.

5.2 Construction of the Proposal would be completed to Building Code of Australia performance requirements.

5.3 Any demolition work must be carried out in accordance with AS 2601—2001, The Demolition of Structures, published by Standards Australia on 13 September 2001.

5.4 Protective fencing is to be installed around demolition and construction areas to prevent public access to the site.

5.5 No blasting would be permitted during construction.

5.6 All previously connected services would be appropriately disconnected as part of the demolition works. The contractor is required to consult with the various service authorities regarding their requirements for the disconnection of services.

5.7 The use of any rock excavation machinery or any mechanical pile drivers or the like is restricted to the hours of 7.00am to 6.00pm (maximum) on Monday to Friday, and 8.00am to 1.00pm on Saturdays, to minimise the noise levels during construction and loss of amenity to nearby residents.

5.8 A standard commercially manufactured sign containing the words "DANGER ASBESTOS REMOVAL IN PROGRESS" measuring not less than 400mm x 300mm is to be erected in a prominent visible position on the site. The sign is to be erected prior to demolition work commencing and is to remain in place until such time as all asbestos cement has been removed from the site to an approved waste facility. This condition is imposed for the purpose of worker and public safety and to ensure compliance with clause 259(2)(c) of the Occupational Health and Safety Regulation 2001.

5.9 After demolition, the site is to be left free of debris that may harbour vermin.

6. Erosion and Sediment Control

6.1 Erosion and sediment control measures will be provided in accordance with the Erosion and Sedimentation Control Plan and Details prepared by Enstruct Group dated 08/06/2012.

6.2 Erosion and sediment control measures e.g. socks around inlets, silt fences etc, in accordance with the Landscape Concept Plan prepared by Oculus dated 19/06/2012 and with Landcom's "Managing Urban Stormwater, Soils & Construction Guidelines (The Blue Book)". Where over 2,500m^2 of soil is being disturbed as a result of the works, a Soil and Water Management Plan would be implemented.

6.3 Erosion and sedimentation control measures would be maintained regularly and after rainfall events in accordance with Landcom's "Managing Urban Stormwater, Soils & Construction Guidelines (The Blue Book)".

6.4 Erosion and sedimentation control measures would not be removed until disturbed areas have stabilised.

6.5 Disturbed areas would be stabilised during construction works where necessary and revegetation would be undertaken after works are complete, in line with Landcom's "Managing Urban Stormwater, Soils & Construction Guidelines (The Blue Book)".

6.6 Any excess spoil following construction would be seeded to minimise the likelihood of it being transported offsite through wind or water action. Alternatively, it would be removed off site for disposal in accordance with DECCW, Council and legislative requirements.

6.7 Any damage from construction to the ground surface shall be restored to pre-construction condition on completion of works.

6.8 Any loose material stockpiles would be located within the temporary construction compounds and be protected from possible erosion.

7. Water Quality

7.1 All care and due diligence would be taken to minimise or prevent pollutant material entering drain inlets or waterways.

8. Flora and Fauna

8.1 Appropriate tree protection measures would be put in place prior to any works on the site.

8.2 Tree protection fences would be installed around trees or groups of trees to be retained and located within 10 metres of any temporary construction compounds.

8.3 Contractor would minimise vegetation disturbance.

8.4 All tree pruning, removal and protection works should be carried out in accordance with the Arborist's Report prepared by Outback Tree Services dated 9 June 2012.

8.5 All tree protection measures should be carried out in accordance with AS4970-2009 (Protection of Trees on Development Sites).

8.6 All tree pruning works would be carried out in accordance with AS4373-1996 (Pruning of amenity trees).

8.7 All tree pruning works would be carried out in accordance with the *Amenity Tree Industry: Code of Practice 1998* by WorkCover NSW.

9. Noise and Vibration

9.1 The contractor would use the best available techniques not entailing excessive cost to meet the Office of Environment and Heritage construction noise and vibration requirements as far as practicable. Reference should be made to the Office of Environment and Heritage "Interim Construction Noise Guideline (July 2009)".

9.2 Demolition, earthworks and construction noise will be limited to the Noise Management Levels identified in the Norman Disney Young 'Acoustic Assessment' dated 22 June 2012 which provides for a construction noise level of background plus 10 dB(A) and LAeq 75 dB(A) during recommended standard hours (Monday to Saturday 7 am to 7 pm with no work on Sundays or public holidays) and a construction noise level of background plus 5 dB(A) outside standard hours.

9.3 All reasonable and practical steps shall be undertaken to reduce noise and vibration from the site.

9.4 Construction noise would be attenuated with the use of screening, acoustic enclosures, engine silencing and substitution by alternative processes to reduce noise emission levels from typical construction equipment. In addition to these physical noise controls, the following general noise management measures would be followed.

9.5 The noise wall proposed along the eastern site boundary would be installed prior to the commencement of any works on the car park and internal road network.

9.6 Plant and equipment would be properly maintained.

9.7 Equipment would be checked and calibrated to the appropriate design requirements and to ensure that maximum sound power levels are not exceeded.

9.8 Where possible, plant would be strategically positioned on site to reduce the emission of noise to the site, surrounding neighbourhood and to site personnel.

9.9 Unnecessary noise would be avoided when carrying out manual operations and operating plant.

9.10 Any equipment not in use for extended periods during construction work would be switched off.

9.11 Appropriate noise attenuation measure such as those detailed in Section 6.0 of the Norman Disney Young 'Acoustic Assessment' dated 22 June 2012 would be implemented to achieve the following aggregate sound power levels:

a. ICT facility mechanical/ air conditioning plant – 79 dBA Lw

b. Diesel generators and Substation – 87 dBa Lw

9.12 Good communications with people living and working in the vicinity of the construction site would be established at the beginning of the project and be maintained throughout the project.

9.13 A Noise Complaints Register would be maintained for the duration of the project. Any complaints would be registered, and then addressed seriously and expeditiously.

9.14 Safe working distances contained in Section 10.0 of the Norman Disney Young 'Acoustic Assessment' dated 22 June 2012 would be observed where possible. Where work is required to take place within these distances, the contractor shall consult with the affected community member to establish appropriate periods when this work will occur.

9.15 Vibration impacts would be attenuated through the implementation of clearly visible signage including contact details for the head contractor, consultation with relevant occupants of nearest affected buildings and the provision of respite periods where necessary.

9.16 Vibration monitoring should be conducted for the duration of an earthworks at the nearest hospital receiver and within (or directly adjacent) the most sensitive space.

9.17 Vibration monitoring results would be assessed against the nominated vibration goals and compiled into a report to be forwarded to the construction contractor and project manager.

10. Air Quality

10.1 Spraying of paint and other materials with the potential to become air borne particulates would only be undertaken in still or light wind conditions.

10.2 Community notification would be undertaken where appropriate.

10.3 No burning of vegetation or other materials would be permitted on site or at the construction compound.

10.4 Dust generation during construction activities would be controlled by regular control measures such as on-site watering.

10.5 Areas of open excavation would be kept to a minimum.

10.6 Damp cloth fences would be used around open excavation areas as required.

10.7 Construction vehicles and equipment would be suitably serviced within the six-month period prior to commencement of construction activities and all necessary maintenance undertaken during construction period. In addition, where practicable, the excessive use of vehicles and powered construction equipment would be avoided.

10.8 Exposed areas would be progressively revegetated as soon as practical.

10.9 Vehicle wash down areas would be established to ensure all mud and soil from construction vehicles is not carried onto public roads.

10.10 All vehicles involved in the excavation and/or demolition process and departing the property with demolition materials, spoil or loose matter must have their loads fully covered before entering the public roadway.

10.11 Mud deposited on the road network due to truck movements to and from the site would be either prevented or cleaned up immediately.

11. Waste Management

11.1 All waste generated by the project, shall be beneficially reused, recycled or directed to a waste facility lawfully permitted to accept the materials in accordance with the Office of Environment and Heritage "Waste Classification Guidelines (2008)" and the Protection of the Environment Operations Act 1997.

11.2 Where available, recyclable site and construction waste would be recycled in accordance with the NSW Government's "Waste Reduction and Purchasing Policy (WRAPP guidelines)". Waste oil would be sent to approved recyclers.

11.3 The type and volume of all waste materials (e.g. excavation material, green waste, bricks, concrete, timber, plasterboard and metals) would be estimated prior to demolition and construction with the destination specified either for on-site re-use or recycling, or off-site re-use or recycling and as a last resort disposal at a licensed waste facility.

11.4 Where possible non-contaminated excavated material would be incorporated in the earthworks for the Proposal.

11.5 No burning or burying of wastes would be permitted on site.

11.6 Cleaning out of batched concrete mixing plant would not be permitted within the construction area.

11.7 Non-recyclable waste and containers would be regularly collected and disposed of at a licensed landfill or other licensed disposal sites in the area.

11.8 Any bulk garbage bins delivered by authorised waste contractors would be placed and kept within the property boundary.

11.9 Waste management practices for the Proposal would follow the resource management hierarchy principles embodied in the Waste Avoidance and Resource Recovery Act 2001. These practices include: avoid unnecessary resource consumption; recover resources (including reuse, reprocessing, recycling and energy recovery); and dispose (as a last resort).

12. Heritage

12.1 Should any heritage relics or sites discovered during construction shall be reported to Health Infrastructure. Any proposal to disturb any suspected relics or heritage sites may require consultation with the Office of Environment and Heritage.

12.2 Should any evidence of Aboriginal relics discovered during construction shall be reported to Health Infrastructure. Any proposal to disturbance suspected relics or Aboriginal heritage site may require consultation with the Office of Environment and Heritage. All work is to cease on site until the relevant permit is received or advice is provided by Health Infrastructure that work can recommence.

13. Utilities and Services

13.1 Prior to commencement of construction activities, any services near the building site which may be impacted by the works would be accurately located.

14. Contamination

14.1 The development should be undertaken in accordance with the conclusions and recommendations of the "Phase 1 Contamination Assessment" dated 18 April 2012 and the "Targeted Contamination Assessment" dated 25 June 2012 prepared by Douglas Partners.

14.2 Should any new information come to light during construction works which has the potential to alter previous conclusions about site contamination then the Managing Contractor must be immediately notified and works must cease. Works must not recommence on site until the site is remediated in accordance with an approved Remedial Action Plan, and a Validation and Monitoring Report together with a notice of completion of remediation pursuant to clause 18 of State Environmental Planning Policy No 55 – Remediation of Land (as if that Policy applied) has been submitted to and approved by the Office of Environment and Heritage.

14.3 Contamination of the site during construction works would be avoided.

14.4 If any contaminated materials or hazardous substances (for example, asbestos, polychlorinated biphenyls, synthetic mineral fibre, lead dusts, paint containing lead and ozone depleting substances) were encountered during demolition and construction then safe work method statements and appropriate documented practices would be implemented.

14.5 Any contaminated materials or hazardous substances would be classified first and then stored, transported and disposed of in accordance with the Office of Environment and Heritage requirements at a the Office of Environment and Heritage licensed waste facility.

14.6 Prior to commencement of works, an asbestos management plan should be prepared by an appropriately qualified professional, which addresses occupational health and safety controls required during construction works, methods for disposal of waste that may contain asbestos. and measures to contain and immobilise fill material at the site that may contain asbestos.

14.7 Asbestos removal and management in NSW is regulated under the Occupational Health and Safety Act 2000 and Occupational Health and Safety Regulation 2001. The handling of asbestos and asbestos work must be carried out in accordance with the following documents published by the NOHS Commission in August 1988, as in force from time to time (clause 259):

- "Guide to the Control of Asbestos Hazards in Buildings and Structures [NOHSC: 3002 (1988)]", and,
- "Code of Practice for the Safe Removal of Asbestos [NOHSC: 2002 (1988)]".

14.8 The Regulation requires licensed contractors to contact WorkCover NSW of each bonded asbestos removal project of $10m^2$ or more.

14.9 Any contaminated material (i.e. bakelite light fittings, lead paint) would be classified first and then stored, transported and disposed of in accordance with the Office of Environment and Heritage requirements at a the Office of Environment and Heritage licensed waste facility.

14.10 An Unexpected Finds Protocol would be established as part of the detailed Construction Management Plan and include appropriate responses to report and manage the discovery of unexpected contaminated materials.

15. Foundations

15.1 All earthworks on the site should be undertaken in accordance with AS 3798, as relevant.

16. Traffic

16.1 The works shall be undertaken in accordance with the Traffic Impact Statement prepared by Cardno.

16.2 Construction Traffic shall be managed generally in accordance with the Preliminary Construction Traffic Management Plan prepared by Cardno.

16.3 Staging of works to the Main Car Park shall be managed generally in accordance with the Section 2.9 'Staging of Construction Works' of the Preliminary Construction Traffic Management Plan prepared by Cardno.

16.4 A Driver Code of Conduct should be developed and enforced for operators of construction vehicles which includes details of designated transport routes, parking and standing guidelines within the site, and operating hours in accordance with Dubbo City Council schedules.

16.5 Disabled parking spaces shall be provided in accordance with AS2890.1 – Off Street Car Parking Facilities.

17. Pavement Material & Construction Requirements

17.1 The pavement base and sub-base materials are to be compacted to a minimum dry density ratio of 100% relative to standard compaction at a moisture ration of 60-90% of the optimum moisture content. The sub-base are to be compacted to a minimum dry density ratio of 98% relative to standard compaction at a moisture ratio of 60-90% of the optimum moisture content.

17.2 The sub-base should be compacted to a minimum dry density ratio of 98% relative to standard compaction at a moisture ratio of 60-90% of the optimum moisture content.

17.3 The subgrade should be compacted to a minimum dry density of 98% relative to standard compaction at a moisture ratio of 60-90% of the optimum moisture content.

17.4 Fill should be placed and compacted in maximum 250mm loose thickness layers and compacted in accordance with the requirements noted above for sub-grade.

18. Other Requirements

18.1 Works-as-executed drawings are to be forwarded to NSW Health Infrastructure and Dubbo City Council for information purposes at the completion of the project.

18.2 New buildings will be provided in accordance with AS1428 – Design for Access and Mobility