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New Maitland Hospital Development

Hunter New England Local Health District

Final Business Case

Incorporating the requirements of the Project Definition Plan

March 2016, Revision 4

Figure 1 Artist Impression of the Preferred Option for the NMH

NSW GOVERNMENT Health Hunter New England Local Health District

NSW GOVERNMENT Health Infrastructure

APP

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Amendment Record

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1	Draft for HI / HNE review	29.11.15
2	Revised draft for HI / HNE review	7.12.15
3	Final	17.12.15
4	Update to respond to MoH comments and Gateway review	30.3.16

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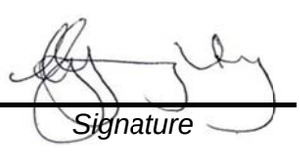
Prepared and reviewed by APP Project Director	*Gillian Geraghty*		*30/3/16*
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Project Team

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Abbreviations and Acronyms

Abbreviation / Acronym	Expansion
ABF	Activity Based Funding
ACI	NSW Health Agency for Clinical Innovation
ADL	Activity Daily Living
FMU	Facilities Management Unit
AHFGs	Australasian Health Facility Guidelines
AHIS	Aboriginal Health Impact Statement
aIM	Acute Inpatient Modelling (projection tool)
AIM	Accelerated Implementation Methodology
ALOS	Average Length of Stay
AMMS	Advanced Maintenance Management System
AMP	Asbestos Management Plan
ASP	Asset Strategic Plan
BC	Business Case
BCA	Building Code of Australia
BMCS	Building Maintenance Control System
BCR	Benefit Cost Ratio
BME	Biomedical Engineering
CCU	Coronary Care Unit
CDR	Concept Design Report
CMN	Calvary Mater Newcastle
COAG	Council of Australian Governments
CSD	Central Sterilising Department
CSP	Clinical Services Plan
CSP	Hunter Valley Health Services Clinical Service Plan
CWG	Communications Working Group
CYMHS	Child and Young Mental Health Service
CYP&F	Children Young People and Families
DAS	Direct Alarm Supplies
DCWC	Donald Cant Watts & Cork
DDA	Disability Discrimination Act
DMR	Digital Medical Record
DPE	Department of Planning and Environment
DRG	Diagnostic Related Group
EA	Economic Appraisal
ESAP	Elective Surgical Access Performance (replaces NEST)

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Abbreviation / Acronym	Expansion
ECG	Electro-Cardio Gram
ED	Emergency Department
EIS	Environmental Impact Statement
EMCHC	East Maitland Community Health Centre
EMR	Electronic Medical Record
EMRAN	Electronic Medical Record Adoption Model
ENT	Ear Nose and Throat
EOI	Expressions of Interest
ERG	Expert Reference Group
ESC	Executive Steering Committee
ESD	Environmentally Sustainable Design
ESSU	Emergency Short Stay Unit
ETC	Estimated Total Cost
ETP	Emergency Treatment Performance (replaces National Emergency Access Target)
EUG	Executive User Group
FBC	Final Business Case
FCC	Family Care Cottage
FDB	Functional Design Brief
FIS	Financial Impact Statement
GI	Gastro Intestinal
GP's	General Practitioners
GPAAH	General Practice Access After Hours
HDU	High Dependency Unit
HI	Health Infrastructure NSW
HIMMS	Healthcare Information & Management Systems
HiTH	Hospital in The Home
HNE Health	Hunter New England Local Health District
HVCSP	Hunter Valley Clinical Service Plan
HVSPP	Hunter Valley Health Services Planning Project
HVSS	High Volume Short Stay
HVWP	Hunter Valley Workforce Plan
IC&T	Information Communication & Technology
ICU	Intensive Care Unit
IPU	Inpatient Unit
IRSD	Index of Relative Socio-economic Disadvantage
ISEPP	State Environmental Planning Policy (Infrastructure)
JHCH	John Hunter Children's Hospital

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Abbreviation / Acronym	Expansion
JHH	John Hunter Hospital
JRPP	Joint Regional Planning Panel
KKH	Kurri Kurri Hospital
KSO	Keep Safe and Operational
LEP	Local Environmental Plan
LGA	Local Government Area
LHD	Local Health District
MAU	Medical Assessment Unit
MCC	Maitland City Council
MDT	Multi-Disciplinary Team
MH-CCP	Mental Health Clinical Care and Prevention Model
MoH	NSW Ministry of Health
MPS	Multi-Purpose Service
NAPOOS	Non-Admitted Patient Occasions Of Service
NCOS	Net Cost of Service
NETS	Neonatal Emergency Transport Service
NGO's	Non-Government Organisations
NICU	Neonatal Intensive Care Unit
NMH	New Maitland Hospital
NMHSWP	New Maitland Hospital Strategic Workforce Plan
NPV	Net Present Value
NWAU	National Weighted Activity Unit
OEH	Office of Environment and Heritage
PAC	Planning Assessment Commission
PACM	Potential asbestos containing materials
PACU	Post Anaesthetic Care Unit
PBC	Preliminary Business Case
PCB	Polychlorinated Biphenyl
PDC	Planning and Development Committee
PDP	Project Definition Plan
PECC	Psychiatric Emergency Care Centre
PESC	Project Executive Steering Committee
PICU	Paediatric Intensive Care Unit
PoFP	Process of Facility Planning
PSN	Perinatal Service Network
PUG's	Project User's Group(s)
RCD's	Residual Current D

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Abbreviation / Acronym	Expansion
REF	Review of Environmental Factors
RMS	Roads & Maritime Services
RU	Relative Utilisation
SCN	Special Care Nursery
SEARs	Secretary Department Planning and Environment (Environmental Assessment Requirements)
SEIFA	Social & Economic Index For Areas
SEPP	State Environmental Planning Policy
SFDB	Strategic Functional Design Brief
SoA	Schedule of Accommodation
SPP	Service Procurement Plan
SRG	Service Related Group
SS	Service Statement
SSD	State Significant Development
SSS	State Significant Site
TACP	Transitional Acute Community Program
TMH	The existing Maitland Hospital
VM	Value Management
VMO's	Visiting Medical Officers
VPN	Virtual Private Network

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Endorsement Sheet

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ENDORSEMENT

This Final Business Case is certified to have been developed in accordance with the NSW Treasury Guidelines Business Cases (TPP 08-5).

Signed
Project Manager

The preferred option in this Final Business Case is certified to have been developed in accordance with the NSW Health Facility Guidelines and the Building Code of Australia.

Signed
Architect

The capital cost estimates in this Final Business Case are certified to have been developed in accordance with Health Infrastructure's requirements.

Signed
Cost Manager

The Final Business Case has been reviewed and is fully endorsed by the Hunter New England Local Health District.

Signed
Chief Executive, Hunter New England Local Health District

The Final Business Case is certified to contain all items required for project approval and funding.

Signed
Chief Executive, Health Infrastructure

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Compliance Sheet

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PROJECT DEFINITION PLAN (PDP) COMPLIANCE CERTIFICATE

The following PDP compliance certificate is to be referred to and completed throughout the development of the PDP and submitted with each PDP to **Health Infrastructure**

	Cert By	Page

This PDP Compliance Certificate is to be included after the Executive Summary in the document or attached to the cover letter.

Section 1.0 Executive Summary

▪ The service parameters that has prompted the completion of the PDP		20
▪ Brief description of the Preferred Option to address the service need		20
▪ How the project promotes NSW Health and District -wide service objectives		21
▪ The Preferred Option has been endorsed by the District , Steering Committee and local stakeholders		21
▪ Benefits of the Preferred Option		23
▪ Financial and Economic Appraisal of the Preferred Option		22
▪ Proposed capital budget and cashflow for the Preferred Option		23
▪ Total recurrent cost estimate of the Preferred Option		22
▪ Risk Assessment Strategy		23
▪ Proposed program with key stages identified for the Preferred Option		23

Section 2.0 Introduction

▪ Service background and reasons for undertaking the project		24
▪ Objectives/outcomes of the PDP process		29
▪ The benefits to be realised by the project		27
▪ Committee structure for the project		31
▪ The consultation process used in the preparation of the PDP		34
▪ Strategic Directions of Health Infrastructure		36

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	Cert By	Page
▪ District Health Care Service Plan		39
▪ Statewide Service Plans		39
▪ Aboriginal Health Impact Statement		40
▪ **NSW Health** Aboriginal Health Impact Statement completed and attached (if required).		Appendix 6
▪ Other NSW Government and Australian Government policies		36
▪ District Asset Strategic Plan		43
▪ Process of Facility Planning		30
Section 3.0 Service Delivery		
▪ Endorsed District Healthcare Service Plans		63
▪ Project aligns with the local Service Plan or Service Statement		64
▪ Population-related basis for the project		59
▪ Service activity parameters that support the need for the project		45
▪ Analysis of Service Gaps and Needs		45
▪ Role Delineation – current and proposed		78
▪ Service Delivery Option and Proposed Service model (s)		78
▪ Staff profile – current and proposed		103
▪ Information Management & Technology issues are identified		86
▪ All service planning issues have been endorsed by Statewide Services Development Branch		89
▪ Assessment criteria were developed		90
▪ Options include 'do nothing', 'non-capital' and 'alternative service'		90
▪ Options analysis completed		90

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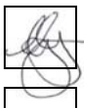
	Cert By	Page
▪ Preferred option defined in detail with a description and a site plan		101
▪ Schedules of Accommodation		97
Section 4.0 Affordability and Value for Money		
▪ Capital Cost budget for the preferred option including estimates for other options		107
▪ Analysis of equipment requirements		Appendix 18
▪ Recurrent cost for the preferred option		107
▪ Financial Impact Statement completed		107
▪ Outcomes of the Economic Appraisal included		110
▪ Leasing strategies considered		N/A
▪ Gateway Project Profile Report attached		Appendix 23
▪ Value Management Report completed		Appendix 17
Section 5.0 Sustainability		
▪ Asset Management Strategy		119
▪ ESD Pre-Design Report completed		114
Section 6.0 Governance		
▪ The Management Case		130
▪ Project Governance		130
Section 7.0 Preferred Implementation Strategy		
▪ Service Delivery Strategy defined.		138
▪ An indicative project program has been developed for all stages		136

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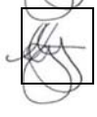
	Cert By	Page
▪ An indicative cashflow against the project time frame as agreed with NSW Health.		136
▪ Confirmation of title holder to the proposed redevelopment site		137
▪ Risk Assessment Strategy, Mitigation and Valuation		133
▪ Transport, access and parking issues addressed.		145
▪ Relevant discussions have occurred with the local shire or city council		140
▪ Conservation Management Plan completed (if required).		N/A

Section 8.0 Stakeholder, Change and Communications Management

▪ A Change Management Strategy to implement the new service model has been prepared for implementation.		148
▪ A Communication Strategy in accordance with AHS protocols has been developed and endorsed by the Area.		148
▪ **Area CE & Steering Committee endorsement of PDP**		Endorsement page

1. Executive Summary

The development of the New Maitland Hospital (NMH) has been identified in the top five priorities in the HNE Health 2015/16 Asset Strategic Plan (ASP). The existing Maitland facility cannot support the growth and change in the type of services needed to provide contemporary health care due to a growing and ageing population in the Hunter Valley, The facility is already operating at 97% capacity and there are a number of issues relating to age, asset condition, compliance with current facility guidelines and ability to meet contemporary service delivery and models of care.

The NMH will resolve these constraints and provide opportunities to develop a health campus that will meet the needs of the community well into the future. The scope proposed for the NMH is 278 total overnight beds and 48 day only beds as summarised in Table 1 below. A site on Metford Road has been identified as the preferred location for the NMH and endorsed by the HNE Health Board. It was publically announced by the Minister for Health on 30 August 2013.

Service Delivery Units	Maitland Hospital 14/15	New Maitland Hospital	Increase
Acute	128	198	70
Critical Care	20	30	10
Acute Mental Health	24	24	0
ESSU	0	8	8
PECC	0	6	6
Acute Overnight Beds	*172*	*266*	*94*
Sub-Acute Over-night beds	12	12	0
Total Overnight Beds	**184**	**278**	**94**
Acute Day Only Beds			
Maternity Day	2	4	2
Satellite Renal Dialysis	10	12	2
Paediatric Day	0	4	4
Medical Day	0	8	8
Surgical Day	6	20	14
Total Day Only	**18**	**48**	**30**
Operating suites	3	7 + 1 shell	4
Endoscopy Procedure Rooms	1	0	0

Service Delivery Units	Maitland Hospital 14/15	New Maitland Hospital	Increase
Recovery Spaces	6	20	14
Delivery Suites	5	7	2
Emergency Department			
Treatment spaces	23	31	8
Resuscitation bay	2	3	1
Ambulatory Care			
Chemotherapy chairs	0	12	12
Oral Health chair	6	6	0
Outpatient Clinics	37	51	14
Total increase			**178**

Table 1 Summary of Infrastructure requirements for NMH in comparison to existing facility

The NMH project has been developed in accordance with the MoH Process of Facility Planning (PoFP) and the aligned Health Infrastructure (HI) adopted approach. This FBC is the key deliverable for Stage 2 of the PoFP.

The project was reviewed by an independent panel for the NSW Treasury Strategic Gateway in October 2014. The panel found that the project is important for the ongoing provision of health services and this is deemed to be demonstrated based on socio-demographic parameters and the poor condition of existing assets. Further the project was subject of an Internal Gateway Review in February 2016.

The Preferred Service Option for NMH has been determined as requiring to provide Role Delineation Level 4 services in emergency, maternity, and associated core services. Identified expansion zones have been included for core services to increase the Role Delineation Level 5 in future. NMH will accept admissions that can be managed by general surgeons and general physicians safely. This FBC details this preferred option, how it responds to the identified drivers, delivers the required project benefits and how it demonstrates value for money.

The NMH will provide a range of health services to the residents of the Hunter Valley region. The services will complement the range of services already provided at other health care facilities or those that are currently under development. It will provide an increased service capability and complexity to help address the increasing demand being experienced by the majority of services across the region.

The Service Drivers below were identified and have been detailed within this FBC for rationale and justification with the current and projected strong demand for health services at the existing Maitland Hospital:

1. Access to Health Care and Inpatient Services
2. Critical Care (High Dependency and Intensive Care)
3. Medical Services
4. Elective and Emergency Surgery
5. Maternity Services
6. Emergency Services
7. Ambulatory Care and Outpatient Departments
8. Cancer and Chemotherapy Services
9. Sub-Acute Services
10. Ageing Infrastructure and poor functional layouts

Relocation of all services from the existing Maitland Hospital to the NMH will result in a significant proportion of staff for the new hospital coming from the existing Maitland Hospital. In addition there will be workforce relocated from KKH with the relevant clinical service. A number of workforce initiatives have been considered in the development of the models of care and staffing profile for the NMH as part of the Workforce Plan completed which has provided a detailed staffing profile for the NMH.

The Options for the NMH have been developed over a period of time from 2013 in the following areas;

- Expression of Interest for preferred site
- Clinical network options
- Master planning options
- Pre Value Management - Long List of Service Options refined to a shortlist of Service Options
- Value Management for the PBC - Agreement on a preferred Service Option which was the Full SS with future relocation of Morisset Psychiatric Services
- Refinement of the Preferred Service Option for the FBC
- Functional Relationships and Schedule of Accommodation (SoA)

The Base Case was maintained in value management and assessment for baseline purposes only. The option of doing nothing is not viable as it will result in unsatisfactory health outcomes, unmet demand, and network capacity issues as the demand for services and type of activity proposed for NMH cannot be delivered from the existing facilities.

A FIS has been completed by HNE Health for the development and focuses on incremental cost impact by applying the state price to incremental activity volume projections in acute in-patient, emergency department, ambulatory care and mental health acute services. Established on activity based funding (ABF) cost estimates, HNE Health have estimated that the net recurrent cost of services for NMH is $174.8 million per annum excluding depreciation.

The capital cost of the NMH development preferred option was prepared by the Cost Manager, DCWC in accordance with HI Cost Planning and Reporting Standards version 2.0. The Estimated Total Cost totals $450,000,000.

In accordance with NSW Treasury Guidelines for Economic Appraisal and NSW Health Guidelines for the Economic Appraisal of Capital Projects, an EA has been completed for the development. The results indicate that all the options are economically viable. The EA reviewed three options with Option 3 being the option described within this FBC. The EA concluded that Option 3 has a positive incremental NPV of $225.6 million over a 20 year evaluation period and it has a BCR of 1.28.

On the basis of the EA results and the qualitative assessment of strategic and non-quantifiable benefits undertaken, Option 3 is the preferred option for the Project. Option 3 provides an appropriate and logical option to provide health benefits to the residents of the New Maitland Hospital's catchment area while balancing the requirement for relative affordability.

The social impacts of the project are detailed in section 5.1 and in addition the key benefits of the project as detailed in the endorsed Benefits Realisation Table (included as Appendix 16).

Through a detailed Value Management (VM) process, EA, user consultation and analytical assessment of existing facilities and options, a strong case has been made for the progression of the NMH development to the next stage of implementation. A Project Master Program has been developed, on the anticipation that main works construction will commence in mid 2018, with the main new build complete and commissioned in late 2020. A Delivery and Procurement Strategy detailing the proposed packages of works and procurement methodology for the project has been developed and is included within this FBC.

The New Maitland Hospital Capacity Options document, FDB, the refined Master Plan, Concept Design and this FBC provide the planning framework for the delivery of the project.

It is recommended that this FBC be approved as setting the social, financial and economic parameters and benefit targets for the NMH Development.

2. Introduction

2.1. Service Background

In September 2011, the NSW Government pledged $20 million to fast track the planning for Maitland / New Hunter Hospital. The project is included in the Budget Paper 2013-14 as a new work with an estimated total cost of $20 million and includes planning for services across the Lower Hunter, with a key focus on the future requirements for a new Maitland Hospital and acquisition of a site. This announcement was based on planning documents including the HNE Health Rural Health Plan, HNE Health Twenty 20 Strategy and original HNE Health Hunter Strategy.

The Hunter Valley Health Services Planning Project (HVHSPP) was established in May 2012 to deliver this political commitment. The project delivered The Hunter Valley Clinical Services Plan (HVCSP) in 2013 and reviewed the strategic directions and service development priorities for health facilities in the Hunter Valley. The major recommendation from the HVCSP was the development of a new rural referral hospital that would replace the current Maitland Hospital and provide increased service capacity and complexity, networked with services in the Hunter Valley and tertiary services such as John Hunter Hospital and Calvary Mater Newcastle Hospital.

The HVCSP was based on 2006 population data and demonstrated a growing and ageing population in the Hunter Valley and surrounding areas as a major driver for the current and projected strong demand for health services at Maitland Hospital. Concurrently in time with the HVSPP, HNE Health completed their Strategic Plan towards 2016 and their partnering 2014/15 Operational Plan.

In 2013 a site on Metford Road was identified as the preferred location for the new hospital and endorsed by the HNE Health Board. It was publically announced by the Minister for Health on 30 August 2013. The site is bound in the northwest by Metford Road, in the northeast by the Great Northern rail line and Raymond Terrace Road, and in the south by a high voltage electricity easement. Surrounding areas include residential areas of Metford to the south and East Maitland in the west, some light industrial areas immediately to the west, and community lands in the north. The location of the site is illustrated in the following figure;

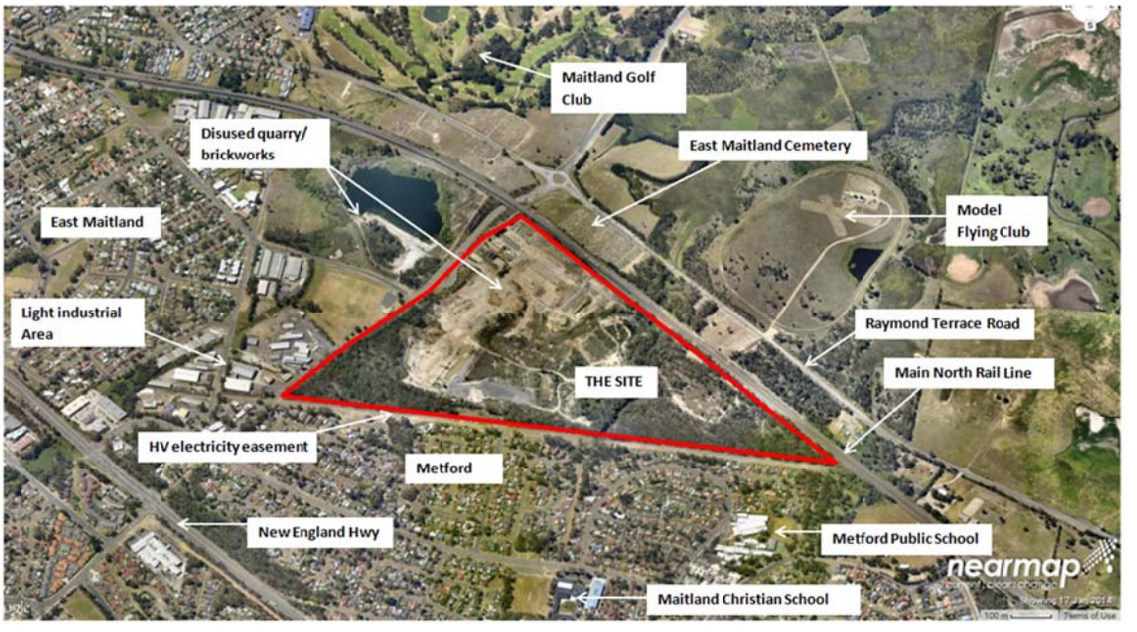


Figure 2 Metford Site

In 2014, as part of the PBC the NMH Service Statement (SS) was prepared and was based on 2011 population data. The SS built on recommendations made in the CSP and outlined the service requirements for the NMH to effectively manage current and future activity and ensure patients receive timely, safe and high quality care. A Strategic Functional Design Brief (SFDB) reflective of this proposal was also prepared for the NMH.

The project was reviewed by an independent panel for the NSW Treasury Strategic Gateway in October 2014. The panel found that the project is important for the ongoing provision of health services and this is deemed to be demonstrated based on socio-demographic parameters and the poor condition of existing assets. The report from the Strategic Gateway is in Appendix 20.

Since the Strategic Gateway in 2014, Hunter New England (HNE Health) reconsidered the patient flows, and the impacts of such changes on their network of health services. In this review it was found that residents across the Hunter Valley and greater Newcastle access health services via a changing road system and residential land development; and by the level of acuity and specialist service provided at each hospital.

In parallel, in January 2015, the MoH supported the allocation of $5.3 million from the project funding to be applied to the HNE Health holding works strategy which includes an extension to the rehabilitation unit on the Kurri Kurri Hospital campus to accommodate the transfer of 12 rehabilitation beds from Maitland Hospital and minor refurbishment of the vacated space at Maitland Hospital to provide 16 additional acute care beds. The holding works strategy is included in the scope of the NMH planning project to assist with service reconfigurations and service demand in the period prior to the completion of the NMH. HNE Health is managing these works and they are on track to be completed by September 2016. The funds for these works have been segregated in the project cost plan.

In March 2015, the Minister for Health announced that $25M would be committed from the Hunter Infrastructure and Investment Fund as part of the State Government's election commitment to fast track the start of NMH's construction. This commitment is included within the $450M included in NSW Health's Capital Program for NMH.

In May 2015, MoH confirmed their support of the progression of planning for the NMH on the basis that the FBC delivers an option within the funding provision of $450M identified for the project on the NSW Health Capital Program.

The revised planning for these health services considered the HNE network and reviewed health services for the Hunter Valley in conjunction with greater Newcastle; as well as tertiary and state-wide services to residents of HNE LHD, Mid North Coast (MNC) LHD, Northern New South Wales (NNSW) LHD and Central Coast (CC) LHD.

Figure 1 Detailed Map of Towns and Sectors of Hunter New England Area Health Service

As part of this review it was agreed that the relocation of the mental health services from Morisset Psychiatric Hospital would be removed from the Preferred Service Option for NMH and be considered as a separate funding application under the process of asset planning within NSW Health.

As a conclusion to the review, the Preferred Service Option for NMH was determined as requiring to provide Role Delineation Level 4 services in emergency, maternity including corresponding Special Care Nursery (SCN) service for qualified neonates, and associated core services. The NMH will accept admissions that can be managed by general surgeons and general physicians safely.

In response HNE Health prepared the New Maitland Hospital Capacity Options Document and the project team prepared the Functional Design Brief (FDB). HNE Health prepared a SoA to reflect the FDB. The New Maitland Hospital Capacity Options Document, SoA and FDB form the basis of the validated zonal master plan and revised concept design which have been prepared as part of this FBC.

The key benefits of the preferred option for the project are detailed in the endorsed Benefits Realisation Table (included as Appendix 16) and are as follows:

- Improved Service access and patient flow for Maitland Hospital catchment
- Assist in closing the Gap between Aboriginal and non - Aboriginal Health
- Improved access to ambulatory care services (including specialist outpatient services) to minimise hospital stay and readmission
- Grow and support a skilled, competent and capable workforce
- Assist in the rationalisation and consolidation of services at Kurri Kurri and Cessnock Hospitals
- Enhanced delivery of current evidence - based care models and clinical redesign to achieve better health outcomes, reduce length of stay and unplanned admissions
- Improved patient safety and reduced clinical errors
- Building partnerships and service integration across health and non-government sectors to increase sustainability and reduce duplication while maintaining and increasing the level of service to the community
- Improved workplace health and safety

The timeline of planning documents is illustrated in the following figure;

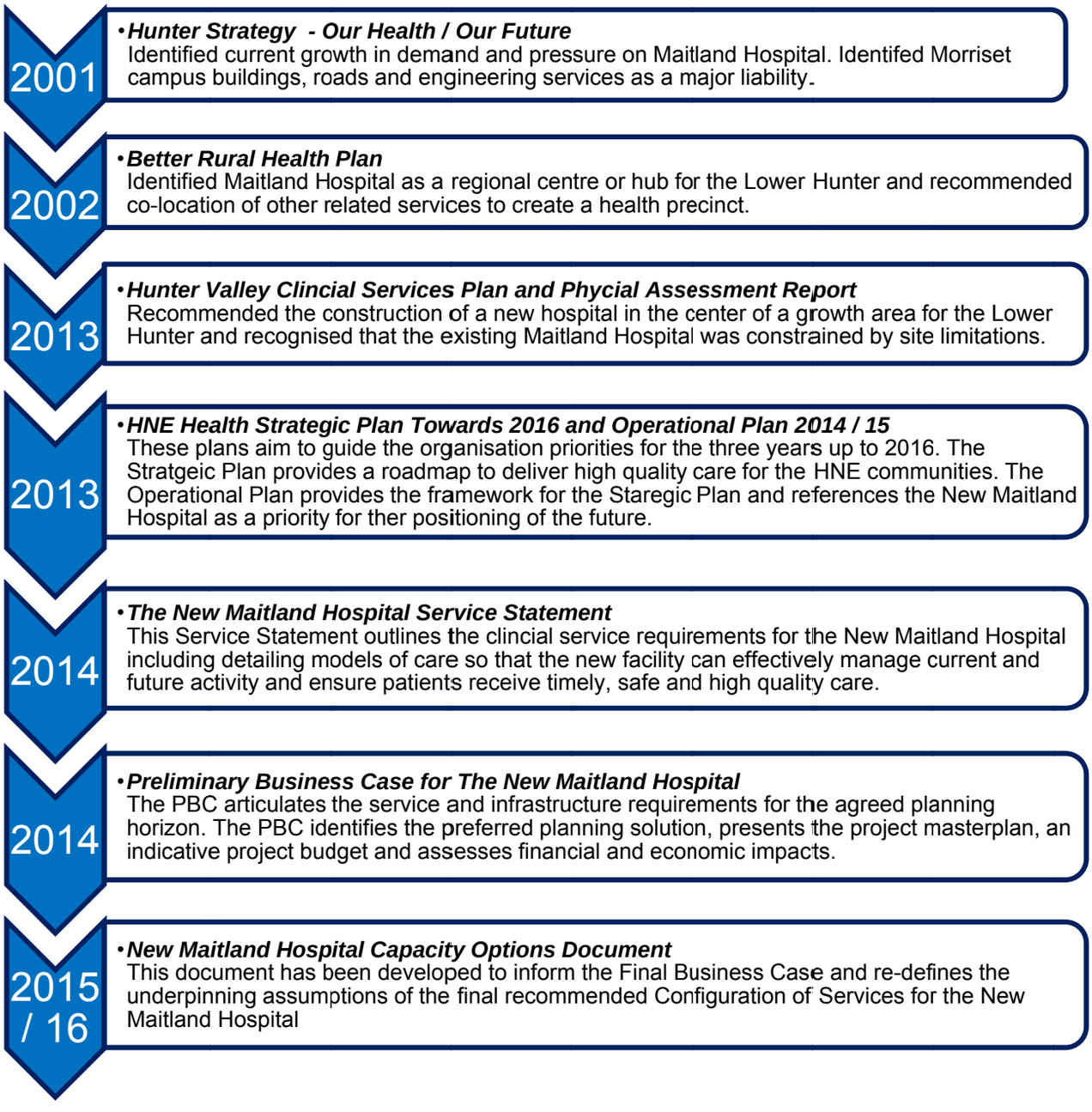


Figure 2 Timeline of Planning Documents

2.2. Final Business Case

The purpose of this FBC is to present how the strategic clinical services requirements at the NMH can be accommodated and facilitated by the preferred option for the project and to demonstrate the value and benefits that these services will bring to the Lower Hunter population, HNE Health and the NSW Government.

The FBC documents the proposal in detail, including justification of service rationale, identification and analysis of a range of project options to determine a preferred facility model and subsequently a demonstration of value for money and benefits that the preferred option will provide. The financial requirements, both recurrent and capital, and the management case for the delivery of the project are also presented.

In addition the FBC incorporates and has involved the following:

- Development of the New Maitland Hospital Capacity Options Document, which includes the identification of clinical service priorities for NMH
- Implementation and adoption of new models of care by HNE Health, the resulting FDB and SoA to guide the development of concept options
- Consultation and communications associated with the endorsement of the preferred service configuration option
- Feedback received and or outcomes of the NSW Treasury Strategic Gateway Review, as detailed in Appendix 20
- Response to the correspondence received from MoH which supported the progression of planning for the FBC
- Further investigations of the current sites of the Maitland Hospital and Morisset Psychiatric Hospital to ascertain their unsuitability for redevelopment
- Consultation with Maitland City Council (MCC) and various authorities to confirm town planning requirements
- Based on the preferred Concept Facility Option, the development of the Concept Design by the Architect, with input from HI, HNE Health and the Project Manager
- Assessment of workforce and recurrent cost impacts of the development by HNE Health
- Financial analysis of the preferred option, including capital, cashflow and recurrent cost estimates, and associated risk assessment to ensure value for money and affordability
- EA of the preferred option against a baseline option, utilising broad economic principles applied to the project in terms of quantitative measures (Net Present Value (NPV) and BCR analyses) and in terms of qualitative measures (Benefits as identified in the Benefits Realisation Plan)
- Strategies for the successful implementation of the project to meet the objectives of the project, in terms of scope, budgets, timeframes, planning approvals, procurement, change, communications, workforce planning and asset management
- Progression of the project communications associated with the development and endorsement of the preferred option
- Preparation of the FBC utilising and updating the contents of the PBC, for submission to a Gateway Review process
- Final refinement of the Business Case following the Gateway Review and reviews by HI and HNE Health for submission to NSW Treasury

2.2.1. Process of Facility Planning

The MoH established the PoFP to provide a robust framework for procuring capital infrastructure across the NSW public health system. HI adopted an approach based on the PoFP, defining the PoFP stages into sequential Phases and Parts to enable a logical project delivery process to be established. The alignment of the PoFP with the HI Phases and Parts is shown below.

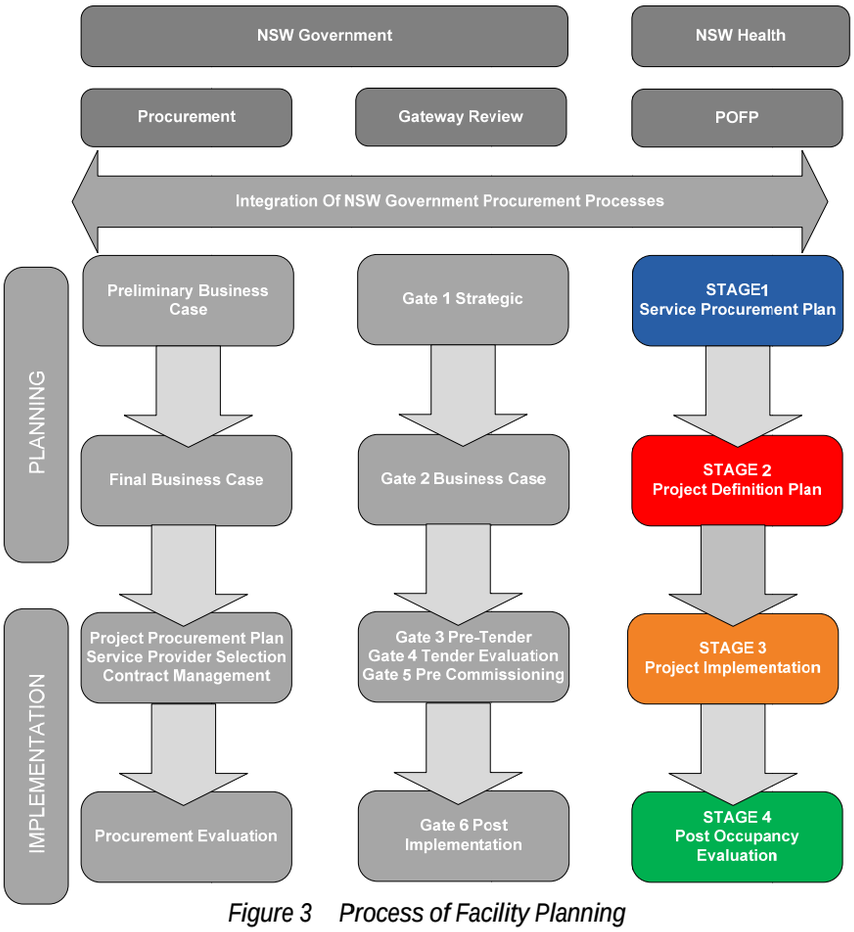


Figure 3 Process of Facility Planning

The PoFP has informed the development of this FBC. Consistent with the PoFP, the following planning parameters have been developed to inform health capital developments:

- Patient needs and safety
- Respect for the individual choice of patients and their significant others
- Provision of an appealing environment that promotes dignity, safety and recovery
- Integration of the proposed departments/ services into the service delivery structure of the new hospital as a whole
- Operation and resourcing needs particular to establishing new departments/ services (as per the development phases)

The primary source of facility planning principles is the Australasian Health Facility Guidelines (AHFGs). These Guidelines have been developed on the basis that the provision of appropriate physical environments facilitates the delivery of high standards of patient care (http://www.healthfacilityguidelines.com.au/guidelines.htm). The AHFGs provide spatial benchmarks as a basis for SoA's, operational considerations that impact on facility design and general guidance regarding the delivery of services.

The AHFGs have specifically informed a number of aspects of the planning for the NMH as follows:

- The NMH Strategic FDB
- The development of SoA
- Consideration of health unit adjacencies to achieve optimal functional relationships
- Masterplan and Concept Design

Preliminary consultation has occurred to inform the concept design requirements for all departments and services. It is anticipated that further consultation and engagement will occur for all departments and services included within NMH. In subsequent planning phases for this project extensive consultation by a specialist design team will be undertaken to further develop the design requirements for the NMH.

As well as developing optimal designs which promote clinical functionality and operational efficiency, the user group consultation process will ensure that there is ownership and endorsement of the design by key stakeholders. This process is essential to facilitate appropriate change management for the development.

2.3. Project Governance and Committee Structure

The project governance structure described in this document is compliant with the NSW Health PoFP which sets out the minimum standard from which all projects will be based. The structure and participants are characterised by HI directing the planning process in collaboration with NSW Health, LHD's and key stakeholders:

Objectives of the governance structure include to:

- Deliver a consistent and robust approach to generate quality planning outcomes
- Enable decision making around program, budget and scope through the project
- Establish a transparent authority framework to manage planning
- Delegate authorities for participants to contribute within their scope of expertise
- Provide oversight and endorse clinical and non-clinical inputs to planning
- Establish lines of communication between each group, HI and HNE Health

The diagram following is the project Governance Structure with reporting and communication lines including interface with HI and project stakeholders. Membership was confirmed through discussions with HI and HNE Health.

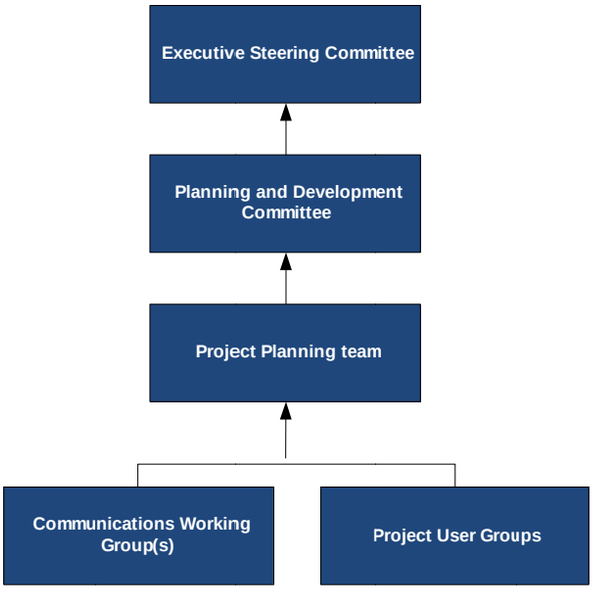


Figure 4 Project Governance Structure

In accordance with the project governance structure the following committees and users groups have been convened for the project.

Executive Steering Committee (ESC)

The ESC provides strategic direction to the project and is the ultimate decision making authority within the project governance structure. The committee comprises delegated executives responsible for delivering the project within the agreed scope and will cover clinical services planning and capital components. The ESC has provided the mechanism to ensure all phases of the project and their timelines are met.

Planning and Development Committee (PDC)

The PDC has overseen the planning of the project and provided operational leadership to the project team. The PDC has been responsible for monitoring the project objectives, planning inputs and key deliverables for endorsement, driving the development of the operational policy and workforce strategy whilst managing overall program and project requirements within budget, time and scope. The committee will also oversee and monitor the development of the operational policy and workforce strategy. The PDC has been responsible for overseeing planning associated with site assessment, master planning and options development.

Project Planning Team (PPT)

The PPT has been responsible for coordination of the consultation process, review of planning and provides advice for all clinical issues to facilitate, co-ordinate, guide and advise the project as required. Upon transition to project delivery phases, the PPT also becomes responsible for transition planning and operational commissioning.

Project User's Group(s) (PUGs)

PUGs report directly to the PPT, and were convened on a time limited basis during the development of the Strategic Functional Design Brief to generate the clinical and operational planning input, provide feedback on health service delivery matters, represent the interests of the broader workforce and work collaboratively with the project team, clinical and non-clinical representatives.

Communications Working Group (CWG)

The CWG has been chaired by HNE Health and reports to the PPT as a working group for the project. Their role has been to oversee the implementation of the Communications and Consultation plan for the project.

Project Team

The project team consists of a number of external specialist consultants as outlined in the table below;

Role	Organisation
Project Manager	APP Corporation Pty Ltd
Architect	Wood Bagot
Cost Manager	DCWC
Civil & Structural	Robert Bird Group
Electrical Engineer	Steensen Varming
Hydraulic Engineer	Warren Smith & Partners
Mechanical Engineer	WSP
Acoustic Engineer	SLR Consulting Pty Ltd
Access and DDA	Morris Goding Accessibility
Helicopter Consultants	Aviation Professional Services Pty Ltd
Fire Engineering	Rawfire
BCA Consultant	Blackett Maguire Goldsmith
Environmental Consultant	KMH Environmental
Traffic Engineer	AECOM
Town Planner	Cardno
Economic Appraisal	AECOM Australia
Health Planner	Carramar Consulting

Table 2 Project Consultant Team

The key external consultants worked closely with HNE Health, HI and NSW MoH in preparation of the FBC as detailed in the following organisational structure;

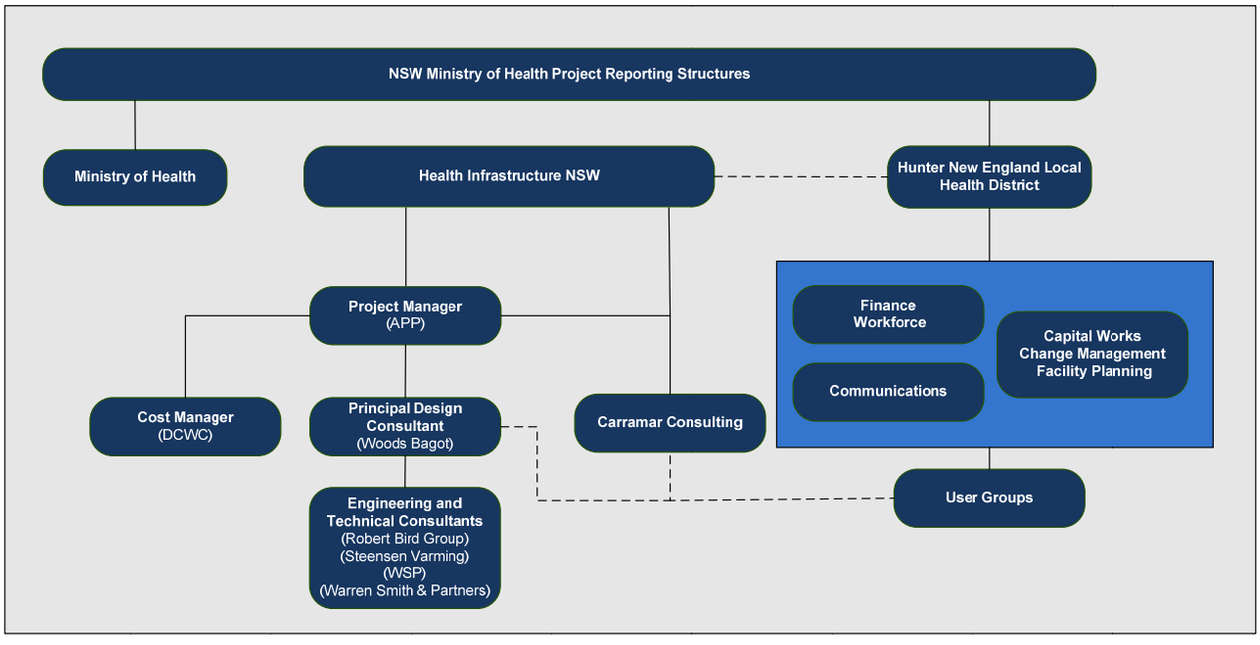


Figure 5 Project Organisation Structure

2.4. Stakeholder Consultation Undertaken to inform the Final Business Case

Consultation relating specifically to this project over the last few years has been managed by HI and HNE Health. A long period of consultation preceded the commencement of this project. Particularly, broad consultation occurred during the HVSPP and development of the CSP. This included consultation with the HNE Health Board, key clinical staff, and the district's peak committees, Directorates and services. Broader staff input on the project was also sought via news articles in the District's Chief Executive News with community and stakeholder forums held during 2013 and 2014.

This FBC has been prepared in consultation with HNE Health, HI and the MoH. Stakeholders involved in the development of the FBC include members of the project committees and groups. In addition to these groups, a range of stakeholders will be engaged as part of the ongoing consultation and communication activities associated with the implementation phases of the project. The proposed consultation and communication plan overview, communication action list, stakeholder analysis register, communications calendar and media plan (detailed within the Stakeholder Consultation and Communication Plan) have been developed to align stakeholder communication and consultation activities with key milestones in the facility planning programme.

Specific stakeholder consultation undertaken to inform preparation of the FBC included the following:

- Consultation to inform preparation of the FDB which included consultation with over 150 key clinical staff, stakeholders and executive between November 2014 and February 2015

- ESC meetings to provide strategic direction and decision making to inform preparation of the FBC undertaken monthly from October 2014 to November 2015. The ESC is responsible for delivering the project within the agreed scope
- PDC meetings to review planning inputs, these meetings have been a regular ongoing mechanism to coordinate, monitor and implement planning strategies to achieve project objectives and timeframes. There have been five PDC meetings undertaken in preparation of the FBC
- Risk Management Workshops held with the PDC in June and September and monitored throughout the project as part of the PDC meetings
- HI Expert Reference Group (ERG) meetings have been undertaken during concept design. ERG meetings have occurred to provide advice to the project team and a peer review function. The extent of ERG involvement has been determined by the complexity of this project
- In addition to consultation undertaken with relevant project stakeholders, there have been meetings with several external stakeholders including MCC , Hunter Water, Transport for NSW, ARTC, Ausgrid, RMS, Crown Lands, Resources and Energy, Mine Subsidence Board, Local Aboriginal Land Council

2.5. Compliance with Policies and Pre-requisites

The NMH project complies with the policies and pre-requisites of the NSW Government, the MoH, HNE Health and the Commonwealth Government. The policy framework below illustrates the alignment of all relevant policies with the project;

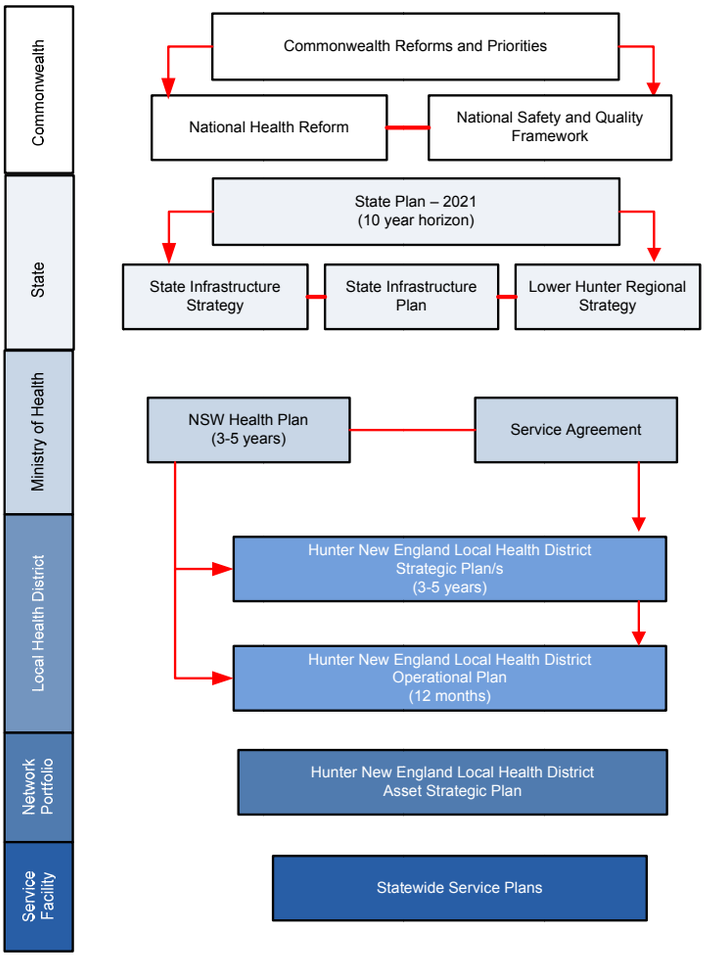


Figure 6 Policy Framework

2.5.1. NSW Government

NSW 2021 A Plan to Make NSW Number One

NSW 2021 – A Plan to make NSW Number One sets the Government's agenda for change in NSW. It is a 10 year plan to rebuild the economy, return quality services, renovate infrastructure, restore accountability to government, and strengthen local communities. To return quality services and restore confidence in the public health system the NSW Government's NSW 2021 and Plan to Provide Timely, Quality Health Care sets the following goals:

- Goal 11 – Keep people healthy and out of hospital. Focus on illness prevention and reducing the burden of chronic disease on the health system
- Goal 12 – Provide world class clinical services with timely access and effective infrastructure. Rebuild hospitals and health infrastructure, re-engage medical practitioners and give communities and health care providers a strong and direct voice in improved patient care

The State's goal is to restore confidence in the public health system by rebuilding hospitals and health infrastructure, encouraging stronger engagement with medical practitioners, and giving communities and health care providers a strong and direct voice in improved patient care.

Development of NMH is strongly supported by the local community, clinicians and HNE Health Board as a means to provide timely access to and improved patient care.

NSW State Health Plan – Towards 2021

NSW State Health Plan Towards 2021 provides the strategic framework which sets priorities across the system for the delivery of 'the right care, in the right place, at the right time' for everyone. The Directions and Strategies with the NSW State Health Plan establish the common values, actions, policies and programs that will be required for the next steps on the reform journey.

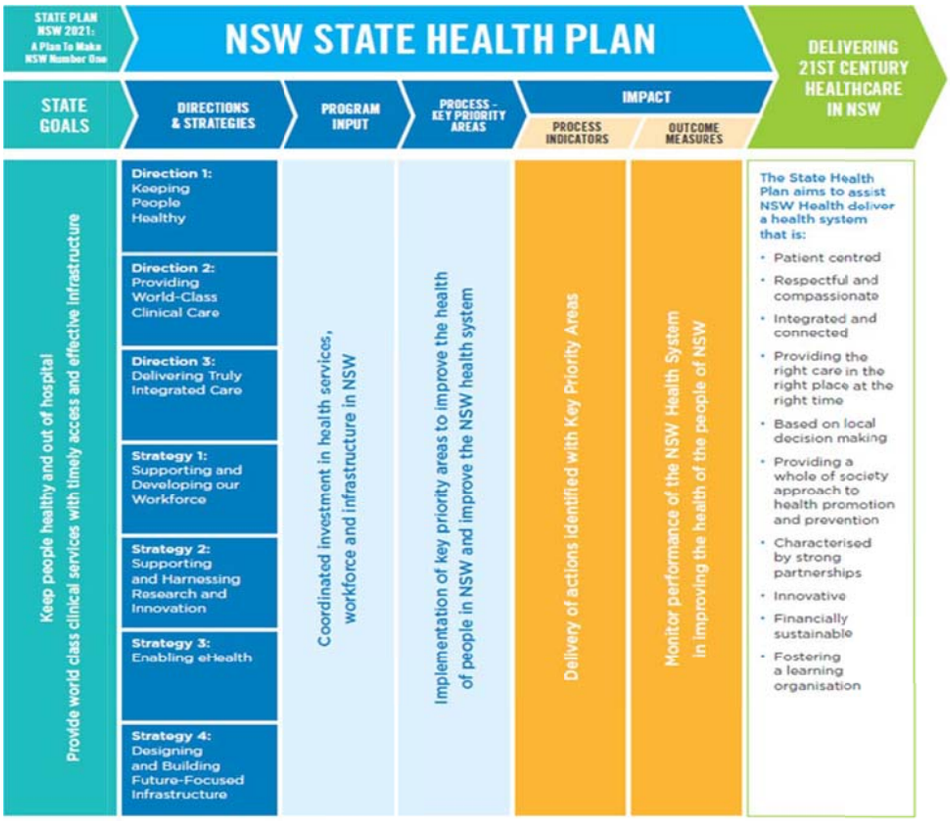


Figure 7 NSW Health Plan Directions and Strategies

The development of NMH directly aligns with the directions and strategies of the NSW State Health Plan, specifically:

- Direction Two: Providing World-Class Clinical Care. The NMH will assist with streamlining Emergency Department processes, reducing re-admission rates and supporting new service models to meet emerging health issues
- Direction Three: Delivering Truly Integrated Care. The NMH will support the delivery of seamless integrated care and avoid unplanned hospitalisations
- Strategy One: Supporting and Developing our Workforce. The NMH will enable the HNE Health workforce to deliver first class, patient-centred care
- Strategy Three: Enabling eHealth. The NMH will improve digital connectivity in line with the Blueprint for eHealth in NSW

- Strategy Four: Designing and Building Future-Focused Infrastructure. The NMH will deliver improved facilities and equipment to support the required delivery of care

Infrastructure NSW, State Infrastructure Strategy 2013

The State Infrastructure Strategy notes that like health systems around the world, the NSW health system is facing considerable challenges to meet growing demand driven by an ageing population, lifestyle diseases and new care technologies. The Strategy supports the delivery of a prioritised capital program which establishes proactively planned health care precincts with easy access to related private and public health services delivered by both government and non-government providers. The NMH will be the cornerstone for a Health Precinct which encourages partnership with NGO's and integration with ambulatory care services.

NSW Government State Infrastructure Plan 2014 – 15

The State Infrastructure Plan outlines the NSW Government's funded infrastructure priorities from 2014 – 2019. It includes projects to deliver improved services for communities throughout the State. The NMH is noted for the initial approval of $20 million for land purchase and planning.

The Lower Hunter over the next 20 years: A Discussion Paper March 2013
Lower Hunter Regional Strategy 2006

The Lower Hunter discussion paper looks at the elements that have shaped the Lower Hunter in the past, the trends that are expected to shape the Lower Hunter in the future and how we can facilitate and manage growth in a sustainable manner to the benefit of the Lower Hunter community. The paper notes that for the Lower Hunter to build on its potential as an economic contributor to NSW and Australia, it must overcome blockages to delivering new housing, strengthen employment and build the right infrastructure to meet the demand. The infrastructure needed to support the growing region is noted as:

- Economic infrastructure such as roads, railways, ports, airports and utilities
- Social infrastructure such as schools, educational facilities, hospitals and health clinics, housing, recreational and entertainment facilities

The Lower Hunter Regional Strategy represents an agreed NSW government position on the future of the Lower Hunter and applied to the period of 2006 – 31. The Strategy noted that the vision for the future was one that is sustainable, affordable, prosperous and liveable, where there is access to quality infrastructure and services, including education and health care.

2.5.2. Local Health District Service Plans

Hunter New England Local Health District Strategic Directions Towards 2017

Flowing from the State Plan is the Hunter New England Local Health District: Strategic Plan Towards 2017 which provides an endorsed blueprint for the provision of safe, high quality care to the Hunter New England population in the most efficient and effective manner possible. The clinical

strategies of the project are evaluated against the “Triple Aim” Framework that aims to improve health system performance. New strategies need to simultaneously pursue three dimensions:

- Improving the patient experience of care (including quality and satisfaction)
- Improving the health of populations
- Reducing the per capita cost of health care

Hunter New England Local Health District Operational Plan 2014/15

HNE Health is a values-based organisation. Staff, patient and community relationships are built on the core values of Collaboration, Openness, Respect, and Empowerment (CORE) so staff can use their knowledge, skills and experience to provide excellence for every patient every time. Service delivery and care at the NMH will be underpinned by these values which align to the NSW MoH values for health service provision. HNE Health has the following Strategic Priorities:

1. Community – the people we serve
2. Service – the service we provide
3. Patient Safety Quality and Experience – Excellence for every patient, every time
4. Resources – managing our services well
5. Positioning for the future – proactively preparing
6. Our staff and workplace culture – supporting and encouraging our staff

NMH will align with the overarching vision for NSW Health and the HNE Health vision of 'Healthy People – Now and into the Future', with the aim of providing health services that:

- Keep people healthy and out of hospital
- Provide world class clinical services with timely access and effective infrastructure

The vision for the NMH is a precinct of excellence for person centred care embracing the patient and their family as central decision makers in care design and delivery. The Precinct will incorporate both in-hospital and out-of-hospital care focusing on seamless integration of services across the continuum of care.

Service Agreement 2015 - 16

The Service Agreement is an agreement between NSW Health and HNE Health which supports the devolution of decision making, responsibility and accountability for the provision of safe, high quality, person centred health care. The agreement clearly sets out the service delivery and performance expectations for funding and other support provided to HNE Health. The agreed benefits of the project as detailed in the Benefits Realisation table will contribute to HNE Health meeting the objectives of the Service Agreement.

2.5.3. State Wide Service Plans

A number of key policies have been endorsed by the NSW Government for the consistent governance and delivery of healthcare in NSW. These policies inform health service and facility planning. The design of the NMH will comply with the relevant legislation and policy for the designated areas. The full list of relevant policies is outlined in Appendix 2.

2.5.4. Aboriginal Health Impact Statement

In the 2011 census, 7,306 people living in the Hunter Valley identified as being of Aboriginal or Torres Strait Islander origin. This represents 4% of the total Hunter Valley population, compared to the state average of 2% of the population.

Muswellbrook and Cessnock LGAs have statistically significantly higher proportions of Aboriginal people (5%) than other Hunter Valley LGAs. The Aboriginal population has higher proportions of children and young people and lower proportions of people aged 45 years and over, when compared to the non-Aboriginal population. It is recognised that Aboriginal people experience levels of disease two and a half times that of non-Aboriginal Australians, and that chronic diseases and associated risk factors are responsible for most of the life expectancy gap between Aboriginal and non-Aboriginal Australians.

The Aboriginal Health Unit based at Maitland is responsible for the management and delivery of programs across the Lower Hunter and Hunter Valley Sectors. The Aboriginal Health Unit works with all HNE Health Services, Aboriginal Community Controlled Health Services, Primary Health Networks and other key government and non-government organisations to *Close the Gap* in Aboriginal Health, with a specific focus on healthy lifestyle behaviours and preventative health measures. The unit is serviced locally by an Aboriginal Health Education Officer who is supported by an Aboriginal Health Coordinator.

The new facility design will consider opportunities for co-location of key Aboriginal health services and will ensure alignment with the HNE Health Aboriginal Cultural Audit Tool as the minimum standard for culturally safe and welcoming health services. Consultation and negotiation processes will occur to ensure that Aboriginal health principles, including a *whole of life* view of health, self-determination, working in partnerships, cultural understanding and recognition of trauma and loss, are reflected in the planning process.

The benefits of the NMH will help HNE Health to support their existing programs and achieve their closing the gap objectives. The project will consider HNE Health Aboriginal Health Plan 2014-2016. This Plan highlights the significant disparities in estimated life expectancy and health outcomes between Aboriginal and non-Aboriginal people in Hunter New England. Disparities include the gap in life expectancy (currently between seven to nine years), reduced access to medical and surgical interventions and increased rates of chronic disease. It identifies a range of strategies and actions aimed at delivering appropriate Aboriginal health care and enhancing a culture of sustainable, culturally informed practice while at the same time recognising, sharing and identifying opportunities for improved practices.

The purpose of the Aboriginal Health Impact Statement (AHIS) (NSW Health Policy Directive 2007_082 – refer Appendix 6) and Guidelines is to ensure the needs and interests of Aboriginal people are embedded into the development, implementation and evaluation of all NSW MoH initiatives. The AHIS comprises two elements:

- A declaration as to whether or not the specific initiative will impact the health of Aboriginal people

- A checklist detailing how the needs and interests of Aboriginal people have been elicited and incorporated where appropriate

The AHIS declaration and checklist has been completed for this stage of the project and is included in Appendix 6.

2.5.5. Other NSW Government and Australian Government policies

Commonwealth Reforms and Priorities - Activity Based Funding

In 2010, the Commonwealth Government announced the National Health and Hospital Network reform plan. A subsequent National Health and Hospital Reform Agreement was established with most Australian states to implement a nationally unified, locally controlled and accessible health system.

Associated with this reform plan is the change to the way health services are funded with the Commonwealth Government increasing its contribution for public hospitals and taking full responsibility for General Practice, primary health care and primary mental health care services.

This includes the introduction of an Activity Based Funding (ABF) program that more transparently links expenditure of public health dollars to patient services and outcomes. The staged implementation of this funding model is underpinned by the National Council of Australian Governments (COAG) agreements and aligns with the National Health Reform Agreement, under which there will be a national approach to health funding and a national efficient price for health services which came into effect in the 2014/15 financial year. The introduction of nationally based pricing has major implications for the development and delivery of health care within all New South Wales Local Health Districts.

Any reconfiguration of services will need to consider affordability against HNE Health's funding allocation within an ABF framework. This will identify potential efficiency improvements and inform priorities for clinical redesign to ensure a sustainable, resilient and high performing health service delivering better patient outcomes. The NMH services will mainly be funded through activity based funding arrangements. Therefore, enhanced service capacity and complexity will need to be planned in accordance with funding arrangements and allocated growth. This may be incremental year to year, maximising safe service development processes.

National Health Reform Agreement

The National Health Reform Agreement requires the NSW Government to establish service agreements with each of the LHDs, including performance management and accountability processes for remediation and poor performance. LHDs in turn are required to meet the conditions of COAG National Agreements and National Partnership Agreements between NSW and Commonwealth Government.

As a result, NSW is required to provide health and emergency services through the public hospital system, based on established Medicare Principles. These principles include:

- Eligible persons are to have access to, free of charge, equitable access to ED, public hospital outpatient and public hospital inpatient services
- Services are to be provided on the basis of clinical need and within a clinically appropriate period of time

The NMH provides the opportunity to address improvements to models of care that will enable improved health and emergency services for the residents of the Hunter Valley

National Safety and Quality Framework

The proposed vision for safe and high quality health care for Australia, on which this framework is based, was approved in April 2008. The framework includes a number of dimensions aimed at guiding action to improve safety and quality of care including:

- Patient focused care that is respectful of and responsive to individual preferences, needs and values
- Driven by information to improve the safety and quality of care, reduce unjustified variation in standard of care and to improve patient's experiences and clinical outcomes
- Organisational structures, work processes and funding models recognise and reward taking responsibility for safety

2.5.6. Hunter New England Local Health District Asset Strategic Plan

The HNE Health ASP 2013-2023 provides the long term approach for managing the district's land, buildings, infrastructure, plant and equipment to support implementation of health care priorities and initiatives outlined in the HNE Health Strategic Plan Towards 2017.

Specifically in relation to the NMH and Health Service Campus, the HNE Health ASP identifies the need for replacement and expansion of the existing Maitland Hospital to provide an improved, expanded flexible and contemporary facility to meet the health needs of the catchment population, integrated with the Hunter Valley network of hospitals.

The relationships between levels of the health system involved in Strategic Resource Planning is illustrated in the following figure that shows the relationship of the ASP to both district and State strategic directions.

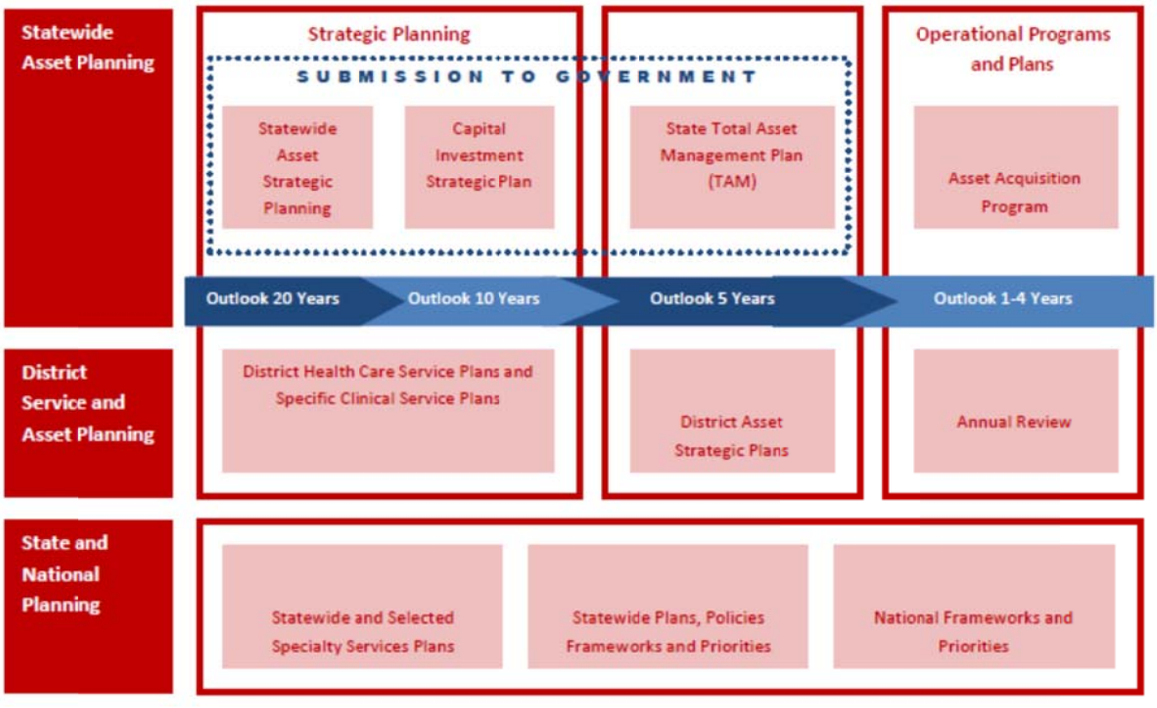


Figure 8 Asset Strategic Planning and Prioritisation Process

The key service drivers are the substandard asset base across the Lower Hunter and the need for capacity expansion of acute and mental health services. There is the need to develop a new rural referral hospital to replace Maitland Hospital and develop specific asset management plans for Kurri Kurri, Cessnock, Muswellbrook and Singleton Hospitals to implement the required realignment of these assets. The consolidation and realignment of services particularly for Kurri will enable HNE Health to improve efficiency dramatically across their network.

The HNE Health Investment Logic Map for the NMH is included in Appendix 1.

3. Service Delivery

3.1. The Strategic Case – The Case for Change

The existing Maitland Hospital is the rural referral hospital for the Hunter Valley and district hospital for greater Maitland residents. The Hospital has 172 acute overnight beds and 12 sub-acute overnight beds and provides medical, surgical, obstetric and emergency department services at level 3/4 Role Delineation (in accordance with New South Wales Health, Guide to Role Delineation of Health Services, Third Edition, 2002). In addition there will be 16 additional acute overnight beds in 2016 with the relocation of sub-acute overnight beds to KKH. KKH is under the management of Maitland Hospital to maximise efficiencies in service delivery and workforce utilisation across the two sites.

The existing Maitland Hospital is facing considerable challenges to meet the health demands driven by a growing and ageing population. As the population ages, the number of people with chronic conditions and co-morbidities is expected to rise and this will place a strong projected demand on HNE health services.

The current services are at 97% capacity resulting in a high percentage of patients attending or being referred to hospitals in Newcastle or Sydney to meet demand. There are only limited ambulatory care services that would assist to reduce hospital admissions and length of stay.

The HVSPP was established in 2012 to identify the future needs of the community and benefits to the State which included broad consultation with clinicians and other stakeholder groups and analysis of demand trends. The project delivered the Hunter Valley Health Services CSP and reviewed infrastructure of current health facilities in the Hunter Valley. The major recommendation was the development of a new rural referral hospital on a greenfield site to replace the current Maitland Hospital and provide increased service capacity and complexity.

It should be noted that the CSP developed an overall network plan for HNE Health to effectively service the population of the Lower Hunter. Twelve months after the CSP was endorsed, the SS built on the recommendations in the CSP to outline the specific service requirements for the NMH.

Review of these documents in 2015 led to HNE Health developing an alternative document – The New Maitland Hospital Capacity Options 2015 (later revised to 2016). This document outlines the assumptions underpinning capacity options for the NMH to inform the FBC and includes a review of previous documents including Hunter Valley CSP August 2013, NMH SS July 2014 and planning projections for NMH.

New Maitland Hospital Capacity Options document details the key drivers why there is a clear and urgent need to provide HNE Health with the capability and capacity to better meet the healthcare needs of the Lower Hunter community, to address future demand for services from a growing and ageing population and to better provide services closer to home.

3.1.1. The Service Drivers

The key service driver for the development of the NMH is the insufficient asset base across the Lower Hunter and the need for capacity expansion of health services. The detailed Service Drivers below are given for further rationale and justification with the current and projected strong demand for health services at the existing Maitland Hospital:

1. Access to Health Care and Inpatient Services
2. Critical Care (High Dependency and Intensive Care)
3. Medical Services
4. Surgery and Procedural Activity
5. Maternity Services
6. Emergency Department
7. Ambulatory Care and Outpatient Departments
8. Cancer and Chemotherapy Services
9. Sub-Acute Services
10. Mental Health
11. Ageing Infrastructure and poor functional layouts

Each driver is detailed further below:

1. Access to Health Care and Inpatient Services

The existing Maitland Hospital currently has 172 acute overnight beds and 12 sub-acute overnight beds. Reconfiguration of the bed base and transfer of sub-acute rehabilitation services to Kurri Kurri in 2016/17 will increase the acute bed capacity to 188 overnight beds. However, actual activity for 2013/14 has exceeded 2017 projections.

Between 2007/08 and 2010/11 there were 213,235 separations for residents of the Hunter Valley (excluding separations for chemotherapy, renal dialysis and unqualified neonates). As the referral hospital for the Hunter Valley, the existing Maitland Hospital admitted more Hunter Valley residents than any other public facility from 2008/09 to 2011/12. Maitland Hospital met 19% of the demand for inpatient services of Hunter Valley residents from 2008 – 2010, and then 20% from 2010 -2012.

Place of Residence	Acute Seps	Acute Bed days	% Total Acute Bed days
Greater Maitland Region	10,301	39,553	83%
Greater Newcastle	2,056	6,627	14%
Rest of NSW	439	1,460	3%
States of Australia	48	172	0.4%
Overseas and Unknown	13	105	0.2%
Total	**12,857**	**47,917**	**100%**

Table 3 Maitland Hospital - Current Acute Activity by Place of Residence, All Ages, 2010/11

2. Critical Care (High Dependency and Intensive Care)

In 2011, 3,196 patients were admitted to ICU/HDU beds in JHH, Tamworth, CMN and Manning Hospitals, the four main units which contribute to the HNE Health ICU database. Population data indicates a deficit in ICU beds in HNE Health, and a more significant deficit at the level of high dependency care. Based on population calculations, HNE Health is currently at least 6 ICU beds short on the basis of 5.5 ICU beds per 100,000 of population and 20 HDU beds deficient based on 5.5 HDU beds per 100,000 adult population. The projected population increases indicate an immediate and future deficit in ICU beds across HNE Health, and a more significant deficit at the level of high dependency care. There has been an increase in the acuity of patients presenting to Maitland placing additional demand on tertiary ICU and HDU services at JHH. The retrieval activity from Maitland to JHH has been steadily increasing.

The existing Maitland Hospital admits 8% of the district's acute admissions and currently there are no ICU services available in the Hunter Valley - Maitland Hospital has HDU and Coronary Care Unit (CCU) co-located within one unit of 8 inpatient beds. Historically, this consisted of 6 coronary care and 2 high dependency beds, however with the advent of the Medical Assessment Unit (MAU) a few years ago, utilisation has shifted to 4 coronary care/ 4 HDU beds. Contemporary ICU units separate CCU beds from ICU / HDU services. Consultation identified that critical care services were a significant service gap for the Hunter Valley, and therefore placed increased pressure on tertiary facilities at the JHH, JHCH and CMN.

20% of the total ICU hours and 20% of the total HDU hours at JHH in 2011/12 were for Hunter Valley residents. In 2011/12, 129 adult patients requiring ICU support were retrieved from Maitland and transferred to JHH or CMN. In addition, there were retrievals from other parts of the Hunter Valley as well as patients who were electively sent for management at the tertiary ICUs.

HNE Health undertook a strategic Intensive care and High Dependency Clinical Services Plan in 2013 to make recommendations for the district and to fulfil JHH's state-wide role. The Plan aligns with those of the NSW Intensive Care Services Plan Adult (2001) and identified that HNE Health requires 6 ICU beds and 15 HDU to meet current demand and that this should increase by 10.4 beds overall annually until 2016/17 and then 7.6 beds annually to 2021/22 to meet expected population growth in HNE Health.

In particular the Plan identified that the existing Maitland Hospital "had very limited critical care facilities". The completion of the Paediatric Intensive Care Unit (PICU) at JHH will relieve some pressure for paediatric services however pressure will remain for adult intensive care beds.

3. Medical Services

General medical services are provided at the existing Maitland Hospital in a 32 bed ward with an eight bed medical assessment unit and eight bed medical step-down unit which are both operating at capacity. The hospital provides a general medicine model of care supporting medical services including cardiology, gastroenterology, respiratory, endocrinology, immunology at predominately Role Delineation Level 4. Similar to many district and community hospitals general medical services is the core business for the hospital.

The CCU is co-located with the HDU with eight beds in total. The CCU beds have flex capacity which allows patients requiring cardiology services to be prioritised for a bed with patients requiring a HDU bed. There are no dedicated cardiology beds other than in the coronary care unit with patients admitted under a general physician. Limited outpatient services are provided including stress testing three days a week, and ECG and heart failure clinics.

Medical activity for 16+ years of age, demonstrates a projected increase of 22.8% from 2010/11 to 2021/22, at an annual growth rate of 2%. Safe and appropriate general medical services, at Role Delineation Level 4/5 will be provided at the NMH. These services will be supported by a range of clinical networks and outreach clinics including a range of general medical & sub speciality services.

4. Surgery and Procedural Activity

An extensive environmental scan was undertaken to calculate the demand for operating rooms at the NMH. Operating theatre data was analysed including surgical and procedural data, both admitted and non-admitted patients, surgical activity at Kurri Kurri District Hospital, a projected increase in caesarean section activity due to the increase in role delineation of maternity services and the expected growth in activity within the projected population. In 2013/14 there were a total of 6693 theatre attendances at the existing Maitland Hospital of which 3864 were elective and 2829 were emergency attendances. Total surgery is approximately 60% elective and 40% emergency / unplanned.

The existing Maitland Hospital is the centre of a surgical network in the Hunter Valley. It provides a broad range of emergency and elective surgical services predominately at Role Delineation Level 3/4. Higher acuity surgery is undertaken at the existing hospital with some surgical services provided at Kurri Kurri and Cessnock Hospitals, tertiary and complex surgery is provided for Hunter Valley residents at JHH, JHCH and other State specialist services. The hospital currently has 44 available surgical inpatient and 6 day of surgery beds, and is functioning at capacity. Planned surgery activity incorporates a range of services including orthopaedic, general surgery, urology, paediatric Ear Nose and Throat (ENT)/minor surgery, endoscopy, gynaecology and obstetrics day-only and short stay services. An emergency surgery service is provided as required and includes 24 hour on–call coverage.

Surgical services are provided by visiting medical officers, staff specialist, resident medical officers and registrars and supported by specialist anaesthetists and training registrars providing surgical and in-hospital pain management. Maitland Hospital also provides a central training hub for surgeons, anaesthetists, physicians, obstetricians and paediatricians in the Hunter Valley.

Currently Maitland Hospital has three operating theatres and one procedure theatre operating Monday – Friday 0800-1730hrs, and is utilising all existing theatre capacity, as well as theatre capacity at KKH to meet demand. The number of theatre attendances at the existing Maitland Hospital increased by 941 (17%) from 2008/09 to 2011/12. Overnight separations increased in that period – by 810 (35%) for surgery and 57 (33%) for procedures. Day-only surgical separations grew by 179 (14%) and day-only procedural separations by 11 (4%). The growth in theatre attendances contrasts with decreasing activity at other Hunter Valley facilities.

Demand for surgical services is represented strongly in the top 20 reasons for admission to the existing Maitland Hospital. “Other orthopaedics – surgical” was the second most frequent reason for admission in 2011/12 (841 separations) and “caesarean delivery” the fourth most frequent (575 separations). JHH accounted for 11% of surgical separations for Hunter Valley residents in 2011/12.

5. Maternity Services

Maitland Maternity services form part of the district and state Perinatal Service Network (PSN). Maitland Hospital is the only 24 hour service staffed by obstetricians in the lower Hunter and also undertakes all caesarean sections in the lower Hunter. The remaining maternity services in the Hunter Region (outside of JHH) are provided by GP obstetricians or midwifery models of service.

Womens’ inpatient services are projected to grow 13.7% between 2010/11 to 2021/22. This is an annual growth of 1.25%. This includes some reversal of flows related to the proposed change in Role Delineation.

Currently within HNE Health there are no Level 4 neonatal services, this means the JHH maternity services are required to manage all women from across the district with high risk pregnancies at risk of birthing less than 36 weeks gestation or whose new born is at risk of requiring Level 4 neonatal services after birth. Increasing Role Delineation from 3 to 4 (using the new Guide to Role Delineation) for Maternity Services and an associated increase in Role Delineation for the Special Care Nursery will reduce pressure on JHH.

SCN activity is projected to grow by 79.8% with the addition of new cots and the increased Role Delineation. This projected increase in activity is related to population growth and reversal of flows related to the Role Delineation. Actual service demand in 2013/14 exceeded aIM projections for 2016/17.

6. Emergency Department

On opening, all emergency services currently provided at Maitland and Kurri Kurri hospitals will transfer to NMH. The projected general Emergency Department activity for NMH demonstrates an increase in attendances of 16.8% from 2014/15 to 2021/22 (or an increase of 8,723 attendances), at an annual growth rate of 2.4% from years 2014/15 to 2021/22. Models of care will include fast track and an ESSU. A PECC will cater for residents presenting with mental health symptoms.

Emergency services for the Hunter Valley are provided across all acute facilities and multi-purpose services (MPS) in scope at various role delineated levels. The existing Maitland Hospital Emergency Department (ED) provides the highest level of emergency services for the Hunter Valley at Role Delineation Level 4.

The ED was redeveloped in 2010 and comprises 2 resuscitation beds, 14 adult acute / observation bays, 4 paediatric acute / observation bays, 4 fast track bays, a negative pressure isolation room , 2 treatment rooms , a plaster / procedure room, a Hughes Walters/ Clinical Initiatives Nurse (CIN) room and a safe assessment room.

Fast track systems are in place in the ED and the department utilizes an 8 bed MAU located within the medical ward to admit patients who require short stay admissions whilst further investigations are undertaken. Patients can be discharged from the MAU or be admitted for further care as required. The ED lacks an ESSU resulting in some patients staying in the ED beyond the ETP.

The GP After Hours Access Clinic (GPAAH's) clinic is currently available at the existing Maitland Hospital to assist in the management of low priority triage category presentations. For the 6 month period from January to June 2014, 78% of available appointments were utilised by the ED, decreasing pressure on the ED.

7. Ambulatory Care and Outpatient Departments

Ambulatory care is defined as the provision of health services on a same day basis on the hospital campus, integrated with acute- care services. The existing Maitland Hospital currently provides a limited outpatient clinic service provided by staff specialists and registrars. A service gap currently exists in ambulatory care and non-admitted clinics at the existing Maitland Hospital and community health services are provided from EMCHC

The focus of ambulatory care services including outpatient clinics, same day services and hospital avoidance or substitution is required to support inpatient activity. There is a projected need for 54 consulting/clinic rooms to accommodate clinical services (to 2026/27). The consulting/clinic rooms need to be supported by interview and treatment / procedure rooms. To assist with the predicted medical day activity a day medical unit will be included to reduce the need for patients to utilise overnight accommodation. The rationale for the number of clinics for NMH is based on;

- Current number of clinics at the existing Maitland Hospital is 37 including Child and Youth Mental Health Service (CYMHS). This is underestimated as some spaces are dual offices and clinic spaces.
- Requirements for outpatient clinics to support inpatient activity, ambulatory care, same day activity and new models of care for services to maximise the avoidance of hospital admissions.
- As a comparison JHH and JHCH have 110 clinic rooms (excluding decentralised clinics), which are functioning at capacity and cannot meet the outpatient service demands.

Approximately 70% of the total burden of disease in Australia is attributable to chronic diseases, all of which have the potential to be either prevented or managed in settings other than in an acute hospital. Services that were traditionally provided as multi-day inpatient episodes of care are increasingly being provided as day only or 'ambulatory' episodes of care. Importantly, Ambulatory care services reduce the disruption to the lives of patients and their families, and improve the effective use of available resources.

8. Cancer and Chemotherapy Services

HNE Health has the largest number of new cancer cases in NSW (14%). As well, new cancer cases are projected to increase by around 30%. Cancer will continue to be one of the major causes of morbidity and mortality for residents of the Hunter New England region.

HNE Health cancer services will need to meet the increased demand associated with an ageing population, improved screening and diagnosis, improved survival, and a significant number of patients developing more than one cancer throughout their life.

A service gap currently exists with minimal incidental surgical services for cancer provided at Maitland Hospital. Adult cancer services are provided to residents of the Lower Hunter at CMH and paediatric cancer services are provided at JHCH. Extensive day only chemotherapy and radiation oncology is provided at CMN for adult and day only chemotherapy for children at JHCH. Tertiary level cancer-related surgery, for example head and neck surgery, is undertaken at JHH, however all surgeons incorporate cancer-related surgery in their current specialties, for example urology and gynaecology.

9. Sub-Acute Services

Currently rehabilitation is provided through in reach to acute services with 12 bed rehabilitation unit at the existing Maitland Hospital. Ortho-geriatric rehabilitation patients are directed toward KKH for rehabilitation services in a new purpose-built facility. There are no inpatient rehabilitation beds geographically located between the existing Maitland Hospital and Tamworth Health Service. Local facilities provide opportunities for maintenance care but no formal rehabilitation models of care exist.

Rehabilitation and Sub Acute services across the KKH and NMH campuses are being greatly expanded. HNE Health is projecting a growth of 171% and providing capacity to meet this demand.

10. Mental Health

Contemporary models of least restrictive mental health care including assessment, short term admissions, and intervention have not been established in Maitland. The existing 24 bed Mental health unit provides 18 general mental health beds and 6 higher acuity beds in the observation area.

Both the existing Emergency Department and Acute Mental Health Inpatient Unit at Maitland Hospital have limited capacity or processes to provide the least restrictive short term inpatient care to patients who are likely to require only a brief (up to 48 hours) period of time in hospital. Analysis of admissions to Maitland Mental Health Unit for the 6 months (Jan to June 2014) identified that 35% patients had a length of stay of 72 hours or less.

11. Ageing Infrastructure and poor functional layouts

The existing Maitland Hospital is positioned on an irregularly shaped site on the north-western side of Maitland, bounded by High Street to the west and south, Mount Pleasant Street to the north and Halls Creek to the floodway on the east. The Hospital dates back to the 1840's and is a complex of 21 buildings (Blocks A to S and four other cottages) of varying ages and designs distributed unevenly across the site.

The site is the subject of its own heritage Conservation Plan. In addition there is no helicopter landing site on the site – in the event of a patient retrieval or disaster recovery, helicopters land adjacent to the cricket pitches in the oval on Mount Pleasant Street to the north-east, where they are met by ambulances that convey patients to the Hospital. While many of the main patient areas are well maintained, especially in the newer buildings, the facilities generally show sign of age. A number of buildings are unable to be utilised or their use is affected by the hospital's heritage Conservation Plan.

The layout and functional relationships of the existing Maitland Hospital are illustrated below;

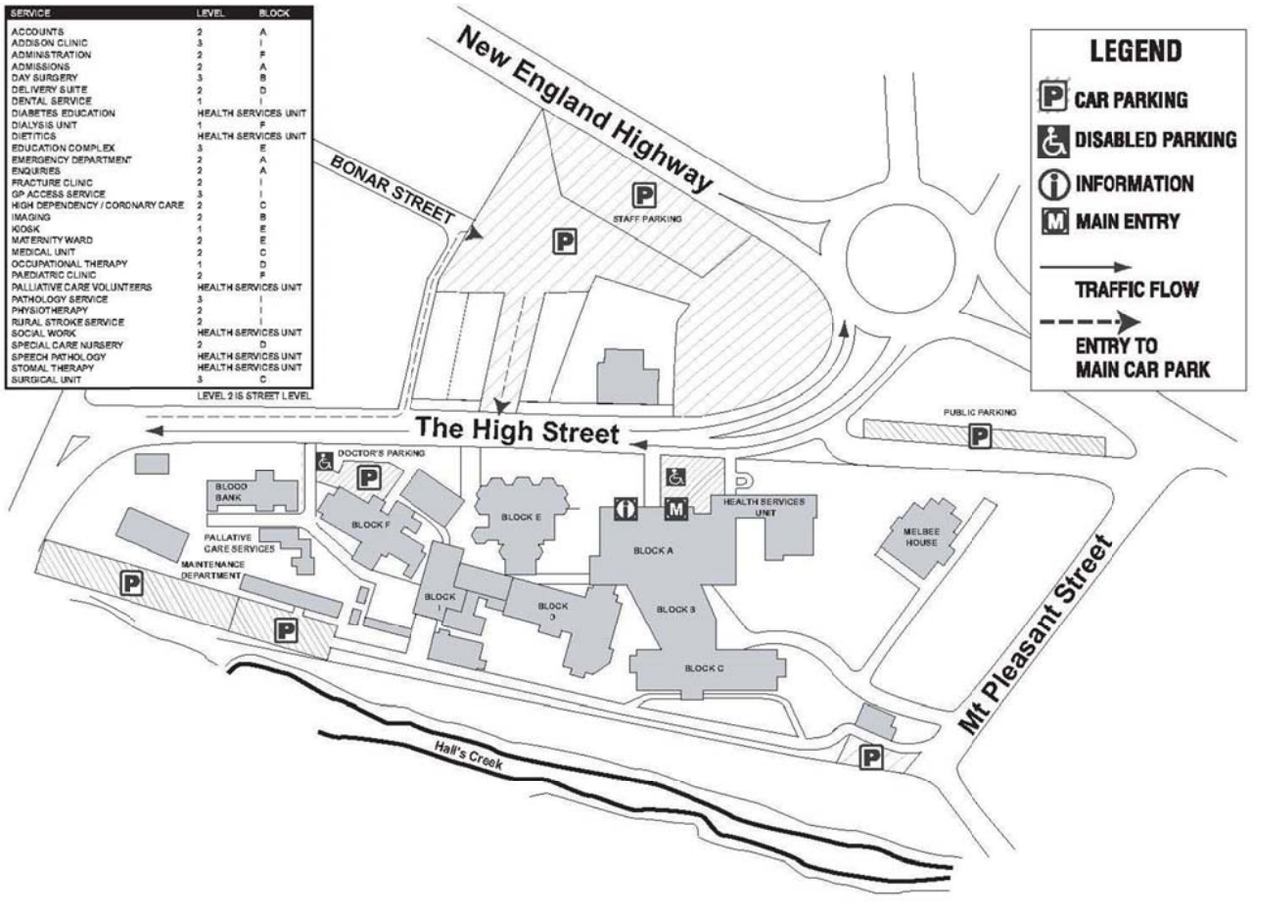


Figure 9 Existing Maitland Hospital layout

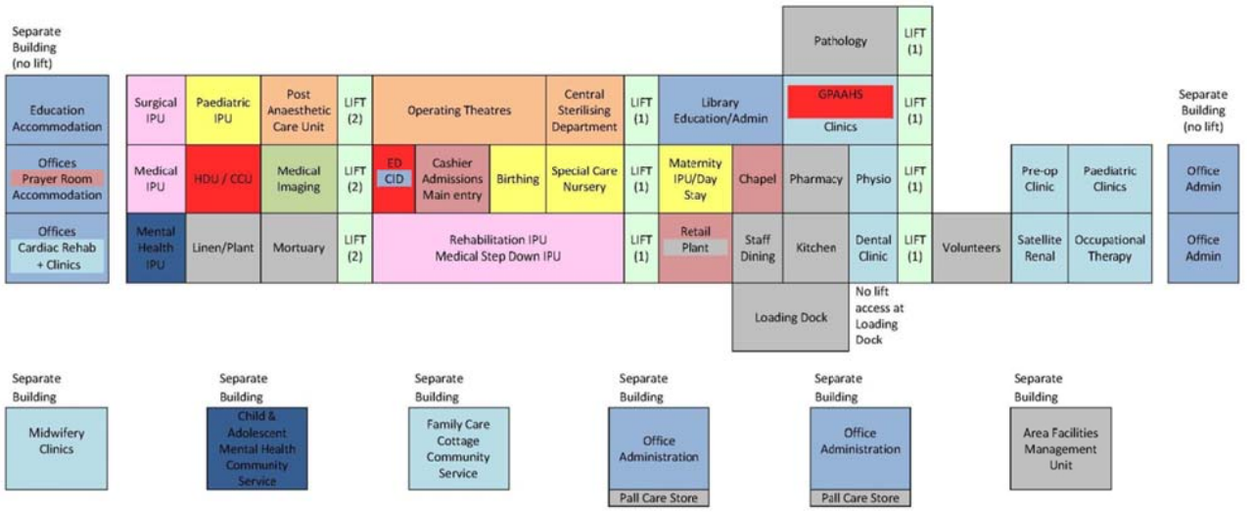


Figure 10 Existing Maitland Hospital functional relationships

The reasons why Maitland is not suitable for redevelopment are as follows;

1. *Efficient delivery of health services*

As part of the Value Management process for the PBC for the NMH there were two options included in the long list of options that retained services on the existing site. These two options were excluded from proceeding based on the finding that the existing site was unable to

- Maintain business continuity during a major redevelopment
- The available footprint for redevelopment was not of suitable size to meet the predicted demand

Furthermore the recurrent costs of having health services operated from two sites i.e. Metford and existing Maitland, were assessed and were found not to be sustainable.

2. *Physical Infrastructure & Environment*

A review of the current Maitland hospital facilities identified the following major issues related to the infrastructure;

a. Number of buildings on site – There are a total of 21 buildings that occupy the Maitland Hospital "campus". These building pose significant connectivity challenges for the supply of goods and consumables or removal of waste. Furthermore for patients this lack of connectivity requires travel paths that include multiple changes in surface, inclines & exposure to the elements. For aging populations or parents with prams or patients in wheelchairs or mobility scooters this poses significant impact on accessibility to clinical services. For staff it results in increased time spent walking between buildings, difficulties in establishment of contemporary models of care from a co-located multi-disciplinary team (MDT). The multiple buildings also pose challenges with security of individual buildings and multiple entries and exits to be monitored to ensure lock down each night.

b. Disjointed Building /Site Layout - For the various services located in houses or outbuildings deliveries of stores or removal of waste requires trolleys to traverse uneven paths or varying

inclines. Some pathways are isolated and other buildings not connected at all. Access between separate buildings is problematic for security and work flows. Internal planning and relationships are generally satisfactory to newer areas, but there are poor functional relationships to isolated buildings, and older facilities do not comply with current standards and guidelines. Other site issues include the loading and receiving docks being unable to access the main campus complex in inclement weather.

c. Age of buildings – The hospital has grown in a piecemeal way. The age of buildings dates from 1840 through to 2010. The building fabric is indicative of the age of the construction – including in some buildings the presence of hazardous materials. While many of the main patient areas are well maintained, especially in the newer buildings, the facilities generally show sign of age. A number of buildings cannot be fully utilised or their use is affected by the hospital's heritage Conservation Plan. The functionality and space occupied by Blocks H, I, O and S are problematic, as the latest major works in the 1990s did not address these areas.

d. Relationship between building & service delivery - The site development is reflecting the adaption of existing buildings to accommodate changed service or models of care. However these changes in themselves pose further challenges & result in dysfunctional relationships. For example the GPAAHS service was introduced to respond to low acuity ED patients – ideally this service would be located close to the ED & medical imaging however due to space limitation these relationships are not achieved. HNE have undertaken an audit of key functional relationships and their inadequacies in the current Maitland Hospital.

HNE Health has rated the existing functional relationships utilising the same format and colour coding to represent the key functional relationships for the NMH as follows;

Colour/Key	Cluster
Ambulatory Care	Clinics, Allied Health, Dental, Renal, Family Care Cottage, Cardiac Rehab, Midwifery clinics
Office/Admin	Office, Administration, Education, Library, Accommodation
Women's & Children	Paediatric IPU, Birthing Unit, Special Care Nursery, Maternity IPU, Maternity Day Stay
IPU	Inpatient Units – Medical, Surgical, Rehabilitation, Medical Step Down
Perioperative	Operating theatres, Post Anaesthetic Care Unit, Central Sterilising Department
Critical Care	Emergency Department, High Dependency and Coronary Care Unit, GP Access
Mental Health	Mental Health IPU, Child and Adolescent Mental Health Community Service
Medical Imaging	Medical Imaging
Lift Core	Lift core – patients, staff, public
Support Services	Support Services – Pharmacy, Pathology, Linen, Loading Dock, Mortuary, Volunteers, Area Facilities Management Unit, Plant Rooms, Kitchen, Staff Dining, Palliative Care Equipment Store

Main Entry	Main Entry, Retail, Cashier, Chapel, Admissions

Table 4 Functional relationship coding

In Table 11 (overleaf) HNE have rated the existing functional relationships as either:
5 – ideal
3 - average
1 – poor

Table 5 Maitland Hospital – Existing Hospital Departmental Functional relationships

NEW MAITLAND HOSPITAL DEVELOPMENT
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Functional Relationship - Adjacencies - Current Maitland Hospital

	Emergency Department	HDU / CCU IPU	GPAAHS	Nuclear Medicine	Medical Imaging	Cardiac Cath Lab	Central Sterilising Department	Operating Theatres	PACU / Day Stay	Maternity Day Stay	Maternity IPU	Birthing Unit	Special Care Nursery	Paediatric IPU	Family Care Cottage	Midwifery Clinics	Medical IPU	Surgical IPU	Medical Step Down IPU	Rehab IPU	Mental Health IPU	Child & Adolescent Mental Health Services	Dental Clinic	Satellite Renal	Clinics / Ambulatory Care	Clinical Information Department	Departmental Office Admin	Pathology	Pharmacy	Loading Dock	Linen	Mortuary	Helipad	Main Entry	Retail	Chapel
Emergency Department																																				
HDU / CCU IPU	3																																			
GPAAHS	3	–																																		
Nuclear Medicine	Off site	Off site	–																																	
Medical Imaging	5	5	1	Off site																																
Cardiac Cath Lab	Off site	Off site	–	Off site	–																															
Central Sterilising Department	3	–	5	–	–	–																														
Operating Theatres	1	3	–	–	3	Off site	5																													
PACU / Day Stay	1	3	–	–	3	–	5	5																												
Maternity Day Stay	3	–	–	–	5	–	5	–	3																											
Maternity IPU	3	3	–	–	5	–	5	1	3	5																										
Birthing Unit	3	3	–	–	5	–	5	1	3	5	5																									
Special Care Nursery	–	–	–	–	5	–	5	1	1	5	5	5																								
Paediatric IPU	3	–	–	–	5	–	5	5	5	5	–	–	5																							
Family Care Cottage	–	–	–	–	–	–	–	–	–	–	–	–	–	–																						
Midwifery Clinics	–	–	–	–	1	–	–	–	–	1	1	1	–	–	–																					
Medical IPU	5	5	–	–	5	–	5	5	5	–	–	–	–	–	–	–																				
Surgical IPU	3	3	–	–	5	–	5	5	5	5	–	–	–	–	–	–	5																			
Medical Step Down IPU	3	5	–	–	5	–	5	5	5	–	–	–	–	–	–	–	5	5																		
Rehab IPU	–	5	–	–	5	–	5	5	5	–	–	–	–	–	–	–	5	5	5																	
Mental Health IPU	1	1	–	–	–	–	–	3	3	–	–	–	–	–	–	–	5	5	–	–																
Child & Adolescent Mental Health Services	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–															
Dental Clinic	5	–	–	–	3	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–														
Satellite Renal	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–													
Clinics / Ambulatory Care	3	–	–	–	1	–	1	–	–	3	1	1	–	1	–	1	5	5	–	–	–	–	–	–												
Clinical Information Department	5	5	–	–	5	–	–	–	–	3	5	3	5	5	3	1	5	5	5	5	5	–	–	–	1											
Departmental Office Admin	5	5	–	–	5	–	5	1	1	1	5	1	1	1	1	3	1	1	1	1	3	5	3	3	1	3										
Pathology	5	1	5	–	–	–	–	1	1	1	3	1	3	3	–	1	3	3	3	3	3	–	–	5	3	–	1									
Pharmacy	5	5	5	–	5	–	–	5	5	5	5	5	5	5	–	–	5	5	5	5	5	–	–	5	3	–	3	5								
Loading Dock	1	1	1	–	1	–	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1							
Linen	5	5	–	–	5	–	5	5	5	5	5	5	5	5	1	1	5	5	5	5	5	–	5	5	5	–	3	–	–	5						
Mortuary	5	5	–	–	–	–	–	5	5	–	5	5	5	5	–	–	5	5	5	5	5	–	–	–	–	–	–	–	–	–	5	5				
Helipad	Off site	Off site	–	–	–	–	–	–	–	–	–	Off site	Off site	Off site	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			
Main Entry	5	5	1	–	5	–	–	3	3	5	5	5	5	5	–	–	5	3	1	3	3	3	1	1	1	1	–	1	3	–	–	5	–			
Retail	3	3	1	–	3	–	–	3	1	5	5	5	5	3	–	1	3	3	5	5	5	1	5	3	1	3	–	3	5	–	–	–	–	1		
Chapel	3	3	–	–	–	–	–	3	3	5	5	5	5	3	–	–	3	3	3	3	3	–	3	3	3	–	–	–	–	–	–	3	–	3	5	
	Emergency Department	HDU / CCU IPU	GPAAHS	Nuclear Medicine	Medical Imaging	Cardiac Cath Lab	Central Sterilising Department	Operating Theatres	PACU / Day Stay	Maternity Day Stay	Maternity IPU	Birthing Unit	Special Care Nursery	Paediatric IPU	Family Care Cottage	Midwifery Clinics	Medical IPU	Surgical IPU	Medical Step Down IPU	Rehab IPU	Mental Health IPU	Child & Adolescent Mental Health Services	Dental Clinic	Satellite Renal	Clinics / Ambulatory Care	Clinical Information Department	Departmental Office Admin	Pathology	Pharmacy	Loading Dock	Linen	Mortuary	Helipad	Main Entry	Retail	Chapel

e. Changing Models of Care - The introduction of the Medical Assessment Unit (MAU) into an existing medical inpatient unit has resulted in sub optimal amenities for patients, visitors and staff. For example the patient /visitor lounge area is located in a public corridor. Due to space constraints related to increasing manual handling aids and equipment required to manage bariatric patients' clinical areas such as interview rooms have now been re-purposed for equipment storage. Other changes to policy or practice have also impacted on amenities for patients, staff and visitors. Following the publication of the "Final report of the Special Commission of Inquiry into Acute Care Services in NSW Public Hospitals" (also known as the Garling Report) numerous recommendations were made that further impacted on the required amenities for patient care. While these changes were individually fairly minor they placed pressure on existing inadequate facilities.

f. Lack of helipad on site – This results in helicopters landing on the Mount Pleasant Street cricket pitch and patients transported to and from the hospital via ambulance transport to the waiting helicopter.

g. Lift access – While there are three lift cores in the "core clinical buildings" these lifts are unreliable and pose delays to staff, patients and the public using them. In Block F which houses a range of ambulatory services there is no lift which limits access to the levels above ground for both patients and staff.

h. Travel Paths - There is no separation of public and patient/back of house travel routes. This results in patients being transported in lifts that may also be transporting consumable stock, waste, soiled linen or food or along corridors in direct view of the public. This is particularly important for travel routes from Delivery Suite to Operating Theatres for emergency caesarean sections or transport to or from the Mental health unit for distressed and agitated patients. For critically unstable patients requiring retrieval for higher level care the patient does traverse public corridors from HDU through ED to the Ambulance bay.

i. Loading Dock - There is no clear defined loading dock area for deliveries to the campus. Similarly there is no travel route that enables a pallet of stores to be delivered to any of the core clinical units. A dumb waiter is available however due to its size this requires the pallet to be decanted and recanted into smaller sized "packages" for transport. In other buildings even the facility of the dumb waiter is not available, for example in Block F clinical, consumables, equipment (computers, workstations etc.) and stationery stores, soiled linen & waste have to be manually carried up and down multiple flights of stairs. The travel routes for the delivery of pallets of dialysis fluid to the Renal Unit requires the utilisation of the patient transport pick up area as a loading/unloading area. Once inside the building many door ways are too narrow to allow easy movement through the building with a pallet jack.

j. Multiple changes in levels across the site - The varying developments across the site have resulted in buildings not having consistent floor levels or floor to floor heights. This results in varying levels across the site and connections between buildings needing ramps or stairs to connect to the next building, resulting in WH&S issues for staff moving items across dislocated buildings.

k. Non-compliance with statutory requirements – namely the Building Code of Australia (BCA) and Disability Discrimination Act (DDA) - key areas of the hospital buildings do not have adequate fire separation and effective compartmentation. Other buildings do not have compliant DDA access externally. Several buildings do not meet DDA requirements internally for accessible amenities (toilets, change rooms or showers), corridor width, or door hardware etc.

l. Storage areas for consumables and equipment - Across the campus storage areas are inadequate in terms of physical space and functionality. The lack of a Building Management and Control System (BMCS) does not allow for remote monitoring of temperature or humidity control for sterile stock areas as required by the Australian Standards, instead local monitoring is undertaken.

m. Buildings on the State Heritage Inventory - several buildings on site are identified in the Heritage Conservation plan – Block D, Block E, Block F, Block H and Block I are identified as a rating “marginal worthy of recording”. Conservation policy is exterior conservation with adaption of interiors. Other buildings including Block G (Melbee House) have a higher rating of “Medium” and should be seriously considered to be conserved. Whereas Block J, Block K, Block L and Block N are recorded as ratings of “High” and should be considered or restored if practicable. These buildings require preservation and partial reconstruction of the exterior and preservation, conservation and adaption of the interior.

n. Construction methods - make some existing buildings difficult to repurpose. For example, buildings with interior load bearing masonry walls pose challenges to future adaptability.

o. Infrastructure limitations - Each major infrastructure has deficits and limitations, a summary of the key issues faced include:
   ii) There is no *centralised plant* which services all areas of the hospital.
   iii) *Electrical distribution boards* across the campus are generally non-compliant to current standards. A range of non-compliance issues have been identified with lighting, light switching, emergency lighting, exit signs and in some clinical areas there are no Residual Current Devices (RCD’s). There are insufficient data outlets in older buildings to comply with TS11 and the nurse call does not interface with other systems.
   iv) *Mechanical systems* - the air conditioning units range from single window units to roof top plants and Air Handling Units.
   v) There is currently no central *BMCS* on site.
   vi) *Medical gases* - there is currently limited bulk oxygen storage available on site.
   vii) *Sewer & stormwater* - the sewer system is in a reasonable condition however the fixtures are beyond their normal economic lifespan.
   viii) *Fire systems* - In the older buildings testing of fire alarms is not possible due to the age of the buildings/systems.

p. Hazardous materials have been identified on the site these include asbestos (both bonded and friable), synthetic mineral fibres, lead based paint and Polychlorinated Biphenyls (PCB’s). The impact of these materials varies from building to building dependent upon the age and state of refurbishment undertaken. Some buildings have evidence of all three hazardous materials.

q. Limited pneumatic tube connection - contemporary facilities utilise pneumatic tube systems to transport specimens to the pathology department and other sites also use this system to transport medications to clinical departments from pharmacy. The current Maitland Hospital has only one connection from the ED to the pathology department. This results in all other clinical units needing to use staff to physically transport specimens to the pathology department or pneumatic tube.

r. Culturally appropriate environment - There are challenges across the existing site to meet the needs for a range of cultural groups. For example while there is a Christian chapel for visitors, patients or staff, there is no appropriate area for people of other faiths or beliefs to attend to rituals of prayer or quiet reflection. Similarly there are no outdoor areas for large Aboriginal groups to meet or gather in times of crisis. Access to large meeting rooms for this population is also very limited on the campus.

s. Parking - Access to and parking around the site is regularly congested due to close proximity of town centre, neighbouring shops and lack of space.

3.2. Catchment profile

Local health district

HNE Health covers a large geographic area (16% of the area of NSW) with a major metropolitan centre (Newcastle) and several regional population centres as well as small remote communities. Maitland Hospital is the rural referral hospital for the Hunter Valley which incorporates five district hospitals, two community hospitals, two multi-purpose services and seven community health centres. JHH, JHCH and CMN are the main tertiary referral services for the district.

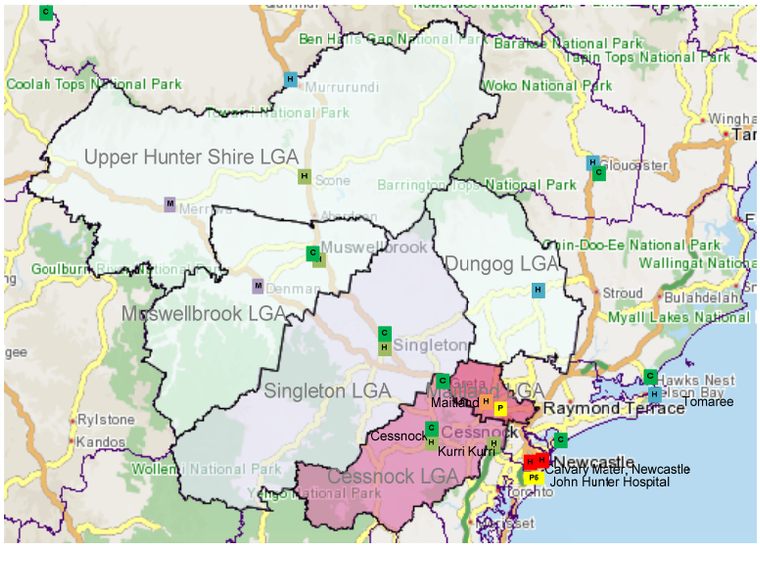


Figure 11 Hunter Valley Local Government Areas, Facilities and Population Densities

The Hunter New England Local Health District includes LGAs of:

- Newcastle
- Lake Macquarie
- Port Stephens
- Maitland
- Dungog
- Singleton
- Cessnock
- Upper Hunter
- Narrabri
- Gwydir
- Tamworth
- Walcha
- Gunnedah
- Liverpool Plains
- Muswellbrook
- Greater Taree
- Great Lakes
- Inverell
- Tenterfield
- Glen Innes Severn
- Uralla
- Armidale Dumaresq
- Guyra
- Gloucester
- Moree Plains

Population profile

In 2011, an estimated 875,573 people lived in the HNE LHD .

Age	2011	2011 % Total
0-14	167,854	19%
15-24	115,642	13%
25-34	101,880	12%
35-44	111,097	13%
45-64	229,473	26%
65+	149,627	17%
Total	**875,573**	**100%**

Source: 2011 Census, Australian Bureau of Statistics; supplied by Hunter New England Local Health District June 2014.

Table 6 Hunter New England Local Health District Population Profile

The following profile of HNE Health focuses on the Hunter Valley catchment, which comprises the LGAs of Cessnock, Dungog, Maitland, Muswellbrook, Singleton and Upper Hunter. In 2011, an estimated 185,021 people lived in the Hunter Valley catchment.

Age	2011	2011 % Total
0-14	39,647	21%
15-24	25,248	14%
25-34	23,884	13%
35-44	25,385	14%
45-64	46,948	25%
65+	23,909	13%
Total	**185,021**	**100%**

Source: NSW Department of Planning and Environment: 2014 Final Population Projections; supplied by HNE Health June 2014.

Table 7 Hunter New England Local Health District Population Profile

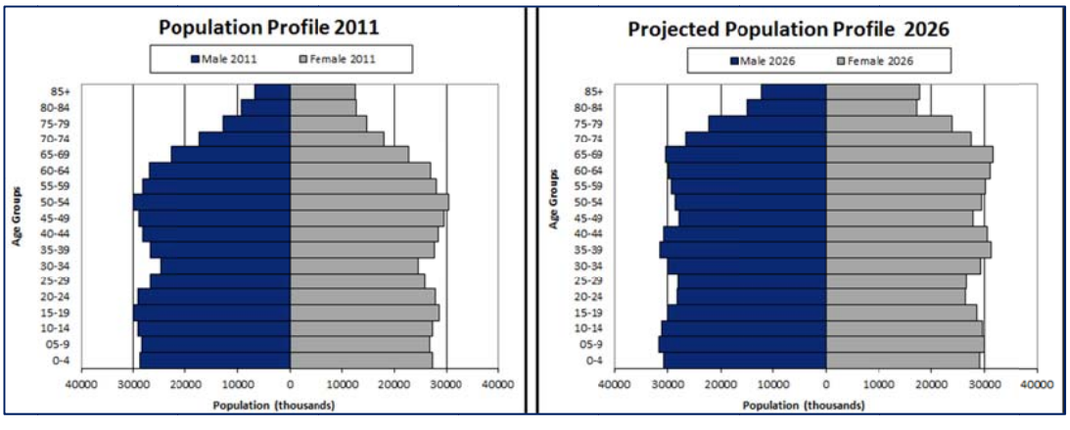
Population projections

The population of the HNE Health is projected to increase to 992,646 by 2026. The age group 65 years and over is expected to experience the largest growth, increasing by 50% from 2011 to 2026, at an annual growth rate of 2.7%. As a proportion of the total population, this is an increase from 17% in 2011 to 23% by 2026.

Age	2011	2011 % Total	2026	2026 % Total	Change	% Change	AGR %
0-14	167,854	19%	182,414	18%	14,560	9%	0.6%
15-24	115,642	13%	113,131	11%	-2,511	-2%	-0.1%
25-34	101,880	12%	113,982	11%	12,102	12%	0.8%
35-44	111,097	13%	124,133	13%	13,036	12%	0.7%
45-64	229,473	26%	234,464	24%	4,991	2%	0.1%
65+	149,627	17%	224,521	23%	74,894	50%	2.7%
	875,573	**100%**	**992,646**	**100%**	**117,073**	**13%**	**0.8%**

Source: NSW Department of Planning and Environment: 2014 Final Population Projections; supplied by Hunter New England Local Health District June 2014.

Table 8 HNE Health Population Projections by Age Groups to 2031



Source: NSW Department of Planning and Environment: 2014 Final Population Projections; supplied by Hunter New England Local Health District June 2014.

Figure 12 HNE Health District Population Profile Pyramids 2011 and 2031

The population of the Hunter Valley catchment is expected to increase to 225,141 residents by 2026, an increase of 40,120 residents or 22%. This is an annual growth rate of 1.3% from 2011. The LGA of Maitland is expected to experience the largest growth of the LGAs in Hunter Valley, increasing to 92,756 residents or 41% by 2026, at an annual growth rate of 1.9% from 2011.

LGA / SLA label	2011 ERP	2016	2021	2026	% Total 2026	Change 2011-2026	% Change 2011-2026	AGR
Cessnock (C)	52,484	55,904	59,535	63,013	28%	10,529	20%	1.2%
Dungog (A)	8,556	8,660	8,741	8,789	4%	233	3%	0.2%
Maitland (C)	69,924	77,918	85,266	92,756	41%	22,832	33%	1.9%

LGA / SLA label	2011 ERP	2016	2021	2026	% Total 2026	Change 2011-2026	% Change 2011-2026	AGR
Muswellbrook (A)	16,328	17,080	17,861	18,618	8%	2,290	14%	0.9%
Singleton (A)	23,523	24,569	25,580	26,516	12%	2,993	13%	0.8%
Upper Hunter Shire (A)	14,206	14,680	15,097	15,450	7%	1,244	9%	0.6%
Grand Total	185,021	198,811	212,080	225,141	100%	40,120	22%	1.3%

Source: NSW Department of Planning and Environment: 2014 Final Population Projections; supplied by Hunter New England Local Health District June 2014.

Table 9 Hunter Valley Catchment Population Projections by LGA to 2011 to 2026

Socio-economic characteristics

The Australian Bureau of Statistics Socio-Economic Indexes for Areas has been calculated using the 2011 Census of Population and Housing data. These indexes allow comparison of social and economic conditions across Australia. Socio- Economic Indexes for Areas values are derived from multiple-weighted variables, with the reference value for the whole of Australia set to 1,000 for each index. Lower values indicate lower socio-economic status. When measured against the national reference, the LGAs of the Greater Maitland catchment has lower levels of socio-economic advantage.

LGA	Relative Socio-Economic Disadvantage	Education and Occupation
Cessnock (C)	936	878
Dungog (A)	989	956
Maitland (C)	993	945
Muswellbrook (A)	968	893
Singleton (A)	1013	925
Upper Hunter Shire (A)	981	926

Source: 2011 Census, Australian Bureau of Statistics.

Table 10 2011 Relative socio-economic disadvantage

Socio-economic factors impact on a person's health. The most common measure of socio-economic status is the Social and Economic Index for Areas (SEIFA) score and is derived from income, educational attainment, unemployment and proportion of people in low-skill occupations. An IRSD score under 1000 indicates that there is relative disadvantage within the area. Most Hunter Valley LGAs have a score under 1000: Cessnock (IRSD=936), Muswellbrook (968), Upper Hunter (981), Dungog (989), and Maitland (993). Even though Singleton (1013) has a higher score, it is important to note that there are pockets of disadvantage within the Singleton LGA.

The Hunter Valley has an ethnically diverse population. These populations are often at risk and need special consideration in the design and delivery of appropriate healthcare services. In the Hunter New England Local Health District catchment:

- Maitland has the highest proportion of residents (3.1%) who speak a language other than English at home
- All LGAs have at least 20% of total households are lone person households
- All LGAs have at least 65% of homes have internet connections

Characteristic	Percentage of total per Greater Maitland LGA					
	Cessnock	Dungog	Maitland	Muswellbrook	Singleton	Upper Hunter
Aboriginal or Torres Strait Islander	4.8%	3.2%	3.5%	5.4%	3.7%	3.9%
Speak language other than English at home	1.7%	1.1%	3.1%	2.8%	2.7%	1.9%
Lone person households	23.8%	23.8%	21.5%	25.6%	20.7%	27.2%
Dwellings with internet connection	67.0%	68.1%	73.5%	68.0%	74.4%	65.6%

Source: 2011 Census, Australian Bureau of Statistics.

Table 11 Socio-demographic census characteristics, 2011

Aboriginal Population

In the 2011 census 7,306 people living in the Hunter Valley identified as being of Aboriginal or Torres Strait Islander origin. This represents 4% of the total Hunter Valley population, compared to the state average of 2% of the population. The Aboriginal population has higher proportions of children and young people and lower proportions of people aged 45 years and over, when compared to the non-Aboriginal population. It is recognised that Aboriginal people experience levels of disease two and a half times that of non-Aboriginal Australians, and that chronic diseases and associated risk factors are responsible for most of the life expectancy gap between Aboriginal and non-Aboriginal Australians.

HNE Health is strongly committed to *Closing the Gap* in health outcomes between indigenous and non-indigenous Australians. HNE Health works closely with Aboriginal stakeholders to ensure that services are culturally sensitive and accessible and provide integrated care between service providers. The HNE Health Aboriginal Plan 2014-16 provides strategies to ensure this is carried out across all facilities and services. This will continue throughout the planning, design and commissioning phases of the NMH.

Burden of Disease

Typically, the poorer the health status of a population, the more frequently public health services are used. Health status is defined by a range of factors including behaviours that increase health risk (such as smoking), prevalence of chronic diseases (such as diabetes), and the age profile of the population (which influences rates of hospitalisations due to falls, etc.). Health indicators are used to show the health status of the population. Table below compares the Hunter Valley with NSW, for several health indicators.

Indicators of Poorer Health 2008 - 2011	Hospitalisations/ Mortality 2011/12	Leading Causes of Death	Behavioural Risk Factors
- Smoking during pregnancy - First antenatal visit >14 weeks gestation - Potentially preventable hospitalisations - Coronary heart disease hospitalisations - Diabetes hospitalisations - High body mass attributable deaths	- Obstetrics - Orthopaedics - Cardiology - Respiratory medicine - Gastroenterology - Non-subspecialty surgery	- Coronary heart disease - Cerebrovascular disease - Heart failure Peripheral vascular disease - Cancers (all types combined)	- Smoked daily 15% (NSW rate; 12%) - Overweight or obese 61% (NSW rate; 54%) - Reported adequate physical activity levels 52% (NSW rate; 55%) - Risk drinking of alcohol 32% (NSW rate; 30%)

Table 12 Health Indicators for Residents of the Hunter Valley

Relative Utilisation

Relative Utilisation (RU) is a measure of relative usage of hospital services for any given population compared to the State as a whole. The State RU is calibrated to 100. Table 29 below shows the total RU; i.e. the combined public and private hospital usage, for residents for the period 2009 to 2011. Numbers over 100 indicate that residents use more health services than the state average. Residents of the Hunter Valley have a Relative Utilisation of hospital services above that for the state.

LGA	2009	2010	2011
11720 Cessnock (C)	101	109	110
15059 Dungog + Maitland	109	109	108
15650 Muswellbrook (A)	113	114	109
17000 Singleton (A)	114	125	116
17629 Liverpool Plains + Upper Hunter	108	107	107
Grand Total	108	111	109

Source: aIM 2012V2.1

Table 13 Relative Utilisation by LGA, 2008 to 2011

3.3. Service Plans

The Hunter Valley Clinical Services Plan 2013

The Hunter Valley CSP 2013 demonstrated a growing and ageing population in the Hunter Valley and surrounding areas as a major driver for the current and projected strong demand for health services at Maitland Hospital. Growth of the population will be 42% with the ageing population increasing by 40%. Residents of the Lower Hunter make up 15% of JHH separations and 8% of CMN separations. The CSP highlighted the growing number of residents in the Hunter Valley living with chronic disease. The CSP noted there was an urgent need for contemporary health infrastructure and service delivery to adequately meet the current and expected growth in demand.

In May 2014 the MoH wrote to HNE Health noting that the existing Maitland Hospital was experiencing increased pressure on overall capacity and significant capital. Further, infrastructure development would be required to meet the demand for inpatient, outpatient and community health services that is projected to occur over the coming years.

MoH agreed that the CSP provided detailed information on the demand for healthcare by residents in the Hunter Valley that supported the next stage of planning. On that basis, MoH advised that the directions identified in the CSP, the methodology for estimating future capacity requirements was supported for planning a scope of services for inclusion in the development and enhancement of health services in the Hunter Valley.

The New Maitland Hospital Service Statement 2014 and partnering Carramar Consulting Maitland Hospital – Service Statement Final Scenario

The Service Statement (SS) was prepared for the PBC and outlined the requirements for the NMH and Health Service Campus, as well as future needs and strategies for Cessnock and KKH, EMCHC and the mental health services for the Lower Hunter region.

The SS noted that the major development would deliver a campus of excellence for person centred care embracing the patient and their family as central decision makers in care design and delivery. The new hospital would be both the rural referral hospital for the Hunter Valley and the major district hospital for local residents of the Lower Hunter and will facilitate enhanced service provision closer to home where possible. It would replace the existing Maitland Hospital Campus, the existing EMCHC and the mental health services at Morisset Hospital except for Kestrel. The Hospital would work closely with the tertiary referral hospitals in the district (JHH, JHCH, and CMN) to provide Role Delineation Level 5 services for the Hunter Valley community.

The Service Statement summarised the infrastructure requirements for the new hospital to meet population demands to 2026/27 as 464 overnight beds of which 412 were acute and 52 subacute. The PBC responded to the demand of SS and was endorsed through the Strategic Gateway. However MoH confirmed their support of progressing the planning to develop a FBC noting that an option which aligns with the $450m estimated total cost on the NSW Health CISP should be included in the assessment.

The New Maitland Hospital Capacity Options

Vigorous review of these documents in 2015 led to HNE Health developing an alternative document – The New Maitland Hospital Capacity Options 2015 - that presents the combined configuration of services that best meets the combination of demand for health service by residents of the Lower Hunter community and the $450 million capital allocation.

This document outlines the final configuration of services for the NMH and details the assumptions underpinning capacity options for the NMH to inform the FBC.

To calculate demand HNE Health planners analysed activity data from Flowinfo V14, aIM and SiAM projection tools, 2014/15 HIE RAP reports and Activity Based Funding portal for both Maitland and Kurri Kurri Hospitals. Bed days for adult medical/surgical and procedural services (excluding renal dialysis) at Maitland and Kurri Kurri hospitals in 2013/14 exceeded the base aIM year (2010/11) for both hospitals by 6461 bed days - equivalent to 18 overnight beds. HNE Health's Projections to 2021/22 exceed the aIM 2026/27 projections for adult

medical/surgical/procedural patients. Therefore HNE Health has not relied solely on the aIM projection tool to calculate demand for NMH and have not made projections using 2026/27 aIM methodology.

Demand for admission (if admission patterns stay the same) to NMH is anticipated to continue beyond the mandated scope of the HVCSP of 2021/22. To manage projected growth to 2026/27 HNE Health has plans to accommodate additional growth across a network of hospitals where clinically advised and where this can be safely and sustainably undertaken to best utilise existing resources - medical demand at Cessnock, Singleton and Dungog hospitals and procedural work, at Cessnock and Singleton hospitals. To further this plan, management of Cessnock and Dungog Hospitals has moved under the management of Maitland Hospital.

HNE Health will better manage patients in community based models of care such as Hospital in the Home as well as work with GPs and other health providers and the Hunter New England Central Coast Primary Health Network to keep people healthy and out of hospital. HNE Health will review admissions of patients across the lower Hunter with potentially avoidable admissions which if managed in the community rather than in lower Hunter hospitals would reduce demand for hospital beds.

The previous service statement included reversals of flow from Newcastle Hospitals for residents bordering Maitland, Cessnock and Dungog LGAs, these, are no longer included in activity projections.

Increases in demand are factored in due to:

- Higher level role delineation maternity and special care nursery services
- Non-admitted day only paediatric and maternity services
- Increased delivery suite (including assessment rooms) and operating theatre capacity
- Inclusion of ESSU
- Introduction of ICU/HDU services at NMH that reduces transfers to JHH as well as support higher acuity surgery undertaken at NMH
- Increased capacity for non-admitted day only surgery
- Addition of PECC services
- Re-introduction of rehabilitation services
- Increased capacity for hospital centred ambulatory care services and outpatients
- Provision of Day Chemotherapy
- Projected population growth.

There are no other planned reversals of flow from Newcastle Hospitals or for residents bordering Maitland, Cessnock and Dungog LGAs. The final projected demand for acute, sub-acute and non-acute services, as well as non-admitted demand has been approved by the HNE Health Executive and Board.

The Capacity Options document describes the following profile for the NMH in context of the short to medium term expansion strategy in the following table.

Service Delivery Units	Maitland Hospital 14/15	Maitland Hospital 16/17	Service Statement 26/27 [15]	New Maitland Hospital 21/22	Short to medium term growth [17]
Acute	128[1]	144[2]	317	198[3]	264[4]
Critical Care	20[5]	20	48	30[6]	42[7]
Acute Mental Health	24	24	27 [15]	24	26
ESSU	0	0	14	8	14
PECC	0	0	6	6	6
Acute Overnight Beds	*172*	*188*	*412*	*266*	*352*
Sub-Acute Over-night beds [8]	12	(12) [16]	33	12 + (12)[16]	24+ (12)[16]
Overnight Beds	*184*	*188 (200)* [16]	*445*	*278 (290)*[16]	*376 (388)* [16]
Acute Day Only Beds					
Maternity Day	2	2	6	4	6
Satellite Renal Dialysis	10	10	0	12	12
In-centre Dialysis	0	0	12	0	0
Paediatric Day	0	0	4	4	4
Medical Day	0	0	8	8	8
Surgical Day	6	6	34 [9]	20	34
Day Only	*18*	*18*	*64*	*48*	*64*
Operating suites	3	3	11	7 + (1)[10]	8
Endoscopy Procedure Rooms	1	1	4	0	2
Recovery Spaces	6	6	47	20	25
Delivery Suites	5	5	9	7	7
Maternity Assessment Rooms	0	0		2	2
Emergency Department					
Treatment spaces	23	23	32	31[12]	36[13]
Resuscitation bay	2	2	3	3	3
Transit Discharge Lounge	0	0	12	0	0
Ambulatory Care					
Chemotherapy chairs	0	0	14	12	14

Oral Health chair	6	6	12	6	12
Outpatient Clinics	37[14]	37	78	51	54

Table 14 NMH profile as described within New Maitland Hospital Capacity Options document

Note	As part of the realignment of services 20 Medical beds at Kurri Kurri are planned to close and services transferred to New Maitland.
Note 1	Acute includes Medical (48), Surgical (44), Womens (24) & Paediatric (12).
Note 2	Acute includes Medical (64), Surgical (40), Womens (24) Paediatric (12) & Flex (4).
Note 3	Acute includes Medical (106), Surgical (56), Womens (24) & Paediatric (12)
Note 4	Acute includes Medical (139) Surgical (85), Womens (28) & Paediatric (12)
Note 5	Critical Care includes High Dependency (4) Coronary Care (4) & SCN (12) spaces
Note 6	Critical Care includes ICU (4), HDU (4) Coronary Care (6) & SCN (16) spaces
Note 7	Critical Care includes ICU (8), HDU(8) Coronary Care (10) & SCN (16) spaces
Note 8	Sub- Acute Beds only includes rehabilitation beds
Note 9	Note there was an error in the calculation of Day surgery bed numbers identified – this number should have been 34
Note 10	Operating Rooms includes 7 built Operating Rooms & 1 shell space
Note 11	Delivery rooms only not assessment rooms
Note 12	ED includes Acute Treatment (19), Fast Track (9) & Isolation (3). Excludes mental health, interview, procedure & plaster rooms.
Note 13	Additional Acute Treatment (4) & Fast Track (1)
Note 14	Outpatient clinics include CAYHMS (6), Adison Clinics (6), Paediatric Clinics (5), Pre-op Clinics (6), Midwifery Clinics (4), FCC (2), Physio (4), OT (2), & HSU (2).
Note 15	Only considers the infrastructure at NMH defined in the Service Statement excluding any relocation from Morisset
Note 16	As part of the project 12 sub-acute beds have been delivered at Kurri. These 12 beds have not been included in the NMH numbers.
Note 17	An expansion strategy to demonstrate how the New Maitland Hospital could grow to meet short to medium term growth has been developed. This growth would allow for the provision of services noted in this column

Table 15 Notes associated with Table 14

3.4. Demand analysis

The Service Drivers identified have been considered in the development of the clinical profile of NMH. As previously noted the key Service Drivers identified are:

1. Access to Health Care and Inpatient Services
2. Critical Care (High Dependency and Intensive Care)
3. Medical Services
4. *Surgery and Procedural Activity*
5. Maternity Services

6. Emergency Department
7. Ambulatory Care and Outpatient Departments
8. Cancer and Chemotherapy Services
9. Sub-Acute Services
10. Mental Health
11. Ageing Infrastructure

1. Access to Health Care and Inpatient Services

Projected activity to 2021/22 for the NMH is summarised below;

Stream	Volume (Admissions & Attendances)	2014/15 (Base)	2016/17	2020/21	2021/22 (Full Service)
Acute (inc. ICU, excluding renal dialysis)	Separations	16,449	17,758	19,303	20,327
	Beddays	67,209	72,559	72,559	83,056
ED (inc MH,ESSU,combined general ED activity TMH and KK)	Presentations	52,380	53,433	57,781	65,404
Non Admitted Patients (Outpatient Services)	Service Event	39,092	39,878	43,346	45,647
Sub-Acute Services –Admitted (Rehab at NMH and KKH)	Separations	551	768	768	943
	Beddays	10,755	10,971	10,971	12,558
Sub-Acute Services - Non Admitted	Service Event				
Mental Health - ABF Hospitals	Separations	725	740	770	777
	Beddays	7,902	8,061	8,388	9,227

Table 16 New Maitland Hospital - Total Projected Acute Activity 2014/15 to 2021/22

The existing Maitland Hospital currently has 184 overnight beds for acute and sub - acute patients providing for potentially available 67,209 bed days. However, demand is increasing and by 2026/27 bed days are projected to be over 83,056 based on the current service configuration (excluding renal dialysis).

HNE Health has a well-established District-wide Clinical Networks and Streams who bring together groups of health professionals from primary, secondary and tertiary care settings to improve clinical service delivery across the district. These include:

- Aged Care and Rehabilitation Services
- Children, Young People and Families
- Cancer
- Women's Health and Maternity
- Mental Health and Drug and Alcohol
- Critical Care and Emergency Services
- Chronic Disease
- Non-Aligned Streams (Anaesthesia and Pain, Immunology and Infectious Diseases and HiTH)

Currently, residents in the current catchment of Maitland Hospital access health services located at JHH, JHCH, and CMN; District Hospitals and health services located at Maitland/Kurri Kurri, Cessnock and Singleton; and Community Hospital and health services located at Dungog.

Services are networked across Newcastle and the Hunter Valley to provide integrated care for residents and this will remain unchanged.

Residents accessing Newcastle hospitals will continue to use the Hunter Expressway to access services on the JHH Campus and the future Newcastle Inner City Bypass (with a full interchange behind JHH) will even further facilitate quicker access.

There are specific services defined by Service Related Groups (SRGs) and Diagnosis Related Groups (DRGs) that will stay mostly with the larger or specialised hospitals. It is accepted that JHH will be the tertiary hospital for services with a relatively small demand provided by a centrally located specialised workforce such as interventional cardiology, renal medicine, complex trauma, vascular, head and neck, cardio-thoracic, and neurosurgery.

JHCH will remain the tertiary facility for residents in the Hunter Valley and provide state-wide services including Paediatric Intensive Care (PICU) and Neonatal Intensive Care Unit (NICU) services. JHCH continues as planned to provide paediatric services across the Hunter Valley and NMH will continue to provide a range of paediatric services.

CMN will continue to provide specialised adult cancer inpatient and toxicology services to the Hunter Valley. Radiation oncology will remain at CMN. Outreach and non-admitted services such as chemotherapy will be networked with the HNE Health Cancer Network and CMN and will be provided from NMH. Children's oncology services will remain at JHCH. JHH will continue to provide high complexity cancer-related surgery such as head and neck and gynaecology. Planned lower acuity oncology surgery, including gastro-intestinal, bowel, urology, breast and gynae-oncology, could occur at NMH.

NMH will provide a district hospital role for residents of the local catchment area and a specialist rural referral role for the larger catchment area of the Lower Hunter and Hunter Valley Sectors . It addition NMH will integrate services currently provided from the Maitland Hospital campus as well as emergency, medical and surgical services currently provided at KKH. KKH will provide rehabilitation inpatient services. HNE Health Community services not currently located on the Maitland Hospital campus will continue providing services from existing facilities and network with hospitals in the Hunter Valley to provided integrated services throughout the patient journey.

NMH will have an expanded bed capacity and essential infrastructure such as operating theatres and delivery suites to an appropriate Role Delineation level for clinically advised SRGs, which excludes cardio-thoracic, vascular, and other similar services. Increased self-sufficiency and capacity to provide additional care locally where it is safe and efficient to do so will improve the health and wellbeing of residents.

NMH campus will provide a number of centres of excellence for the lower Hunter including maternity and surgical services. NMH will provide Role Delineation Level 4 services in emergency, maternity and associated core services. It will accept admissions that can be managed by general surgeons and general physicians safely. ICU/HDU services will be introduced in NMH. The ENT and ophthalmology surgical services at KKH will be transferred to the facility. This specialisation improves patient outcomes, enriches staff skill and maximises efficiencies across the lower Hunter.

Increased service alignment across Hunter Valley hospitals will facilitate utilisation of current capacity in the district facilities and support appropriate specialisation for example: oral surgery, subacute services and satellite renal dialysis and chemotherapy. NMH will support this specialisation with outreach clinicians travelling to sites as well as provide clinical advice and mentoring to local staff.

NMH will continue to network with Singleton and Cessnock Hospitals to ensure planned surgery is undertaken on those sites. Cessnock and Singleton will provide lower acuity emergency, medical and surgical services (focusing on planned HVSS). In order to undertake these clinical services, future capital investment will be required to upgrade operating theatres/day surgery suites at Cessnock and Singleton Hospitals as listed in the HNE Asset Strategic Plan. Dungog Hospital will remain unchanged.

Networking between acute hospitals and community health services across the Lower Hunter and Hunter Valley Sectors will be strengthened to ensure communities have access to the services they need, either locally or within a reasonable travelling distance and utilise models of service delivery such as HiTH, telehealth technology and in reach and outreach services to provide services as close to home as possible). Future models of care will focus on integrated care between hospital and community care and partnerships with other key health providers such as Non-Government Organisations (NGO's), General Practitioners' and aged care facilities.

The figure below illustrates the networking ties between TNMH and other facilities in the Lower Hunter, and within and external to HNE Health.

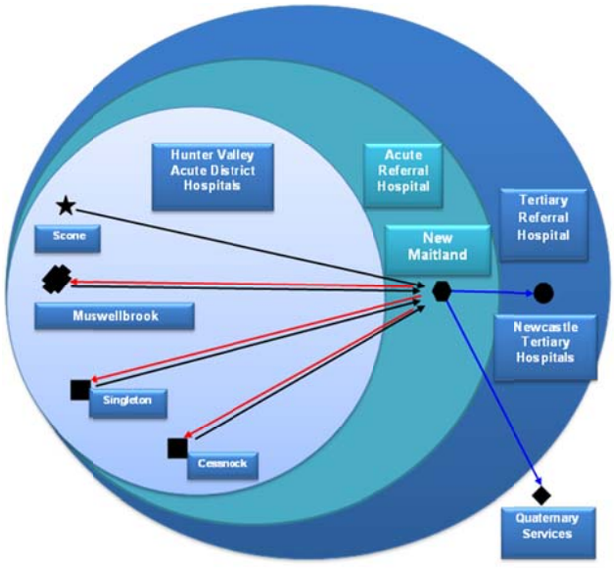


Figure 13 New Maitland Hospital Service Networks

The reconfiguration of services across HNE network as a result of the NMH is as follows;

Location	Current Services Provided	Future Services Provided
Maitland	Provides emergency services, general medicine and	Services as detailed for the NMH within

Location	Current Services Provided	Future Services Provided
	surgery, High Dependency Unit, coronary care, maternity, gynaecology, special care nursery, paediatrics, satellite renal dialysis, rehabilitation, palliative care, mental health, a range of allied health and visiting specialist services. Maitland and Dungog LGAs make up the hospital's primary catchment with significant numbers of people accessing the hospital from other Lower Hunter LGAs, as well as from the Upper Hunter and Port Stephens.	this document.
Cessnock	Provides emergency services, general medical and surgical, gynaecology, orthopaedics, palliative care, residential transitional aged care service, a range of allied health and visiting specialist services. The hospital's primary catchment is the Cessnock LGA.	Cessnock Hospital will maintain a district level hospital role providing lower acuity care that supports presentations to the ED. The hospital will focus on a primary health model of care while sustaining one operating theatre for high volume short stay surgery including oral health.
Singleton	Provides emergency, general medical and surgery, maternity, palliative care, and satellite renal dialysis, a range of allied health and visiting specialist services. While Singleton Hospital primarily provides services for residents of the Singleton LGA, a significant number of people from the Cessnock LGA also access the hospital.	Surgical services will be focused on high volume short stay surgery. No other changes.
Muswellbrook	Provides emergency, medical, surgical, maternity, aged care, satellite renal dialysis, palliative care, and oncology services as well as a range of allied health and visiting specialist services for residents from the Muswellbrook and Upper Hunter LGAs.	No change
Scone	Provides emergency, medical and surgical services, maternity, and palliative care, primarily to the residents of Scone.	No change
Kurri Kurri	Provides general hospital services for local residents with limited emergency, and medical services. The hospital is a centre for ophthalmic and ENT surgery, subacute care and a range of allied health services for residents from the Hunter Valley, as well as from Lake Macquarie, Newcastle and Port Stephens LGAs .	Kurri Kurri Hospital services will be realigned to provide an in-reach model of care for rehabilitation. The hospital will focus on a primary health care model with all other services including emergency and surgical services relocated to the NMH. The subacute overnight beds at Kurri Kurri Hospital will be increased to 26 beds.
Murrurundi	Provides emergency, medical, post-surgical, palliative and respite care services to local residents.	No change
Dungog	Provides emergency, medical, post-surgical and post-natal services for residents of the Dungog LGA.	No change

Location	Current Services Provided	Future Services Provided
Merriwa	Provides medical, limited emergency and aged care services to local residents, with ambulance, community health and GP co-located on the MPS site.	No change
Denman	Provides medical, limited emergency and aged care services to the local community, with other services including ambulance and community health services co-located on the MPS site.	No change
Morisset Mental Health	Provides psychiatric rehabilitation, neuropsychiatry and mental health services for the aged	No change
East Maitland Community Health Services	Provides home visiting, ambulatory and community health services from a community health facility	No change
Beresfield Community Health Services	Provides home visiting, ambulatory and community health services from a community health facility	No change
Newcastle Calvary Mater Hospital	Provides emergency, surgical, medical, gastroenterology, cardiology, intensive care, allied health services to the local community and tertiary referral services for cancer, toxicology, drug & alcohol.	No change
JHH and JHCH	Tertiary referral and teaching hospital for HNE Health. Local district hospital for the population of the Newcastle LGA Patients from the Hunter and beyond are referred to JHH for treatment in a range of specialties and sub-specialties, including: anaesthesia and intensive care, neonatal intensive care, trauma, obstetrics and gynaecology, orthopaedics, rehabilitation, rheumatology cardiology, emergency medicine, respiratory medicine, endocrinology, neurology, nephrology, ophthalmology, dermatology and gastroenterology. Other clinical services include medical and surgical outpatients, cardiac catheterisation, endoscopy, diagnostic radiology, pathology, surgical services and pain management services JHCH is tertiary referral centre for children and young people to 18 years of age. Specialty areas of care include asthma, cancer, cleft palate, cystic fibrosis, diabetes, orthopaedics, spina bifida, trauma and head injuries.A Neonatal Intensive Care Unit and Paediatric Intensive Care unit are currently under construction.	No change

Table 17 Reconfiguration of HNE network

2. Critical Care (High Dependency and Intensive Care)

Based on population calculations, HNE Health is currently at least 6 ICU beds short on the basis of 5.5 ICU beds per 100,000 of population and 20 HDU beds deficient based on 5.5 HDU beds per 100,000 adult population. The projected population increases indicate an immediate and future

deficit in intensive care beds across HNE Health, and a more significant deficit at the level of high dependency care. There has been an increase in the acuity of patients presenting to Maitland placing additional demand on tertiary ICU and HDU services at JHH.

The concentration of a critical mass of skilled critical care clinicians at JHH and CMN ICU has enabled the JHH critical care services to provide networked services across the LHD generally but in particular for the Hunter Region. The JHH bed base is operated as a networked service as part of a Supra LHD provision of Intensive Care services.

The current pressure on ICU beds at JHH for adults and children has resulted in patients from outlying areas at times being directly flown out of the region to Sydney for ongoing care. The inclusion of ICU and HDU beds at the NMH goes some way in meeting this demand by relieving JHH from the flow of patients from the Lower Hunter. Consequently this enables JHH to meet demand in its state-wide role. HDU beds also required to support Level Role Delineation 4 Surgical Services at the new hospital.

To meet this deficit and to reduce the critical care patient flows to JHH and CMN a networked 8 bed intensive care/ high dependency unit is planned for NMH. These services will form part of the state-wide and the district's critical care network, delivered under an intensivist model of care and closely aligned with tertiary critical care service at JHH. The unit will provide rapid response and medical emergency response services across the NMH to both the inpatient and ambulatory care services.

The model of care to provide additional and separate coronary care beds will allow a contemporary patient journey for cardiac patients that flow seamlessly from acute to subacute services as well as increase staff skill and recruitment and retention of the medical workforce.

3. Medical Services

Medical activity for 16+ years of age, demonstrates a projected increase of 22.8% from 2010/11 to 2021/22, at an annual growth rate of 2%. Safe and appropriate general medical services, at Role Delineation Level 4 (with some subspecialties at Role Delineation Level 3) will be provided at the NMH.

Currently patients who have a change in care-type to palliative care, geriatric medicine and maintenance following acute admission or who are specifically admitted for review by physicians in these sub-acute categories are accommodated in medical wards in Kurri Kurri and Maitland Hospitals and this will continue in NMH. Once specialty care-planning is completed within the NMH it is anticipated that selected patients can be safely accommodated in local hospitals closer to patient's homes. Cessnock, Singleton and Dungog hospitals will be networked with NMH to provide integrated care for these patients and this will assist NMH to accommodate demand for medical beds towards 2026/27. To further this plan, Cessnock and Dungog hospitals management has transferred under Maitland Hospital management.

These services will be supported by a range of clinical networks and outreach clinics including a range of general medical and sub speciality services.

4. Surgery and Procedural Activity

Surgery in NSW is one of the priority areas identified by NSW Health that requires redesigning to improve access to care and patient experiences and has triggered significant reports including NSW Health Emergency Surgery Redesign, NSW Emergency Surgery Guidelines and NSW Rural Surgery Futures.

Admitted surgical and procedural activity for 16+ years of age is projected to increase by 62.6% from 2010/11 to 2021/22, at an annual growth rate of 5.7%. Not all patients undertaking surgery and procedures require formal admission to a surgical bed in NMH and with this growth anticipated to continue to 2026/27, HNE Health plans to accommodate growth in either additional recovery beds for non-admitted patients not requiring ongoing care with admission to surgical beds at NMH; or across a network of hospitals where patients can be safely accepted for procedural activity where clinically advised. Hospitals at Cessnock and Singleton can safely provide for selected procedures for non-admitted patients in existing operating and procedural rooms. The level of private hospital surgical and procedural activity was also analysed with 72.9% of surgery and procedures required by residents undertaken in private hospitals. This is expected to continue and even grow with local private hospitals expanding their facilities to meet resident demand.

The top five overnight surgical SRGs are Orthopaedics, Obstetrics Non Subspecialty Surgery, Upper GIT Surgery, and Colorectal Surgery

The top five day only surgical SRGs are Ophthalmology, Gynaecology Orthopaedics, Non Sub Speciality Surgery and Colorectal Surgery.

The NMH will provide high quality, patient centred, accessible surgical services at Role Delineation Level 4. The services to be provided are summarised below;

Service	Clinical Speciality	Comments
Surgery		
	General Surgery	
	Breast Surgery	
	Colorectal Surgery	
	Upper GIT Surgery	
	Dentistry	
	Orthopaedics	
	Ophthalmology	
	Urology	Planned Surgery Only
	Gynaecology	
	Pain Management	
Obstetric Surgery		
	Caesarean Delivery	
Paediatric Surgery		Role Delineation 3
	General Surgery	
	Orthopaedic	

Table 18 New Maitland Hospital – Surgical Services Profile

Delivery of NMH surgical services will meet NSW MoH principles of surgical redesign, emergency surgery guidelines and best practice surgical models of care. This will include strategies to meet the required Elective Surgery Access Performance (ESAP) targets). Surgical services will be a combination of emergency and planned surgery, focused on appropriate streaming of planned and emergency cases delivered in line with the emergency surgery guidelines and high volume short stay models of surgical care.

The NMH will be integrated as part of the district's networked approach to surgical services where hospitals operate in a network to provide specific services and/or functions from separate sites within an area but communicate and work collaboratively together. It will function as the hub for the delivery of surgical services in the Hunter Valley. Surgical services provided at Kurri Kurri will be integrated into the NMH with plans for Cessnock Hospital to maintain one operating theatre for High Volume Short Stay surgery (HVSS).

5. Maternity Services

Provision of Level 4 Maternity Services and an associated increase in Role Delineation for the Special Care Nursery Services at NMH will assist in meeting demand for these services and free up JHH to provide higher acuity services. JHH offers a NICU Service as part of a Supra LHD service to support its Tertiary Level 6 Maternity and Perinatal Role. JHH also provides NICU services to Northern NSW as part of the Northern Child Health Network. HNE Health Neonatal Intensive Care Plan 2013-2017 identified an increasing demand for neonatal services due to the increasing birth rate and fertility rate across HNE Health, the large Aboriginal population across the catchment area and increasing assisted fertility technologies resulting in multiple births and their use of neonatal services.

Neonatal services at Tamworth Hospital as the major referral hospital for residents of the New England area are increasing to Level 4 Role Delineation to support an increase in Maternity Services Role Delineation to Level 5. NMH is planned to provide similar services for residents of the Hunter Valley.

SCN activity is projected to grow by 79.8% with the addition of new cots and the increased Role Delineation. This projected increase in activity is related to population growth and reversal of flows related to the Role Delineation. Actual service demand in 2013/14 exceeded aIM projections for 2016/17.

6. Emergency Department

The projected Emergency Department activity for the NMH demonstrates an increase in attendances of 25% from 2014/15 to 2021/22 (or an increase of 13,024 attendances), at an annual growth rate of 3.5% from years 2014/15 to 2021/22. This activity reflects the activity at both Maitland and KKH as once NMH is operational Emergency Services at Kurri Kurri will be redirected to NMH.

The endorsed Benefits Realisation Register in Appendix 16 details the current and forecast targets for Emergency services.

7. Ambulatory Care and Outpatient Departments

HNE Health faces many challenges in meeting current and projected demand for acute and subacute services. The focus of ambulatory care services including outpatient clinics, same day services and hospital avoidance or substitution is required to support inpatient activity.

The definition of ambulatory care covers a broad range of clinical services. NMH will incorporate ambulatory care into models of care to provide seamless care for patients and reduce length of stay, prevent hospital admission as well as provide evidence based treatment for the increasing numbers of patients with chronic disease. For chronic diseases hospital admission is not the best treatment option for a range of conditions e.g. diabetes, asthma, angina, hypertension, pneumonia, chronic obstructive pulmonary disease and kidney infections. HiTH, medical day services will assist patients in remaining at home while continuing to receive treatment.

There is a projected need for 54 consulting/clinic rooms at NMH to accommodate clinical services. Consulting/clinic rooms need to be supported by interview and treatment / procedure rooms. To assist with the predicted medical day activity (non-admitted) a day medical unit will be included to reduce the need for patients to utilise overnight (admitted) accommodation. The rationale for the number of clinics for NMH is based on;

- Current number of clinics at the existing Maitland Hospital is 37 including Child and Adolescent Mental Health Service. This is underestimated as some spaces are dual offices and clinic spaces
- Requirements for outpatient clinics to support inpatient activity, ambulatory care, same day activity and new models of care for services to maximise the avoidance of hospital admissions.

As a comparison JHH and JHCH have 110 clinic rooms (excluding decentralised clinics), which are functioning at capacity and cannot meet the outpatient service demands.

Alternative models of care are growing in HNE Health, with such programs as the follow-up phone call post discharge already implemented. The NMH will consider further expansion of telephone call and advice (phone coaching, assessment) as well as other strategies to address workforce redesign such as therapy assistants, advanced practice nurses and other allied health and nursing staff to triage and treat patients, for example physiotherapy triage and assessment in orthopaedic outpatient clinics.

8. Cancer and Chemotherapy Services

Based on projected growth of cancer incidence from 764 in 2014 to 1031 by 2026 in the lower Hunter LGAs and the estimated demand for chemotherapy per patient, NMH will provide lower acuity chemotherapy as part of the district cancer network. It will provide an ambulatory care service supporting chemotherapy and cancer related treatments and infusions. Tertiary level adult cancer services will remain at CMN and JHH, and all paediatric cancer services will remain at JHCH. Radiation oncology is not considered part of the initial planning for the site.

9. Sub-Acute Services

Rehabilitation and subacute services across the KKH and NMH campuses is being expanded. HNE Health is projecting a growth of 171% and providing capacity to meet this demand.

The NMH will provide Role Delineation Level 4 rehabilitation services in line with the NSW ACI and models of care for rehabilitation, encompassing service delivery to defined inpatient programs through designated therapy areas with suitable space, equipment and multidisciplinary teams.

Cardiac and pulmonary rehabilitation programs will require access to gymnasium, group activity spaces, procedure rooms, and telehealth consultations. Care will be integrated with home based services including HITH services and Transition Acute Community Programs (TACP) to maximise independence.

10. Mental Health

Mental health illness and disorders are among the greatest causes of disability resulting in diminished quality of life, and reduced social and economic participation, and imposing a very high burden on the individual and community.

The NMH will remain the referral centre for patients of both the Hunter and Lower Hunter Valley sectors of HNE Health. Currently the existing Maitland Emergency Department has limited capacity to accommodate patients who present with a mental health issue. Mental Health ICU services (Psychiatric ICU) are provided at CMN and this will continue.

PECCs are a MoH initiative to improve the health system's responsiveness to persons with mental health illness/disorders providing for short-term admission of people with low to medium acuity mental health problems who present to the ED or other established access points; and who do not require admission to an acute Mental Health (MH) inpatient unit. It is projected that the PECC will see 1818 patients in 2021/22. The PECC model of care at New Maitland will be developed in accordance with the guiding principles:

1. Collaborative decision-making
2. Least restrictive, short-term inpatient care
3. Outcome based monitoring.

11. Ageing Infrastructure and poor functional layouts

The design and construction of the NMH will be in accordance with all applicable guidelines and requirements to enable HNE to achieve the contemporary models of care outlined in the New Maitland Hospital Capacity Options document and deliver the services as outlined in this FBC. The design and construction of NMH will also include analysis of the option for a Helipad Landing Site.

3.5. Service Profile and Role Delineation

Current and Proposed Services and Role Delineation

The NMH will provide a comprehensive range of health services to the residents of the Hunter Valley region. The services will complement the range of services already provided at other health care facilities or those that are currently under development. It will provide an increased service

capability and complexity to help address the increasing demand being experienced by the majority of services across the region. The NMH will provide an enhanced capability of services compared to the existing Maitland Hospital services.

The existing Maitland Hospital is categorised in the hospital peer group listing under Major Non–Metropolitan Hospital Group 2 (B2). The Role Delineation profile for services currently delivered at Maitland Hospital and proposed levels for the NMH are listed below.

	Services	Maitland Current	New Maitland (on opening)	Maitland (longer Term)
Clinical Support	Pathology	5	5	5
	Pharmacy	4	4	5
	Diagnostic Imaging	4	4	5
	Nuclear Medicine	3	4	5
	Anaesthetics	3	4	5
	Intensive Care	3	4	5
	Coronary Care	3	3	4
	Operating Suites	3	4	5
Core	Emergency Medicine	3	4	5
Medicine	General medicine	3	4	4
	Cardiology	3	3	3
	Dermatology	NPS	NPS	NPS
	Endocrinology	3	3	3
	Gastroenterology	3	3	3
	Haematology	2	2	2
	HIV/AIDS	3	3	3
	Immunology	2	2	2
	Infectious Diseases	4	4	4
	Medical Oncology	3	3	3
	Neurology	3	4	4
	Renal Medicine	3	3	3
	Respiratory Medicine	3	4	4
	Rheumatology	3	4	4
Surgery	General Surgery	3	4	4
	Burns	NPS	NPS	NPS
	Thoracic/Cardiothoracic	NPS	NPS	NPS
	Day Surgery	4	4	4
	ENT	3	3	3
	Gynaecology	3	4	4
	Neurosurgery	NPS	NPS	NPS
	Ophthalmology	3	3	3
	Orthopaedics	3	4	4
	Plastic Surgery	NPS	NPS	NPS
	Urology	3	3	3
	Vascular Surgery	NPS	NPS	NPS
Maternal and Child	Maternity	3	4	4
	Neonatal	3	4	4
	Paediatric Medicine	3	4	4
	Paediatric Surgery	3	3	3
	Family & Child Health	2	2	2
Integrated Community and Hospital	Adolescent Health	2	2	2
	Adult Mental Health (inpatient acute)	3	3	3
	Child/Adolescent Mental Health(inpatient care)	2	2	2
	Child Protection Services	1	1	1
	Drug & Alcohol	1	1	1
	Geriatrics	3	3	3
	Palliative Care	3	4	4

	Services	Maitland Current	New Maitland (on opening)	Maitland (longer Term)
	Rehabilitation	4	4	4

Table 19 Future Role Delineation NMH

Model for Integrated Services

The NMH will provide a comprehensive range of health services to the residents of the Hunter Valley region. Services will complement the range of services already provided at other health care facilities or those under development to support an integrated model of health care delivery for the patient across the continuum of care. As part of the National Health Reform and the already existing governance structure within HNE Health, the NMH will work together with tertiary referral, primary and community health services to:

- Promote a consistent approach to service planning
- Overcome identified gaps in services
- Improve access to services across the health care continuum
- Promote integration of service delivery between different types of providers
- Facilitate the transition between acute and primary and community care

The NMH will be supported by the clinical support networks already in effect within HNE Health. Input from consumers on their needs and expectations will be sourced from the already existing Consumer Groups within HNE Health.

Integration will occur across clinical programs, non-clinical support services, and administrative and business processes. Integration across the NMH site will be supported by:

- Sophisticated information, communication and management technology to underpin all clinical, non-clinical and business systems
- Integration of acute, subacute, ambulatory and planning into organisational planning
- Primary health and community health services that are transferring will aim to operate within an integrated care framework
- Strengthening of partnerships between the acute and primary and community health sectors to improve coordination of care
- Implementation of models of care that support the patient journey across the site and service types
- Use of common assessment and referral tools for chronic and ongoing care management and aged care
- Implementation of admission, discharge and transfer protocols across the site
- Non-clinical support services will also promote integration of approaches and systems across the NMH. It is expected that HealthShare NSW will continue to provide services at the new site including: food, linen and hotel services
- Human resource systems such as payroll, employee support and recruitment
- Financial systems such as accounts payable, accounts receivable, general ledger and reporting

Current and Projected Models of Care for Maitland Hospital

All models of care and services provided at NMH will be reliant upon timely and efficient review of performance data. Fundamental to the success of these new services, will be the ability to gather appropriate data that encompasses the patient experience and health outcomes.

Benefits have been and will continue to be identified with appropriate indicators and measures to ensure their realisation. These benefits align with the goals of HNE Health, NSW Health and NMH. Critical to this achievement will be ensuring a "whole of service" approach to developing the appropriate structures, processes, behaviours and communications which will improve and maximise appropriate access to care and patient flow.

The NMH will offer a higher level of service provision and an increased Role Delineation in some specialties compared to the current Maitland Hospital. These encompass clinical, clinical support and non-clinical models.

3.6. Relevant Innovations

Feedback received from the Strategic Gateway and Final Gateway requested further information around the key innovations that were discussed at Strategic Gateway Interview. These key innovations in service delivery for NMH relate to the following services:

1. Paediatric Services
2. Intensive Care and High Dependency Unit
3. Telehealth
4. EMR and DMR
5. ACI Clinical Redesign methodology
6. Surgical Services
7. Hospital avoidance strategies
8. Psychiatric Emergency Care Centre (PECC)
9. Chemotherapy day chairs / unit
10. Paediatric day beds
11. Day medical unit
12. Emergency Department Short Stay Unit
13. ePMA
14. Lower Hunter Sector Realignment

1. Paediatric Services

The key innovations relating to Paediatric Services focus on the proposed model of care that will ensure that care is aligned to the following reference documents:

- A Strategic Health Plan for Children, Young People and Families 2014-2024
- Excellence Every Patient Every Time Hunter New England Local Health District Strategic Plan Towards 2018
- Healthy Kids from the Bush to the Beach, Children, Young People and Families Annual Operational plan 2015-16

HNE Health has identified four key aspects from these documents to ensure that all paediatric services provide:

- The team around the child - This philosophy aims to ensure that wherever the child is located receiving care (home, hospital, school or clinic) that there is consistency in the multi-disciplinary team (MDT) – this includes family involvement in decision making and ongoing care. The "team around the child" is a model of multi-agency service provision, bringing together a range of different practitioners to support and provide services to meet the diverse needs of an individual child or young person and their family. The model is not a multidisciplinary team that is located together or who work together all the time; rather, it is a group of practitioners working together as needed to help a particular child or young person. The model is based on the ethos of a flexible children and young people's workforce providing services to meet the diverse needs of each and every child or young person. The "team around the child" places the emphasis firmly on the needs and strengths of the child or young person, rather than those of organisations or service providers.
- Colocation of women's and children's services - To provide all paediatric care in a safe and secure environment, this includes both ambulatory and inpatient services.
- Designated multidisciplinary clinics that are able to provide paediatrician led review of children referred by a range of practitioners – this service aims to provide an alternate referral path for semi-urgent-conditions. The ambulatory care services will include general paediatrician lead clinics, and MDT clinics for children with chronic or complex diseases that can be safely managed in Maitland – this will include support from JHCH using telehealth. Outreach clinics will also be provided to target the Hunter Valley population and reduce families having to travel to JHCH for review or consultation. Day surgery patients will be managed in the paediatric IPU. It is anticipated that a range of day medical services will also develop – these are in the process of being defined but may include day infusions, wound dressings etc. This service aims to provide care as close to home as possible and reduce the impact of illness on the family.
- Safe and appropriate inpatient space for children and adolescents with capacity for planned elective admissions - dedicated paediatric/family appropriate spaces will be included in the ED, ambulatory care centre, SCN and paediatric inpatient unit. These spaces will be safe and secure and enable families to stay with the child. In the inpatient areas this includes the provision of beds adjacent to the child for family [day and night]. In the ED and inpatient areas there is a clear and definite separation of treatment areas from the bed area. An environment that supports family involvement in care will be provided in the SCN including the provision of kangaroo care to babies. Facilities to accommodate paediatric palliative care will be included in both the SCN and paediatric inpatient unit.

2. Intensive Care and High Dependency Unit

This will be the introduction of a new service. HNE LHD supports a networked model for its Intensive Care Service (ICS) which is championed by its expert group, the Intensive Care (IC) Clinical Stream. The need for networking, safety and support for smaller ICU/HDUs has been part of the IC Clinical Stream planning agenda for some time and the stream will be pivotal to a successful transition for Maitland to a higher level ICU.

In 2015 the ACI Intensive Care Network published the Intensive Care Service Model: NSW Level 4 Adult Intensive Care Units. The ACI IC Service Model will be used along with a clinical redesign methodology as a framework to support:

- Progressing with achieving our goals of equity for intensive care patients across HNE
- Carrying out a self-assessment to identify strengths and weaknesses within the current unit
- Initiate further planning and development of Maitland to transition to a level 4 ICU. This will require the current unit to transition in stages to a level 4 and eventually, in the future, a level 5 ICU, and meet service model and new role delineation guidelines to provide safe patient care. Part of the initial transition will aim to improve both capacity and optimise the functionality of the existing bed stock whilst maintaining patient safety. A networked approach with JHH hospital will also assist with this by strengthening relationships and communication between JHH and Maitland sites improving patient management, advice and reverse flows. There is local support for the need for change, for enhancement of the existing staff skill base with a networked approach and maintaining patient safety and improving outcomes.

3. Telehealth

There are three platforms for clinical telehealth available in HNE Health, the most relevant being the Clinical Care Cameras. Clinical Care Cameras are currently available in the existing Maitland Hospital in:

- 2 x Emergency Department Resuscitation bays
- 1 x High Dependency Unit
- 1 x Special Care Nursery

These are able to be viewed (in consultation with local clinicians) by JHH ICU and retrieval service, NETS or other specialties to consult and give advice on patient care and transfer. The cameras can be viewed from any computer on the Health network (including outside of HNE Health), and via secure VPN from a clinicians home computer. Multiple users at different locations can also log in to these cameras simultaneously to enable multidisciplinary/multisite clinical review of a patient. The camera is also password, and far site secured, and has 360 degree pan and 36 X zoom. The system has one way video feed with telephone communication and no vision is recorded.

The other 2 platforms include Polycom RealPresence and Scopia. Polycom RealPresence is a desktop videoconferencing system that could allow clinicians to have a two-way videoconference at the bedside and has the potential to be used for discussions with off-site specialists and handover/rounds. At present this solution is used for education, grand rounds and videoconference purposes; however other options could be explored. Similar to Polycom above, there are a number of potential uses for Scopia via a tablet at the bedside. Scopia allows secure external videoconferencing and could also be used for handover and discussions.

Currently Maitland hospital has not fully realised the opportunities that exist to utilise the available telehealth technology. Maitland hospital has prioritised the following areas for further development in telehealth in 2016:

- Explore opportunities for clinical handover of patients being transferred between Maitland and Kurri Kurri to occur via telehealth.
- Explore opportunities for some appointments in clinics to be via telehealth with an initial focus on:
    - Orthopaedic clinics
    - Pre-op clinics
    - Wound clinics
- Improved efficiency of business and operational practices through sharing knowledge and expertise across multiple locations via the telehealth model with a focus on provision of education and staff development.

4. EMR and DMR

Planning for the requirements for ICT for NMH will comply with a range of documents including "A Blueprint for eHealth in NSW". The Hunter New England Local Health District Strategic Plan Towards 2018 commits to encouraging new sustainable technology to support clinical needs. Strategic initiatives include working closely with eHealth and other key partners to implement IT strategies and systems including:

- Enterprise Data Warehouse (EDWARD)
- Electronic medication management
- Electronic diagnostic orders

With the New Maitland Hospital there is an expectation that ICT infrastructure will be capable of supporting technologies required by staff, partners, retail, patients and visitors, that are both current and on the horizon, and will have the flexibility to remain fit for purpose across the lifespan of the New Maitland Hospital. The communications network must enable or be future proofed for digital operating rooms, digital information to all departments, radio frequency identification and hospital wide access to clinical data with a focus on:

- improving access to patient health care information
- simultaneous access by multiple personnel
- improved integration of clinical and administrative information systems and databases.

The New Maitland Hospital will be a digital hospital capable of delivering NSW Health core programs including:

i. Electronic medical records – this will require implementation of digital scanning and electronic standardised documentation by the opening date of the new hospital.
ii. Multiple specialty patient information systems covering acute and community services
iii. Corporate and business support systems

5. ACI Clinical Redesign methodology

The current relocation of Rehabilitation services from Maitland Hospital to Kurri Kurri Hospital is being used as a "prototype" for clinical redesign with a focus on the "triple aim" framework, change management and redesign methodology. This "prototype" is using the premise of small steps, thoughtfully designed, co-operatively implemented, cleverly evaluated and continually expanded to

deliver real benefits for all stakeholders. The project is inclusive of the multidisciplinary team and is challenging existing cultures and established processes to deliver patient centred care with a focus on excellence – every patient, every time. The methodology of clinical redesign will be used as the framework for all subsequent service enhancements or reconfigurations associated with NMH.

6. Surgical Services

Work is currently being done around improving theatre efficiency and effectiveness through a significant redesign of the operating theatre session scheduling. This work is the first of a number of initiatives across Maitland and Kurri Kurri Hospitals being implemented to enhance the surgical patient journey to enable service provision, workforce management and governance of Maitland and Kurri Kurri Hospital operating theatres. The work is aimed to provide a transparent, equitable and standardised focus on the management of elective and emergency surgery at Maitland and Kurri Kurri Hospitals. Results from the initial implementation have shown:

- Total workload (emergency and elective surgery) has ↑
- Emergency surgery workload has ↑ 20% however more of this work is being done in hours
- Wait times for emergency surgery are shorter on average for all emergency surgery categories
- Patient cancellations on day of surgery ↓ 75%
- Surgery sessions are finishing more on time compared to 2015

7. Hospital avoidance strategies

Current work underway with hospital avoidance strategies include;

a. VIP program – this is a 2015 ACI Clinical Redesign project at Maitland, Kurri Kurri and Calvary Mater Newcastle Hospitals aimed at reducing representations to ED and readmissions to hospital by identifying and addressing social determinants. VIP = Very Intensive Patient is focussed on patients who have presented to the ED > 8 times in 12 months or readmitted to hospital > 4 times in 12 months. Early evidence suggests that the VIP program has led to reductions in the numbers of people seeking care for reasons other than being acutely unwell. Three months after commencing the pilot phase in July 2015 at Calvary Mater Newcastle and Maitland Hospital there had been an overall reduction from an average of a year earlier 100 VIPs unplanned readmissions per month to less than 60 per month.

A VIP action plan usually includes an integrated health care model across the health care system, and may include actions for the NSW Ambulance Service, the patient's primary care team, their hospital care team, and other healthcare and social care organisations in the community.

b. Current ambulatory care models – a redesign project is in the start-up phase to review existing ambulatory care provision at Maitland – looking at access, referral, waitlist management, clinic management and discharge.

c. Current Hospital in the Home (HITH) service at Maitland is a nurse led, adult model.

Work is planned to realise opportunities to move to a more contemporary ambulatory model that provides integrated clinical care that reduces the length of stay in hospital or in some instances can avoid an admission altogether of both adult and paediatric patients. The Proposed new clinics at the NMH include;

- Multidisciplinary clinics - looking at alternate referral paths for semi-urgent-conditions.
- Rapid review specialist clinics – avoiding admission by outpatient specialist review
- Rapid review post discharge clinics and models of care to facilitate early discharge and continuum of care in the patients home environment – resulting in a ↓ LOS

8. Psychiatric Emergency Care Centre (PECC)

This will be the introduction of a new service. PECCs are integrated with a range of community-based and inpatient care options and represent the least restrictive hospital-based inpatient care option. It is intended to be utilised by consumers with low to medium acuity mental health problems for whom less restrictive care (e.g. community based care), is considered inappropriate and unsafe and who are likely to require only a brief (up to 48 hours) period of time in hospital. GL2015_009 provides the Psychiatric Emergency Care Centre Model of Care Guideline.

The guiding principles for PECCs are:
- Collaborative decision-making
- Least restrictive, short-term inpatient care
- Outcome based monitoring.

9. Chemotherapy day chairs / unit

This will be the introduction of a new service. As the delivery of chemotherapy continues to shift from the inpatient setting to ambulatory day services the demand for rapid access to treatment in Chemotherapy Day Units is on the rise. The Chemotherapy Day Unit provides services closer to home, with a range of outreach cancer services provided by a multidisciplinary team.

10. Paediatric day beds

This will be the introduction of a new service, with a focus on the philosophy of the “team around the child” which places the emphasis firmly on the needs and strengths of the child or young person, rather than those of organisations or service providers. It is anticipated that a range of day medical services will also develop – these are in the process of being defined but will include day infusions, wound dressings, patient education / stabilisation for chronic diseases (e.g. asthma, diabetes).

11. Day medical unit

This will be the introduction of a new service where patients receive investigations and treatment appropriate to their condition without the need for overnight admission to an inpatient bed. This

allows care to be delivered appropriately and to consistent standards. Medical day therapy units can be used to treat patients requiring diagnostic support, specific procedures or treatments, and for patients who visit frequently for certain therapies, such as infusions.

12. Emergency Department Short Stay Unit

This will be the introduction of a new service – Emergency Department (ED) Short Stay Units are Inpatient Units, managed by ED staff, designated and designed for the short term (generally up to 24 hours) treatment, observation, assessment and reassessment of patients initially triaged and assessed in the Emergency Department. PD2014_040 Emergency Department Short Stay Units outlines the mandatory requirements for EDSSUs.

13. ePMA

Currently Maitland is a pilot site for the implementation of ePMA (electronic prescribing and medication administration). This was commenced in the Rehabilitation Unit at Maitland Hospital in November, 2015 and has an implementation plan for the whole site. The Software is used to:

- record the prescription and administration of medications, replacing the National Inpatient Medication Chart (NIMC)
- Provide medication information for clinicians
- Offer clinical decision support for prescribers and administering clinicians
- Undertake medication reconciliation at points of transfer of care including discharge
- Undertake pharmaceutical review
- Request supply of inpatient and discharge medications
- Produce medication lists for patients and carers.

14. Lower *Hunter Sector Realignment*

Hunter New England Local Health District is in the process of realigning geographical and sector boundaries to enable a management and accountability structure for co-dependent services to improve care and patient flow. From April 2016 the Lower Hunter Sector will be managed by one General Manager and be inclusive of Maitland Hospital, Kurri Kurri Hospital, Cessnock Hospital, Dungog Hospital, East Maitland Community Health Centre and Cessnock / Kurri Kurri Community Health. This will enhance the integration of acute hospital and community health services at a local level and improve the links in the continuum of care between acute, subacute and community as well as assist with building stronger partnerships with NGO's and other Primary Health Networks. The realignment will provide opportunity for reworking of models of care and clinical service models, for example, in ED, surgical services and subacute.

3.7. Technology

The NMH Project is a major opportunity to embrace technology and innovation with the aim of creating new ways of working, improved performance and better health outcomes. The incorporation of technology and innovative treatment methodologies, care provision and patient

services is encouraged in the design of the new facility. The design considers capacity for emerging technological changes in clinical, clinical support and non-clinical areas. These technological developments can include but are not limited to robotics, automation, e-health, communications technology and pneumatic tube systems.

The design will underpin the HNE Health clinical network by enabling NMH to provide clinical support to remote locations of the district. The infrastructure will provide the hospital with a communications structured cabling system that will satisfy the initial and future ICT requirements of the hospital. The hospital will incorporate a WiFi system throughout the entire building as well as an active DAS system should internal mobile phone coverage not be sufficient.

The ICT network will not be limited to supporting building system interfaces, it will also be an active element in enabling clinical services to improve the provision of health care both within the hospital and throughout the broader Hunter region.

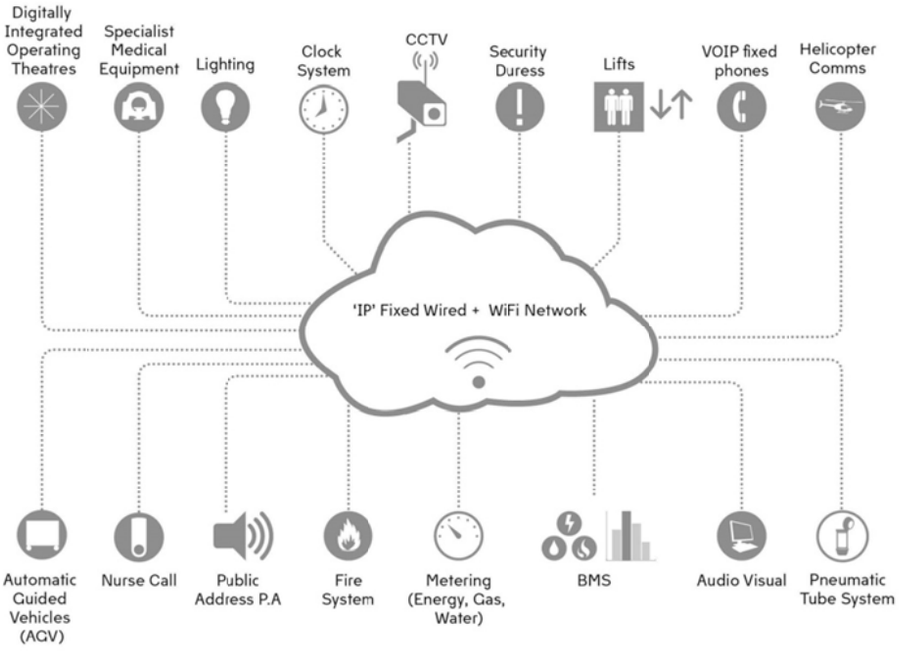


Figure 14 New Maitland Hospital ICT network

NMH will be built using the eHealth/Health Infrastructure Technology standards developed and in operation across NSW Health. Key features of this will be:

- Cabling standard
- Wireless standard to support RTLS
- Campus Standards
- Quality of Service (QOS)
- Naming and addressing standard

A high speed service will be installed into the NMH to deliver the full range of services. It is expected to be at least 10G bits with a 1G bit backup. This service will provide connectivity to

state and locally hosted applications and services. It will provide access to the district wide data, voice and video networks.

The opportunity exists within this development to integrate on campus and off campus telephone services. A hand held device that can work as follows should be the objective for this new facility:

- Mobile telephone off campus
- Pager on and off campus
- Portable telephone on campus
- Duress device on campus
- Fixed telephone on campus

Videoconferencing in general and Telehealth in particular are and will continue to be key strategic services within HNE Health. Every effort will be made to reduce printing and eliminate faxing.

At the current time there are no new replacements or additional corporate systems planned to be hosted locally by HNE Health. The following new or replacement system are planned to be implemented and hosted by eHealth for HNE Health:

- EDWARD – Replacement for HIE Data Warehouse
- Rostering – replacement for Proact and RosterOn.
- Incident Management and reporting – replacing IMMS.
- Engineering Services – Replacing Maximo

The introduction of these replacement systems is not expected to have any impact on the design of NMH.

The following locally hosted clinical systems are planned or currently being implemented by HNE Health. Note these will have significant impacts on the availability of devices both fixed and mobile in clinical areas within NMH.

- Medchart – EMM, this is currently being implemented at the existing Maitland Hospital. The experience of this implementation across the current facility will guide the determination of infrastructure requirements within clinical service areas including wards and clinics.
- Winscribe – Dictation and clinical correspondence system will replace Boswell. This is not expected to have any impact on requirements.
- Order Entry – This is a major project that will have significant impacts on clinical workflow and require additional infrastructure to support. The system is currently being built for Pathology and Medical Imaging orders with go-live expected in Q3 2016. This will be expanded later to include orders for Nursing, Allied Health and Dietary.
- Clinical Documentation – HNE Health propose to move to a complete electronic medical record at NMH and this presents an ideal opportunity to put in place what can be best described as a “Paper light” hospital. A business case has already been developed and approved to implement the Infomedix Record Scanning solution known locally as Digital Medical Record (DMR). This will allow efficiency in the design of the NMH without the need for storage of paper medical records. HNE Health already holds the necessary software licence for the Clinical documentation solution from Orion Health. This is the same vendor as the current local

EMR (CAP). A business case is to be developed in Q2 2016 for the support team to develop and implement this solution across the District.

HNE Health has prepared an initial ICT Strategy for the NMH and this is included in Appendix 19.

3.8. Endorsement of service planning by state wide services development branch

On 4 May 2015, the progression of planning for the NMH was supported by MoH on the basis that a FBC is developed that delivers an option within the funding provision of $450M identified for the project on the NSW Health Capital Program.

3.9. Options Development Evaluation

The Options for the NMH have been developed over a period of time from 2013 in the following areas:

1. Expression of Interest for preferred site
2. Value Management - Long List of Service Options refined to a shortlist of Service Options and then agreement on a preferred Service Option
3. Refinement of the preferred Service Option
4. Master planning options
5. Functional Relationships and Schedule of Accommodation

The process around each of these is considered in detail as follows;

3.9.1. Expression of Interest for preferred site

In 2013 as part of the HVSPP work was undertaken in identifying and evaluating a suitable parcel of land for the new hospital. This methodology and scope undertaken was endorsed by the HVSPP Project Executive Steering Committee (PESC) in October 2012.

The endorsed scope of the task was to identify, review and analyse site options for the recommended land acquisition strategy and identify a preferred site for a new Maitland (Lower Hunter) Hospital.

This included:

- Engaging the Hunter Valley Research Foundation to undertake a targeted research process to identify the geographic boundaries of an appropriate zone for location of the Maitland (Lower Hunter) Hospital
- Discussions with a range of groups such as the Maitland City Council, the NSW Department of Lands and NSW Department of Planning to ascertain their knowledge of potential sites
- Identifying potential sites (publically and privately held) within the defined zone through an Expression of Interest (EOI) process

- Identifying planning principles relevant to the site selection process (including size, access, transport, noise, and development constraints). Developing and prioritising relevant assessment criteria

The EOI was advertised over a three-month period from November 2012 to January 2013 and invited landowners to nominate available land within the preferred zone (below) that may be a suitable for the new hospital. The EOI was extensively advertised and listed the following minimum criteria:

- A usable, appropriate site within the preferred location boundary (shown below)
- A site with a minimum size of 10 hectares
- A site that is not known to be in an area subject to flooding

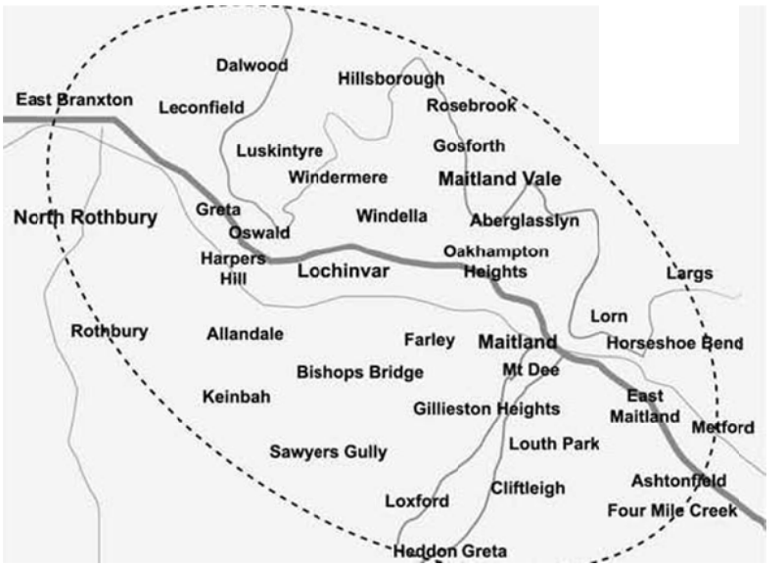


Figure 15 Preferred Zone for Land Parcel for the New Hospital

In parallel to the EOI, the project approached federal, state and local levels of government to enable them to identify any publicly owned land parcels within the zone. The EOI closed 25 January 2013. Property owners responded with numerous sites scattered within and adjacent to the identified area, mainly along a corridor defined by the New England Highway and centred on Maitland. A total of 36 submissions were received through both the EOI and direct approach.

The Tender Evaluation Committee had seven meetings. During these meetings the submitted sites were evaluated against the endorsed evaluation criteria. This was completed between February and May 2013. The Committee was responsible for informing the Executive Steering Committee of the shortlist of sites and identifying which of those sites most successfully meets the assessment criteria.

3.9.2. Value Management

A Pre-Value Management Workshop was held on the 18 August 2014 where the following long list of options was reviewed;

Existing Maitland Hospital	Option 1a	Do Nothing (keep safe and operating)
	Option 1b	Current Demand Case (2010/11) • Redevelopment of existing Maitland Hospital • Does not include relocation of East Maitland Community health and Morisset Mental Health
	Option 1c	Increase Beds and Services at Current Maitland Hospital Site to 2026 demand • Redevelopment of existing Maitland Hospital • Includes the relocation of East Maitland Community Health and Morisset Mental Health
Metford Site Hospital	Option 2	Clinical Services Plan Scenario • Construction of a new hospital to 2021/22 demand • Does not include relocation of East Maitland Community Health and Morisset Mental Health • Reverse flows from JHH and CMH only
	Option 3a	Part Service Statement with Kurri Kurri Reverse Flows Only • Construction of a new hospital to 2026/27 demand • Includes the relocation of East Maitland Community Health • Future relocation of Morisset Mental Health • Reverse flows from Kurri Kurri
	Option 3b	Part Service Statement with Kurri Kurri, Cessnock & Dungog Reverse Flows • Construction of a new hospital to 2026/27 demand • Includes the relocation of East Maitland Community Health • Future relocation of Morisset Mental Health • Reverse flows from Kurri Kurri, Cessnock & Dungog
	Option 4a	Full Services Statement Scenario - includes relocation of Morisset • Construction of a new hospital to 2026/27 demand • Includes the relocation of East Maitland Community Health & Morisset Mental Health
	Option 4b	Full Services Statement Scenario - future relocation of Morisset • Construction of a new hospital to 2026/27 demand • Includes the relocation of East Maitland Community Health • Future relocation of Morisset Mental Health
	Option 4c	Construct all 2026 inpatient acute services at Metford and conduct all outpatient services at the current Maitland Hospital • Construction of a new hospital to meet inpatient acute 2026/27 demand • Existing Maitland Hospital to deliver outpatient services • Includes the relocation of East Maitland Community Health • Future relocation of Morisset Mental Health

	Option 4d	Construct on the Metford site the beds and Clinical Services nominated by HNE and plan for future expansion zones. • Construction of a new hospital to meet 2026/27 demand of services nominated by HNE LHD. • Includes the relocation of East Maitland Community Health • Future relocation of Morisset Mental Health

Table 20 Long List of options

Post the Pre-VM Workshop the following short list of options were agreed to be reviewed as part of the Value Management process;

Option	Description
0	Base Case - keep safe and operating. Minor Capital Works Only.
1	Redevelopment of existing Maitland hospital to 2010 / 11 data projections.
2	Redevelopment of existing Maitland hospital to 2026 / 27 demand projections.
3	Full Service Statement including relocation of Morisset Mental Health Services on new Metford site.
4	Full Service Statement with future relocation of Morisset Mental Health Services.
5	Split Clinical services between existing Maitland Hospital and the Metford sites.
6	6a - Scalable option with build to 2020/21 with ability to expand to 2026/27. Note – incl. Morisset Mental Health Services.
	6b - Scalable option with build to 2020/21 with ability to expand to 2026/27. Note. Future relocation of Morisset Mental Health Services.

Table 21 Agreed Short List of options

A structured value management process was then undertaken in order to assess the strategic options for delivery of health services in the Lower Hunter Region which optimise delivery of care and demonstrate value for money. The value management process fulfilled Treasury requirements for the project PBC and the full VM report is included in Appendix 17. The VM process identified the preferred development option (in a mix of capital and service delivery) to deliver a development that:

- Most effectively enables the delivery of the scope of the SS and SFDB
- Provides the most efficient and cost effective clinical services outcomes
- Generates the best value capital and recurrent cost outcome and most effectively facilitates changes in response to future demand and funding availability as risk mitigation
- Optimises the future development potential of the site and facilitates development of subsequent clinical services priorities and master plan stages
- Most effectively facilitates changes in response to future demand and funding availability as risk mitigation

The following evaluation criteria were developed to compare and assess options as part of the VM process. These were documented and issued as part of the VM workshop papers (prior to the VM Workshop).

Value Factor	Items for consideration
Clinical	Does the proposed capital solution meet the health service requirements in the activity projections to 2026 / 27? Does it enable the delivery of the Service Statement objectives?
Flexibility and Future Proofing	Is it able to expand or adapt for future demand? Does it enable future expansion stages to be implemented? Is it consistent with the long term Zonal Master Plan vision? Opportunity to achieve an integrated health precinct?
Site Utilisation	Does it promote a highest and best use strategy? (i.e. Availability / Height / Density / Asset Renewal)
Functionality	Is it clinically functional and efficient to deliver health services? (i.e. Clinical adjacencies / Travel distances / Patient movements / Operational efficiencies and Models of Care)? Integration across the continuum of care? Does it provide for a better experience for patients accessing health services, including; Maintenance of patient privacy and dignity while keeping patient journeys as short and direct as possible?
Value for money (affordability)	Are recurrent costs financial sustainable? Are whole of government assets optimised? Does the design optimise the site characteristics? Is staging of construction and future expansion considered where practical? Does it provide future focused infrastructure?
Business continuity	Does it maintain hospital services during construction? (i.e. Decanting and temporary accommodation / staging / disruption)

Table 22 Value Management Evaluation Criteria

As an initial step, the VM working group reviewed each of the short listed options to discount any options that were not considered viable to assess as part of the value management process and agree to the final short list to progress through to the VM workshop assessment phase. Options 1 and 5 were both reviewed and agreed as not being viable operational options for HNE Health and therefore these were not assessed. As an outcome of the Value Management assessment, the Preferred Service Option from the Value Management Workshop was Option 3 - Full Service Statement including relocation of Morisset Psychiatric Services excluding Kestrel on new Metford site.

3.9.3. Refinement of the Preferred Option

Since the Strategic Gateway HNE has reconsidered the patient flows, and the impacts of such changes on their network of health services. In this review it was found that residents across the Hunter Valley and greater Newcastle access health services via a changing road system and residential land development; and by the level of acuity and specialist service provided at each hospital.

In parallel, in May 2015, MoH confirmed their support of the progression of planning for the NMH on the basis that the FBC delivers an option within the funding provision of $450M identified for the project on the NSW Health Capital Program. MoH noted that this provision also reflects the estimated total cost of the project identified in Hunter New England Local Health District's 2013/14 Asset Strategic Plan.

The revised planning for these health services considered the HNE network and reviewed health services for the Hunter Valley in conjunction with greater Newcastle; as well as tertiary and state-wide services to residents of HNE Local Health District (LHD), Mid North Coast (MNC) LHD, Northern New South Wales (NNSW) LHD and Central Coast (CC) LHD. As part of this review it was agreed that the relocation of the mental health services from Morisset Psychiatric Hospital, EMCHC and Hunter Valley Mental Health Services (Community) would be removed from the Preferred Service Option for NMH and be considered as separate funding application under the process of asset planning within NSW Health.

As a conclusion to the review the Preferred Service Option for NMH was determined as requiring to provide Role Delineation Level 4/5 services in emergency, intensive care, maternity (including corresponding Level 4 SCN for qualified neonates), and associated core services. It will accept admissions that can be managed by general surgeons and general physicians safely.

3.9.4. Master planning options

The Zonal Masterplan was developed in 2014 by the project team from first principles with consideration of the ideal clinical arrangements. These were then tested against the CSP and the draft SS to determine approximate real-world configurations for the hospital. These configurations were then tested across the site – over 60 outline studies for the Zonal Masterplan were identified and reviewed.

The 2014 Zonal Master Plan designated areas for the new hospital buildings, a forecourt, on grade car parking, drop off zone, NGOs and space for future expansion of the hospital. The components influencing the Zonal Masterplan were identified as follows;

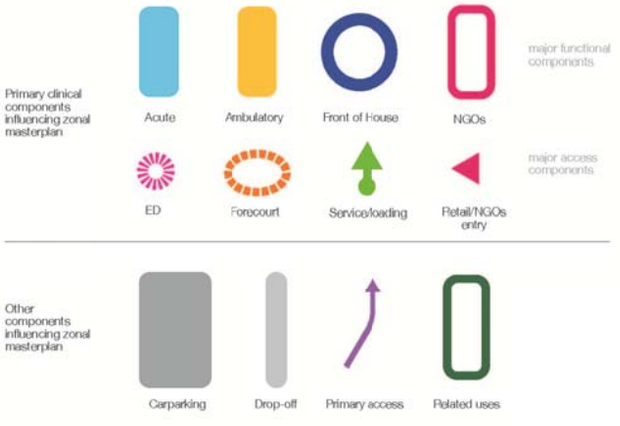


Figure 16 Components of 2014 Zonal Masterplan

These options were then reviewed with reference to site constraints and opportunities, including landform, planning and use context, access and infrastructure. Out of the 60 studies, 5 were selected as highly preferred potential candidates for the final Zonal Masterplan. The project team recommended Zonal Masterplan Option 4 for further development. Option 4 sites the new hospital largely on the North West portion of the site. It was considered by the project team that Option 4 best supported the requirements of the clinical services, and was most likely to support a high quality health precinct. This recommendation was reviewed with the PDC in July 2014 and endorsed.

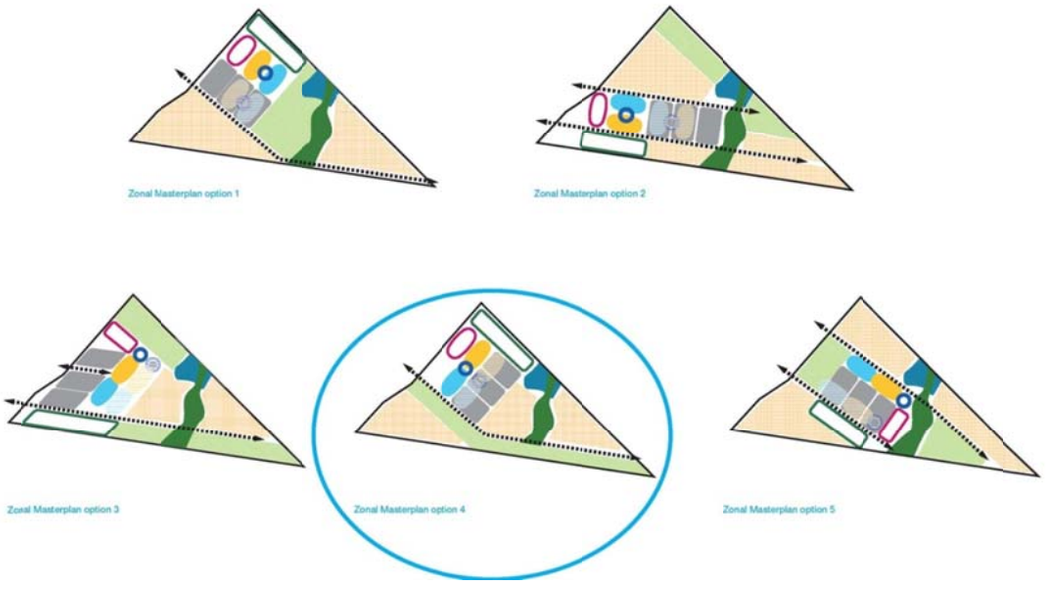


Figure 17 2014 Zonal Masterplan Options and Preferred Option 4

The preferred option 4 was further developed by the Design Team to reach the following resulting Masterplan which was endorsed by the project governance. The resulting masterplan allows for future development of the site, locates major access points on the site, highlights the environmental considerations to be maintained, shows open space configuration in relation to the hospital.

Figure 18 2014 Endorsed Masterplan

In August 2015 as part of the concept design for the project the design team revisited the 2014 endorsed masterplan and refined it based on feedback received as follows:

- Refinement to the Preferred Service Option
- Alignment to Metford Road and Fieldsend Street connection as requested by MCC
- Distance between the two access roads increased to incorporate RMS Standard for road safety
- Orientation considering ESD/sustainability as requested by HNE Health
- Relationship to Metford Road as requested by HNE Health
- Clarity required around pedestrian and vehicular movement as requested by HNE Health
- Built form size and bulk as requested by HNE Health
- Built form scale within settings as requested by HNE Health

The refined masterplan endorsed by the Executive User Group (EUG) and the project governance is illustrated below;

Figure 19 Endorsed Refined Masterplan

Further detail of the Endorsed Refined Masterplan and the technical support for the endorsed masterplan is included in the Project Teams design report in Appendix 7.

3.9.5. Functional Relationships and Schedule of Accommodation

Carramar Consulting (Carramar) prepared the detailed Functional Design Brief (FDB) in September 2015 (Updated March 2016) based on consultation undertaken in November 2014 – February 2015. The consultation undertaken was based on the scope defined in the SS. This FDB was the continuation of and supersedes the Strategic Functional Design Brief (SFDB) completed by Carramar in 2014.

The FDB was refined in September 2015 (and updated March 2016) to reflect the reduced scope as described within HNE Health's New Maitland Hospital Capacity Options document and this FBC.

The FDB was used to define the functional relationships for a conceptual design of the NMH. A clinical functional groups diagram was developed initially to demonstrate the clustering together of services as detailed in the SFDB and FDB. Critical relationships and connections were then developed with and endorsed by the project governance. The model of care outlined and objectives of critical importance include but are not limited to:

- An integrated acute and ambulatory care facility;
- Incorporated both in-hospital and out-of-hospital care focusing on seamless integration of health services across the continuum of care;

The endorsed clinical functional groups diagram is illustrated below;

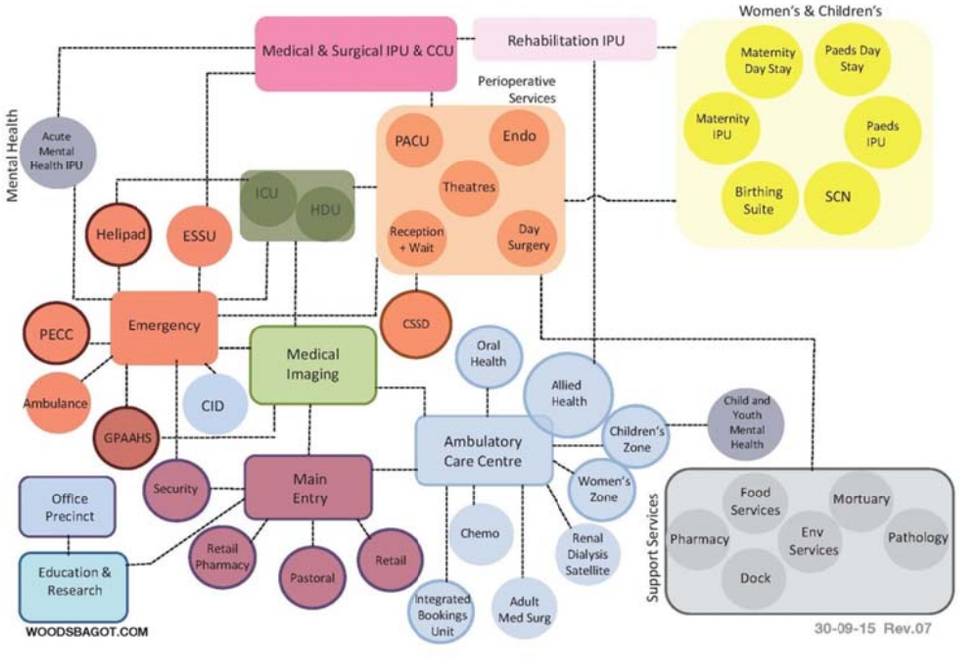


Figure 20 Endorsed Clinical functional relationship diagram

Based off the FDB and reflective of the New Maitland Hospital Capacity Options document a SoA was developed by HNE Health. The summation of the SoA is as follows;

Department	Area	Circulation	Total Area	Expansion 26/27	
Integrated Booking /Admissions	153	46	198		no increase
Engineering /FMU	552	166	718	100	growth of 100m2
Ambulatory Care Clinics				300	add ambulatory imaging & diagnostic approx 300m2

Department	Area	Circulation	Total Area	Expansion 26/27	
Community Zone	99	30	129	5	add 5% to ambulatory clinics depending on future demand
Midwifery Pod	200	60	260	10	
Womens	154	46	200	8	
FCC	80	24	104	4	
CAYMH Pod	126	38	164	6	
Shared Spaces	280	84	364	14	
Paediatric Zone	569	171	740	28	
Adult Clinics	945	284	1,229	47	
Allied Health Zone	572	172	744	29	
Specimen collection	47	14	61		no increase
CID	280	84	364		no increase
CSD 4 Sterilisers	653	196	849		no increase
ED	1,748	524	2,272	140	growth of 1 fast track 4 acute
ESSU	209	63	272	700	growth of 8 beds
PECC	288	86	374		no increase
HiTH 8 beds/GPAAHS	305	92	397		no increase
Education & Research	691	207	898		no increase
Hunter Equipment Service	246	74	319		no increase
BME/Clinical Tech	50	15	65	100	provide nominal 100m2 for potential future equipment library
HSS				300	growth 300m2 HSS
Porter Control Hub	20	6	26		
Cleaning	136	41	177		
Food Services	419	126	545		
Linen	126	38	163		
Supply/Loading Dock	366	110	476		
Waste	208	62	270		
ICU/HDU 8 beds	758	227	985	700	growth of 8 beds i.e. another 700m2
IPU 1 28 bed incl. radio-iodine	901	270	1,171	1,540	growth of 72 bed = 2.5 more wards
IPU 2 28 bed incl. stroke	796	239	1,035		
IPU 3 28 bed incl. CCU	954	286	1,240		
IPU 4 28 bed	764	229	993		
IPU 5 28 bed	902	271	1,173		
IPU 6 28 bed incl. ortho	784	235	1,019		

Department	Area	Circulation	Total Area	Expansion 26/27	
Maternity Birthing Unit 7 Del Suites + 2 Assessment	670	201	871		no increase
Womens IPU 28 beds including 4 Day Stay	973	292	1,265		included increase above
Main Entrance	718	215	933	50	may need some enhancement
Medical Imaging	1,047	314	1,361	1,000	MRI Nuc Med = 1000m2
Mental Health Acute 24 beds	1,286	386	1,672		no increase
Mortuary	100	30	130		no increase
Office Clinical Directorates	2,220	666	2,886	222	approx 10% increase
Oral Health 6 spaces	346	104	450	346	increase by 6 more chairs
OPU/PACU/Day Surgery	2,376	713	3,088	230	provide "day surgery" ambulatory service - 2 procedure rooms & 20 chair spaces
Pathology	415	125	540		no increase
Paed IPU 12 beds 4 day assessment	868	260	1,128		no increase
Pharmacy	217	65	283		no increase
Rehab IPU 1 12 beds	654	196	850	654	increase by another 12 beds & Day rehab services
Renal Dialysis 12 chairs	347	104	450		no increase
Same Day Medical /Chemo 18 spaces	422	127	549	100	increase above 100m2
SCN 16 cots	759	228	987		no increase
Shared Staff Amenities	359	108	467		
Volunteers Unit	138	41	179		
Shell space	130	39	169		
Sub-Total (inclusive of circulation)			38,248	*6,633*	*Expansion 26/27*
Travel and Engineering			13,387	*2,322*	*Expansion 26/27*
Planning Contingency			2,582	*448*	*Expansion 26/27*
	Total		**54,217**	***9,402***	*Expansion 26/27*

Table 23 Schedule of Accommodation

The SoA was reviewed by Carramar in line with the AUS HFG's. The following table documents the changes made to the SoA after the concept design was completed. Note it was agreed that these changes would be incorporated into the Schematic Design in the next phase of the project.

Department	Number	Area	SoA Area	Change to align with AUS HFG	Diff
Midwifery Pod					
Interview Meeting Room Large Family	1	14	14	20	6
Treatment Room	2	20	40	28	-12
Womens					
Interview Meeting Room Large Family	1	14	14	20	6
Treatment Room	2	20	40	28	-12
Paediatric Pod					
Interview Meeting Room Large Family	2	14	28	40	12
Treatment Room	1	20	20	14	-6
Pod 1 Adult					
Interview Meeting Room Large Family	1	14	14	20	6
Treatment Room	2	20	40	28	-12
Pod 2 Adult					
Interview Meeting Room Large Family	1	14	14	20	6
Treatment Room	2	20	40	28	-12
Pod 3 Adult					
Interview Meeting Room Large Family	1	14	14	20	6
Treatment Room	2	20	40	28	-12
ED					
ED Support Areas					
Viewing Reporting	1	8	8	0	-8
ICU/HDU 8 beds					
Staff Areas					
Office 9m2	1	12	12	9	-3
Medical Imaging					
Diagnostic Areas					
OPG	1	8	8	7	-1
Mental Health Acute 24 beds					
Patient Spaces					
Dining room	1	50	50	40	-10
TV Music Room	1	50	50	20	-30
Multifunction OT/Activity room	1	70	70	81	11
Oral Health 6 spaces					
Support Areas					
Dental Workroom	1	12	12	20	8
Instrument Processing	1	40	40	7	-33
Store Sterile Stock	1	20	20	14	-6
Staff Areas					
Staff Resource	1	20	20	15	-5
OPU/PACU/Day Surgery					
Staff Amenities					

Department	Number	Area	SoA Area	Change to align with AUS HFG	Diff
Staff Resource	1	50	50	60	
Cleaners Room	1	5	5	0	-5
Child Specific Areas					
Play Room	1	50	50	48	-2
Rehab IPU 1 12 beds					
Clinical Support Areas					
Bay Meal trolley	2	4	8	4	-4
Renal Dialysis 12 chairs					
Entry/ Waiting					
WC accessible	1	5		5	5
		TOTAL	721	624	-107

Table 24 Changes to Schedule of Accommodation after AUS HFG review

The Carramar review also highlighted departures from the AUS HFG's which HNE Health deferred not to change due to:

- Facility wide approaches,
- Workforce implications,
- models of care, or
- Experience

These departures are documented in the Project Teams design report included in Appendix 7.

3.10. Concept Design

The Concept Design was based on the development of the endorsed refined masterplan and was undertaken from September 2015 through to November 2015. From the clinical functional relationship diagram and the established critical adjacencies the clinical functional stack was created as the basis of the Concept Design.

As a conceptual stacking diagram, each coloured zone of area is approximately proportioned to indicate the size of area on the floor plate. This stacking diagram was presented and endorsed by the project governance. Key discussion points at the EUG were:

- Relationship of acute mental health to ED and PECC
- Scale and overlooking issues for acute mental health
- Relationship of operating theatre to maternity areas
- Relationship of IPU's and theatres
- Pathology after hours access
- Functions and relations to services on the lower ground floor
- Overall height and size of the building
- Orientation of overall building
- Daylight access for Pathology and Mortuary

Using this functional stack the Design Team developed the Concept Design focussing on:

- Development of an integrated clinical model, including mental health functions
- Separation of circulation, back-of-house, and patient flows - both horizontally and vertically
- Arrival and access points into the hospital, using site level changes and orientation to an advantage
- Sufficient perimeter for natural light
- Rational floor plate sizes and planning grids

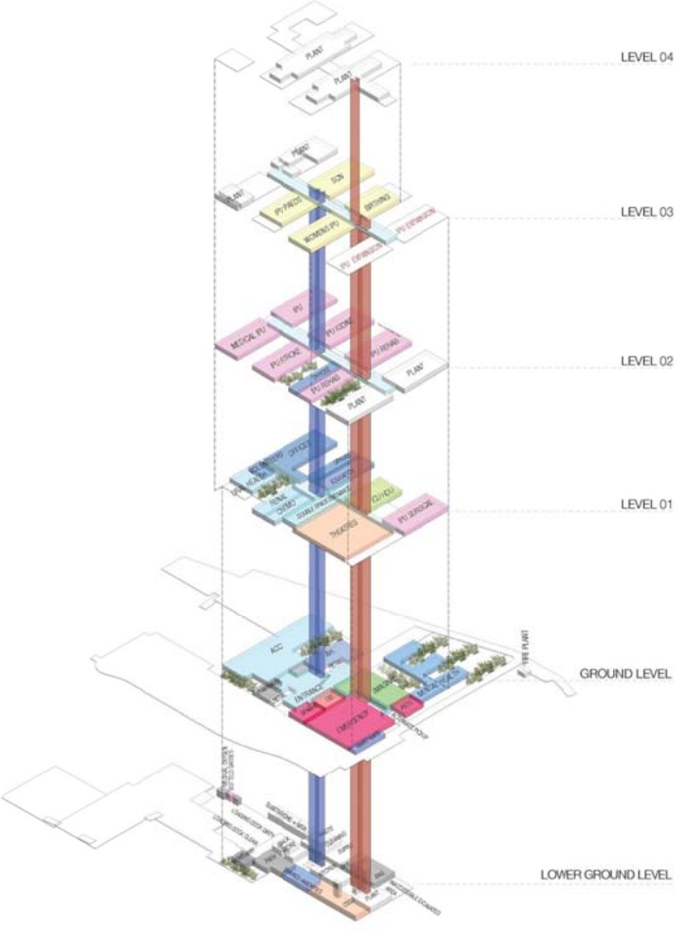


Figure 21 Endorsed Clinical functional stack

Functional and design decisions were tested through consultant reviews, ERG workshops, EUG workshops PPT, and Planning Development Committee (PDC) presentations. These included:

- ERG – 10 September
- ERG – 16 September
- Executive User Group #1 – 18 September
- ERG – 23 September
- ERG – 30 September
- Executive User Group #2 – 8 October
- ERG – 9 October
- ERG – 14 October
- IPU Options Analysis – 19 October

- ERG – 21 October
- Executive User Group #3 – 22 October
- ERG – 29 October
- Services ERG – 5 November
- Services ERG – 12 November
- Civil And Structural ERG – 9 November

The endorsed Concept Design is detailed within the project teams design report in Appendix 7 and is illustrated in the site plan below;

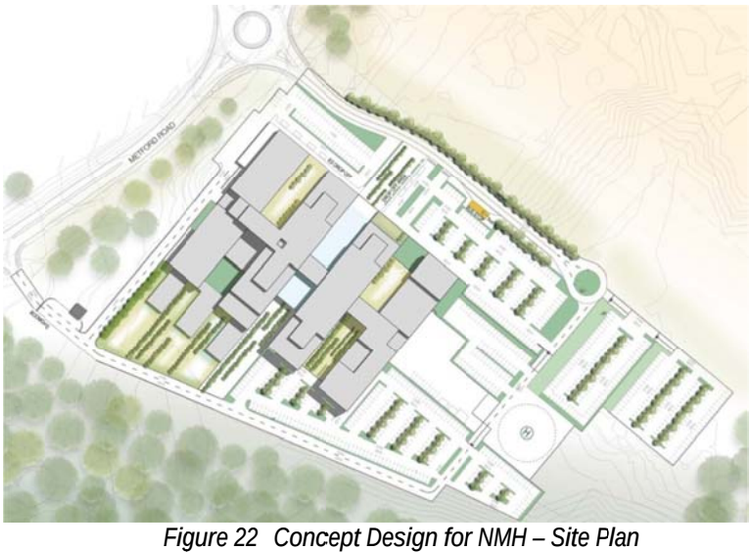


Figure 22 Concept Design for NMH – Site Plan

3.11. Workforce Planning

The NMH Strategic Workforce Plan (NMHSWS) supports the New Maitland Hospital Capacity Options document, was a progression of the Workforce Plan prepared for the PBC and an adjunct to the Hunter Valley Health Services Workforce Plan (HVWP). The purpose of this document is to define the current workforce, identify current issues and provide recommended workforce strategies for the successful planning, commissioning and ultimate operation of the new hospital.

The Plan identifies significant workforce issues for the New Maitland Hospital comprising:

- The ageing nursing and midwifery workforce that is predicted to retire within the next 5 years.
- High proportion of Visiting Medical Officers.
- The increased number of staff required to provide the additional services planned for the new hospital
- The staff with different skill sets required to provide the new services planned for the new hospital
- Staff will require assistance to adapt to new models of care and service delivery
- Difficulties in recruitment and retention of allied health staff
- Developments in information technology and communication generating changes in the way health services are delivered

The Plan is included in Appendix 8 and recommends a number of strategies to overcome these significant issues to ensure that the NMH is staffed by the most appropriate workforce with the best fit. Some of these strategies are mandated by the NSW Health Professionals Workforce Plan, some are tailored especially to local conditions at Maitland. With limited supply of some professions, the aim of the workforce redesign is to change the way in which work is done, or the staff who do it in order to ensure that the job can be done by the people who are available to do it.

Principles guiding the Workforce Planning and Design include:

- Planning and designing services that focus on patient-centred care and include the needs of families and carers
- Early and sustained change management and transition workforce planning and development for the transition to the new hospital
- Close linkages with clinicians including HNE Health Clinical Networks and Streams to develop the workforce requirements, structures and linkages
- A collaborative approach to workforce planning incorporating in-depth knowledge of service provision and models of care
- Planning for staffing levels that provide a flexible and productive workforce that deliver safe and high quality healthcare services, using evidence in support of productivity improvement assumptions
- Development of innovative workforce recruitment strategies
- A focus on leadership building and capacity
- Continued focus on the increased recruitment and retention of Aboriginal and Torres Strait Islander staff.
- Some workforce skills shortages will require a creative approach to position redesign to support service delivery, including:
    - Shift of care to the community and the consequent shift of workforce capacity
    - Adaption of mobile technology
    - Contribution of carers and self-care to the delivery of services
- All financial assumptions made are justifiable and transparent

The workforce for the New Maitland Hospital will be strongly derived from current Maitland staff employed by HNE Health when the new hospital opens. However many of these staff will have left the District (through retirements and temporary contracts), some services currently provided will grow in size, and there will be new services not currently provided, with new staff to be recruited. The following table summarises the current workforce at Maitland and the anticipated workforce required for the New Maitland Hospital when fully operational in 2021/22. Based on these estimates, there is the need for approximately 207 additional staff between current and projected requirements.

Professional Group	FTE 2016/17	FTE 2021/22
Administration Total	91	150
Allied Health Total	14	14
Dieticians	4	4

Professional Group	FTE 2016/17	FTE 2021/22
Domestic and Other	3	5
Hospital Employees	21	32
Maintenance and Trades	13	13
Junior Medical Staff	57	71
Medical Staff	27	26
Senior Medical Staff	28	40
Nursing and Midwifery	469	553
Occupational Therapy	9	9
Other Allied Health	5	4
Pharmacists	10	10
Psychologists	3	3
Social Workers	11	12
Technical Officers	33	55
Oral Health	12	14
Grand Total	**808**	**1015**

Table 25 Current and Future Staff required for New Maitland Hospital

4. Affordability and Value for Money

4.1. The Financial Case

The Financial Case provides a preliminary assessment of the financial impact of the NMH and outlines the following:

- Recurrent cost estimates including maintenance costs for the options
- Summary of capital cost impact of options
- Capital cash flow
- A summary Financial Appraisal

The reconfiguration of services for NMH considers affordability against HNE Health's funding allocation within an ABF framework. This has identified potential efficiency improvements and informs priorities for clinical redesign to ensure a sustainable, resilient and high performing health service delivering better patient outcomes. The NMH services will mainly be funded through activity based funding arrangements. Therefore, enhanced service capacity and complexity will need to be planned in accordance with funding arrangements and allocated growth. This may be incremental year to year, maximising safe service development processes.

The Financial Case is based on the following:

- Future activity projections, generated from demographic and health status data that is driving demand
- Projected staff profile developed to address the requirements of the future activity projections;
- Benchmark recurrent cost information
- The associated functional and spatial requirements for the new facility

On completion of the development, the NMH facilities will become assets of the HNE Health and will be operated, managed and maintained under the auspices and control of HNE Health.

4.1.1. Financial Impact Statement

The FIS evaluates the budget impact of the NMH Project. The following table below shows a summary of the capital and recurrent (operating) cost impacts of the preferred service options for the development. Incremental operating cost assessment under other options has been undertaken in the EA.

The FIS is included in Appendix 12. The objective of the FIS is to:

- provide the best estimate of expenditure required to meet the projected level of service demand as a result of the capital investment, consistent with activity based funding
- optimise efficiency
- provide the best estimate of the projected revenue (if applicable) based on the approved forward budget
- summarise the projected budget growth, identified efficiency gains, revenue from compensable activity and other sources of income, proposed flow reversals, and/or internal redistribution

- identify the Net Cost of Service impact of the project and funding sources
- identify the timetable for funding and commissioning of new services
- identify the activity and financial risks to HNE Health of the proposed service development and strategies to manage these risks and ensure that capacity is managed within the available budget

This FIS focuses on incremental cost impact by applying the state price to the incremental activity volume projections in acute in-patient, emergency department, and Mental Health acute services. The FIS has been developed within the context of 2014/15 budget allocation and activity based funding and management at HNE Health. Established on activity based funding (ABF) cost estimates, the incremental cost in 2016/17 is estimated at $5.182M and progressively to $68.655M in 2021/22 (including depreciation).

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Capital impact									
Capital expenditure	3,421.24	2,822.45	9,333.76	17,922.06	19,846.49	196,982.61	199,671.38	-	-
Capital funding sources:									
Consolidated capital	3,421.24	2,822.45	9,333.76	17,922.06	19,846.49	196,982.61	199,671.38	-	-
Other sources									
*Total	-	-	-	-	-	-	-		-
Recurrent impact									
Total expenses				5,164	5,164	5,164	5,164	55,297	74,265
Total revenues				(18)	(18)	(18)	(18)	4,917	5,610
Budget result (NCOS) Including Depreciation				5,182	5,182	5,182	5,182	50,380	68,655
Additional recurrent funding requirement (vs current year funding)				5,182	5,182	5,182	5,182	50,380	68,655
Recurrent funding sources:									
Consolidated recurrent				5,182	5,182	5,182	5,182	50,380	68,655
Other				-	-	-	-	-	-
Total Including Depreciation				5,182	5,182	5,182	5,182	50,380	68,655

Table 26 Summary of financial impacts of NMH

4.1.2. Capital Cost Analysis

In accordance with HI Cost Planning and Reporting Standards version 2.0, Cost Plan B sets out the Estimated Total Cost of the preferred option. The Project Cost Manager, DCWC have combined the site specific and project specific cost elements with the Schedule of Accommodation. Cost Plan B also identifies key risks and assumptions that have been made in the generation of the costings.

The site requires enabling works for the building footprint and on-grade car park and assumptions have been made for the cut and fill works, site preparation along with site services reticulation and connections. The access road and pedestrian footpath has been assumed under precinct infrastructure with the aid of the current site plan.

At the Concept Design stage of the development process, DCWC were charged with developing an Estimated Total Cost (ETC) for the project as a forecast final value. They undertook the examination of the site specific and project specific cost elements through their benchmarking process, market intelligence and first principles costings exercises to develop costs that represent what are the anticipated final design and constructed situation. For offsite infrastructure the intersection on Metford Road and the linkway to the existing Metford Railway have been included.

For the hospital works DCWC apply benchmark rates for components of the work that are reasonably defined through HI's standardisation of key elements of the building. This averages to a benchmark rate of $ 8,777 per square metre. In addition DCWC examined the building efficiencies such as the travel and engineering allowances, which was set at 35%, to assist in building up a profile of the overall costs of the built elements. The rates were escalated by 3.0% per annum to start on site and 4.0% per annum during construction.

Contingencies will be managed in line with the project governance and have been included as follows;

- Design Contingencies allowance of 5% of gross construction cost.
- Planning Contingencies allowance of 5% of gross construction cost.
- Construction Contingencies allowance of 5% of gross construction cost
- Client's Contingencies allowance of 10% of gross construction cost.

The capital cost of the preferred option is $450,000,000 (Estimated Total Cost) as summarised as follows;

Element	Value
Building costs	253,039,484
Professional fees	30,364,738
Contingencies	63,259,871
FF&E	40,067,288
Escalation	34,221,415
ICT	7,399,617
Authority Fees	2,658,106
LHD Costs	2,530,395
Commissioning	5,060,790
HI Costs	8,822,034

Land	2,500,000
Other	76,262
Estimated Total Cost	450,000,000

Table 27 Capital Cost Analysis

Key assumptions used in the development of the Estimated Total Cost are:

- Contingency budget including design and construction risks and client contingencies. Contingencies and HI and HNE Health management costs have been applied at rates that have been prescribed by the HI Cost Planning and Reporting Standards
- Construction is assumed to commence in May 2018 and escalation allowance based on 3% pa and will be delivered under a traditional procurement arrangement of Design Finalisation and Construct competitively bid with a shortlist of suitable contractors
- Allowance for local authority charges and contributions including contributions to utility providers have been assumed at 1.5% of the Gross Construction Costs
- Allowance for E-Health as no design information available
- The project is based in close proximity to Newcastle and the rates are deemed to reflect the local market therefore locality allowance is not required
- The current level of pricing does not consider an exchange rate however as the level of detail increases it is considered that some building and engineering services components may be procured from overseas and the exchange rate will be reported
- All costs and revenue associated with the disposal of the existing Maitland Hospital site are separate to the project funding and capital cost analysis.

4.2. Maintenance and Life Cycle Costing Considerations

Estimated Life Cycle Costs for the preferred option have been developed by the Project Cost Manager, DCWC and are summarised as follows;

Lifecycle Costs	GFA	Capital Cost	Operational Costs	Total Cost over 25 years	Mean Cost PA over 25 years	Total Cost/ m2	Mean Cost/m2 GFA/PA	% of Annual Cost PA/Construction Cost
	A	B	C	D	E= D/25	F = D/A	G= E/A	H
Cyclical Capital Maintenance	51,268	450,000,000	EXCLUDED	4,500,000	180,000	88	4	1%
Recurrent Maintenance	51,268	450,000,000	EXCLUDED	9,000,000	360,000	176	7	2%

Table 28 Life cycle Cost Analysis

The above table is based on the standard HI Document Life Cycle Costing Standards (January 2014 v 1.0) and sets a line item for Cyclical Life Maintenance at 1% of ETC and Recurrent

Maintenance at 2% of ETC for 25 years asset. It is noted that no allowance for contingency or escalation is included in the above as these are already included in Capital Cost Plan.

Recurrent maintenance is generally routine and preventative and is expensed as part of the recurrent budget. It may include maintenance such as changing lights or fixing air conditioning. Recurrent maintenance is budgeted as 2% of the ETC of the project as per the requirement of NSW Health.

4.3. The Economic Case

In accordance with NSW Treasury Guidelines for Economic Appraisal and NSW Health Guidelines for the Economic Appraisal of Capital Projects, an Economic Appraisal (EA) has been completed for the Development. This is included in Appendix 13.

A cost benefit analysis framework was applied to compare the NMH service options, using a discounted cash flow analysis. The cost benefit analysis assessed the benefits and costs of the options to evaluate whether an option's incremental benefits exceed the incremental costs of achieving them, and to compare options to determine which option is the most economically feasible.

Following the Gateway Review of the PBC, an additional option with $450m capital envelope is included in the EA for the FBC;

- Keep Safe and Operating (Option 1 - Base Case): A 'Do-minimum' Base Case that includes some minor capital works for the existing infrastructure safety and compliance
- Option 2: This option meets the identified service needs of the community catchment to 2026/27 in accordance with the NMH Service Statement as well catering for reversal flows from Kurri Kurri Hospital, John Hunter Hospital and Cessnock Hospital. The relocation of Morisset Mental Health Services is excluded. The ETC is $708m.This option was named as Option 4 in the PBC. The same activity projections are assumed in this analysis noting that future service demand would be impacted due to changing travel patterns for residents of the lower Hunter Valley.
- Option 3: This option meets the revised services needs of the community catchment in accordance with the Capacity Option document as well catering for reversal flow from Kurri Kurri Hospital and reduced reversal flow John Hunter Hospital. The relocation Morisset Mental Health Services and reverse flows from Cessnock Hospital is out of scope. The ETC is $450m.

The key evaluation assumptions which underlie the economic analysis include:

- Evaluation period: The evaluation period used for this appraisal is from 2015/16 to 2035/36, based on a 20 year evaluation period
- Base year: The evaluation has used the financial year 2015/16 as the base year for this appraisal. All costs and benefits have been discounted to arrive at a present value for FY2015/16
- Unit of account / price year: The EA was undertaken in real terms (that is, excluding inflation). All benefits and costs are expressed in constant FY2015/16 prices

- Discount rates: A real discount rate of 7 per cent per annum was applied in the EA, consistent with NSW Treasury guidelines. Sensitivity tests were undertaken at real discount rates of 4 per cent and 10 per cent per annum
- Capital costs: Capital costs are based on estimates provided by Donald Cant Watts Corke (the cost estimators)
- Recurrent costs: Recurrent costs are based on the national weighted activity unit (NWAU) projections and the state price per NWAU for 2015/16

4.3.1. Economic Assessment of Benefits

As part of the EA the project benefits identified above have been evaluated, where possible, through the quantification of the monetary value of the benefits in a quantitative cost-benefit analysis and through a qualitative assessment as part of the wider EA.

A. Quantifiable benefits

The following benefits have been quantified for the Project options:

- Economic benefit for patients in terms of health gain as a result of less waiting time and improved access (user benefits), including:
    - Increase in mortality benefits (i.e. increase in statistical life year);
    - Increase in morbidity benefits;
    - Residual values.
- Impact on the health system as measured by cost efficiency as a result of better patient flows, service configuration and capacity utilisation (producer surplus benefits), including:
    - Reduction of potentially preventable hospitalisation in the catchment area due to improved access to ambulatory care and non-admitted patient services
    - Avoided operating costs associated with PPH;
    - Land sale values in relation to the existing Maitland Hospital freed up after the new hospital commissioning;
    - Higher incremental retail space revenues (i.e. rent for café, florist or shop concessions at the hospital).

B. Unquantifiable Benefits

The following economic benefits were identified but not quantified for the EA for the Final Business Case of the New Maitland Hospital Redevelopment Project:

- Increased workforce productivity, staff morale and retention with the provision of new facilities;
- Enhanced amenity benefits provided by the new facilities;
- Enhanced ability of the HNE Health to effectively manage future growth in service activity to ensure patients receive timely, safe and high quality care;
- Ability to implement new models of care, which in turn reduces the access block to the population, average length of stay and waiting time for elective surgery;
- Reducing the need to redirect excess demand from the local catchment population to referral hospitals;
- Avoided travel costs and time to the patients, carers and visiting family members.

- Environmental benefits in terms of potential savings in environmental externalities, i.e. the design of the new facilities incorporates improved environmental performance such as to lower energy consumption;
- Social benefits in terms of improved access and equity outcomes for regional NSW community; and
- Wider economic benefits for regional Maitland areas in terms of attracting new potential business to the new health precinct.

4.3.2. Economic Assessment of Options

The valuation of health benefits from increased activity levels associated with the NMH options has been conducted using the methodology incorporated in the HI EA assessment template. Table below presents the results of the EA incremental to the Base Case (KSO);

Present Value (PV) (20 years at a 7% real discount rate)	Option 2	Option 3
Incremental costs		
Capital costs	518	316
Life-cycle capital maintenance costs	50	32
Operating costs (including ongoing maintenance costs)	544	467
Total incremental costs	**1,113**	**815**
Incremental benefits		
Incremental health benefits	1,216	953
Incremental residual value	118	69
Opportunity cost of land	19	19
Total incremental benefit	**1,353**	**1,041**
Incremental NPV	**239.9**	**225.6**
Benefit Cost Ratio (BCR)	**1.22**	**1.28**

Note: Total may not sum due to rounding

Table 29 Key results table, incremental to the Base Case ($m, 2015/16)

The results indicate that all the options are economically viable. Option 2 has the highest net present value (NPV) of $239.9 million followed by Option 3 with an NPV of $225.6 million. Option 3 has the highest benefit-cost ratio (BCR) of 1.28, followed by Option 3 with a BCR of 1.22. Sensitivity tests of several variables (alternative discount rates, capital costs, operating costs, patient benefits) do not materially alter the outcome.

A qualitative assessment of the strategic and non-quantifiable benefits was conducted and the following benefits emerge from this assessment:

- Increase workforce productivity, staff morale and retention
- Enhance amenity benefits provided by the new facilities
- Enhance the ability of the HNELHD to effectively manage future growth in service activity to ensure patients receive timely, safe and high quality care

- Ability to implement new models of care which in turn reduces the access block to the population, average length of stay and waiting time for elective surgery
- Environmental benefit in terms of potential energy cost savings to run the new facility as well as the potential reduction of externalities to the surrounding environment
- Social benefit in terms of improve access, equity outcomes for regional NSW community

4.3.3. Economic Appraisal Results

On the basis of the EA results presented in Appendix 13 and the qualitative assessment of strategic and non-quantifiable benefits undertaken, the preferred service option for the New Maitland Hospital Redevelopment Project is Option 3. Option 3 has a positive incremental NPV of $225.6 million over a 20 year evaluation period and it has a BCR of 1.28.

On the basis of the EA results and the qualitative assessment of strategic and non-quantifiable benefits undertaken, Option 3 is the preferred option for the Project. Option 3 provides an appropriate and logical option to provide health benefits to the residents of the New Maitland Hospital's catchment area while balancing the requirement for relative affordability.

In particular, the Project would help NMH meet the projected increase in demand for its services by:

- increasing the capacity of the hospital to meet the projected increases in demand; and
- facilitating the introduction of contemporary models of care, which would increase the overall effectiveness and efficiency with which the hospital provides health services.

There are specific services defined by SRGs and Diagnosis Related Groups (DRGs) that will stay mostly with the larger or specialised hospitals. In the study region, JHH is the tertiary hospital for high complexity services provided by a centrally located specialised workforce e.g. interventional cardiology, complex trauma, vascular, head and neck, cardio-thoracic, and neurosurgery. Therefore the revised lower patients flow from JHH under option 3 is considered appropriate.

5. Sustainability

5.1. Social Impacts

The NMH will result in the implementation of contemporary and improved models of care, the relocation and an expansion of some clinical services which will increase outputs and enhance health services to meet the service needs of the Lower Hunter Valley catchment.

The Social Impacts of the project include:

- Improved patient quality and safety outcomes with enhanced patient journey through expanded and reconfigured facilities and services
- Improved provision of locally available, and appropriate health care that is responsive to identified community need and is culturally appropriate
- Improved safety and security for staff and patients
- Improved care targeted to specific needs of patients
- Improved integration and reduced fragmentation between acute and ambulatory services
- Strengthened clinical networks with other hospitals and health services
- Increased capacity (overnight beds and ambulatory care service improvements)
- Increased ED capacity and services – PECC and ESSU
- Improved site and service functional relationships
- Improved patient comfort and satisfaction
- Reduced travel distances to access some services
- Increased access to a broader range and volume of services
- Increase in local employment during construction
- New employment opportunities after development

Beneficiaries of the above will include:

- Local communities – improved access to health care
- Chronic disease patients and those with multiple co-morbidities.
- Patients requiring ambulatory treatments – including chemotherapy and infusions.
- Workforce – increased capability to recruit and retain staff allows for appropriate succession planning and sustainable workforce management.

5.2. Environmental Impacts

An environmental appraisal has been undertaken by KMH Environmental and provides an analysis of key environmental aspects associated with the project and site, and is informed by a number of specialist investigations undertaken specifically for the project. The appraisal summarises the existing conditions, constraints and opportunities associated with development of a major hospital on the Site.

Key environmental issues identified include:

- Air and noise emissions resulting from the adjacent road and rail operations require building set-backs and design treatments to minimise adverse impacts on hospital operation

- Areas of relatively undisturbed native vegetation appear to comprise endangered ecological communities that are protected under NSW legislation. It is desirable to avoid clearing of these areas
- An Aboriginal object has been identified onsite that will need to be protected and/or salvaged in accordance with obligations under NSW legislation and the requirements of OEH
- Drainage and stormwater run-on within the central low lying parts of the site present constraints to future building and development, but also opportunities for retention and enhancement of these areas as part of the stormwater management system

Further geotechnical studies were undertaken in October 2015. The geotechnical risks identified for the proposed development were as follows:

- Earthworks and Site Preparation
- Additional Earthworks Procedures for Filling of Former Quarry
- Retaining Structures
- Batter Slope Stability
- Existing Filling
- Suitability of Site Materials for Reuse as Filling
- Assessment of Soil Combustibility
- Drainage
- Site Classification
- High Level Footings
- Deep Footings / Piles
- Assessment of Soil Aggressiveness
- Pavements
- Design Traffic
- Subgrade CBR
- Flexible Pavement Thickness Design
- Subgrade Preparation
- Quarry Slope Stability
- Seismic Design
- Acid Sulfate Soils
- Mine Subsidence

In their November 2015 report Douglas Partners reviewed each of these risks and provided recommendations and mitigation measures against each to be considered in the development of the Schematic Design in the next phase of the project.

GHD were responsible for the Phase 2 Environmental Site Assessment and in their December report made the following conclusions:

- Fill materials were generally above surrounding ground level and there was no evidence of any significant filled voids at the locations investigated
- On the basis of the investigations undertaken, except for some isolated zones the exceedances of assessment criteria are relatively minor and isolated, and the fill materials are

expected to be acceptable for use in the proposed development, from a contamination perspective
- Potential asbestos containing materials (PACM) was only identified in a few isolated locations and was generally in sound condition, presenting a low risk to human health provided it is not disturbed. However, given the nature of vegetation coverage across the site, there may be other areas that contain PACM
- Anthropogenic wastes (including PACM) were noted in some areas of fill on the site but were not generally found to be present in the larger stockpiles of fill, and are readily visually identifiable
- Except for shallow groundwater from one well, groundwater and surface water did not generally show evidence of impact from contamination at the site or contaminant migration from adjoining areas that would affect the site, and groundwater is unlikely to be beneficially used

GHD concluded that the works undertaken at the site have sufficiently characterised the site to enable an assessment of its suitability for the proposed purpose subject to implementation of a soil management plan as recommended below:
- Development works should include a soil management plan containing an asbestos management plan (AMP) and an unexpected find protocol to identify anthropogenic wastes, remove PACM prior to disturbance for appropriate disposal, and separate any wastes that are not acceptable for aesthetic or other reasons, for either management (eg. emplacement in deeper fill) or disposal
- Consideration should be given to a conservative management approach through the burial of the carbonaceous material. This could be completed in conjunction with development earthworks using stockpiled material that does not have any unacceptable impacts, and material won from suitable areas designated for cut
- Materials presenting 'aesthetic issues' (bricks, building and domestic waste) may not be acceptable for use at the surface , but could be buried at depth or disposed of off-site to a licenced landfill facility prior to development. Where these materials are to be buried, the location and depth should be documented
- Further assessment of shallow groundwater should be considered if development (including construction) is likely to encounter or disturb hydrocarbon contaminants

5.3. NSW Government Sustainability Policy

The NSW Government Sustainability Policy outlines how the Government will lead by example in sustainable water and energy use, reducing greenhouse gas emissions, waste and fleet management and sustainable purchasing.

The Policy provides an important step for the NSW Government to meet its commitment of becoming carbon neutral by 2020. All elements of the Policy apply to all NSW Government budget dependent agencies. Fleet, waste reduction and purchasing elements also apply to other NSW Government agencies.

The implementation of the new Sustainability Policy requires Government agencies:
- consider sustainability in all relevant decision making

- reduce their greenhouse gas emissions
- are more efficient in their use of energy and water; and reduce wider environmental impacts associated with water and energy use
- meet the challenge of rising prices expected for energy, fuel, water and waste management
- are more efficient in their use of vehicles
- produce less waste and increase recycling in Government activities
- use purchasing power to drive efficiency and environmental sustainability

The Policy incorporates the existing Waste Reduction and Purchasing Policy, the Sustainable Water Policy and the Cleaner Government Fleet Program. It also sets new targets for reducing greenhouse gas emissions and environmentally sustainable purchasing practices.

The NSW MoH's key objectives for environmentally sustainable design, as defined in TS-11 Engineering Services and Sustainable Development Guidelines, are:

- Comfortable and healthy indoor environment (in terms of thermal comfort, visual comfort and indoor air quality)
- Minimised non-renewable resource consumption (e.g. energy, water) and environmental impacts (e.g. greenhouse, other air and water emissions, solid waste)
- Cost-effectiveness over its whole lifecycle

In response to these policies and objectives the project team has developed an ESD strategy for the project based on a number of site and project attributes including development density, overland flows and the substantial habitat retention on the broader site.

The proposed hospital and development parcels provide a high density development zone and primary access point for the Hospital. The relatively intense development and the hospital support a district infrastructure model, which opens up a range of opportunities for low-carbon energy.

The retention of native bushland and the interface of the green spaces with development provide a variety of opportunities for biophilic design and green infrastructure. The site hydrology supports a system of natural and artificial wetland and retention basins which could be used to support an integrated water management approach to the project. Some specific opportunities include passive treatment and retention of grey and stormwater for re-use.

The initial conclusions reached by the ESD consultant, WSP Built Ecology is best summarised in the following figure;

ESD Framework	Built Form	Services Infrastructure	Landscape
The ESD framework is focused on three key outcomes: • Built form • Site services • Landscape and water management This has led to a number of recommendations relating to site infrastructure, renewable energy, water sensitive urban design , landscaping, façade and investigation for opportunities for natural ventilation. In future design phases, further consideration could be given to: • Optimising the indoor environmental quality to create a healthy and healing environment for patients, visitors and staff • Detailed assessment of energy, water and materials efficiency • Governance and assessment frameworks for reporting sustainable performance • Community and social sustainability • HI ESD targets including obtaining results 10% higher than section J	The key conclusion relating to the built form is that the orientation, wind and solar gain suggest an approach of two façade typologies: for the primary facades. • The North West facade is exposed to winter winds and low-angle sun in all seasons. It should be sealed with a high performance façade (closed cavity or high performance glass with external shading). • The South East façade is well suited to being transparent and porous, allowing mixed mode ventilation and excellent views and connectivity to the landscaping and natural habitat. • The building orientation is better suited to conventional high performance façade design. • The glazing performance of the building should prioritize visible light transmittance to bring natural light into the IPUs.	The proposed development characteristics of Hospital zone lends itself to a district thermal system to take advantage of site diversity and operating profiles. Consideration is also to be given for high water usage services for example CSD, pathology, dialysis using technologies to minimise water consumption.	The proposed development shall utilise water sensitive design strategies, implemented to enrich the quality of intermediate landscape spaces and provide control to storm water runoff. The water treatment measures may consist of bio-retention swales; rain gardens, bio-retention ponds and rip rap swales. It is proposed to harvest the roof rainwater for storage in detention tanks. These tanks shall form a critical component to maintaining aspects of the landscape by providing an onsite source of soft water. Stormwater strategies shall be implemented to improve onsite capture of ground water. These strategies may include inclusion of permeable pavements to decrease runoff and improve infiltration, and swales to capture and direct stormwater throughout site prior to discharge.

Figure 23 Initial ESD conclusions for NMH

5.4. Facility Management Strategy and Asset Management Strategy

5.4.1. Facilities Management

The HNE Health Engineering Department's role in supporting patient care activities is crucial, focusing on core maintenance planning and the provision of a campus - wide consultancy service for space and energy management. This approach can be summarised into the following 5 core functions:

- Breakdown / repair maintenance
- Planned maintenance
- Contract supervision of specialist maintenance contracts
- Facilities management through project management and contract supervision of new minor works and renovations
- Energy management and fire prevention

The Engineering Department will have a key role in disaster management and business continuity. The Department will be managed by a manager and a number of assistants. There will be a Duty Engineer available 24/7 to monitor the Building Management System, Urgent Call, alarms and coordinate the day to day operating of the buildings and plant.

There exists currently a host of policy and procedures across HNE Health. This includes:

- Statutory or legislative requirements
- NSW Health requirements
- Local requirements

Standardisation of maintenance practices has occurred across all of HNE Health sites through the use of the Health AMMS system. NSW Health is rolling out a new Asset Management system called Tririga. HNE Health is involved in this roll out and will be utilizing this system as the Asset Management system for the NMH. All asset data and documentation will be formatted to be entered into this system

Soft Services and Hotel Services will include the following Services:

- Food
- Cleaning
- Security
- Stores and distribution
- Wardsman and portering
- External cleaning
- Landscaping and gardening

These services are currently delivered by in-house staff.

5.4.2. Asset Management Strategy

HNE Health relies on internal maintenance supplemented by external maintenance providers to carry out compliance maintenance, preventative maintenance, corrective maintenance, and necessary repairs and replacements to ensure effective and efficient provision of health services.

Maintenance Resources

Maintenance resources are managed by each site. The district's Facility Management Unit provides central expertise and advice and oversees an Asset Improvement Program. Fire Safety is also a primary function for the Facility Management Unit.

Centralised contracts, compliance and quality processes are provided to support all of the sites and services within HNE Health. The following contracts are managed centrally:

- Automatic Door Servicing
- Fire Alarm Monitoring
- Emergency Generators and Fire Pumps Servicing
- Cooling Towers Water Treatment
- Water Softener and Sand Filters Servicing
- Chlorine Dosing Equipment Servicing and Warm Water Legionella Sampling
- Lift Servicing
- Grease Traps

Maintenance Strategies and Planning

HNE Health utilises a computerised maintenance management system called Health AMMS across all sites. This system assists site management to meet its planned, scheduled, compliance and good practice maintenance requirements.

Regular condition audits against building standards will be needed to facilitate better maintenance planning and lead to a long-term change in the balance between reactive and planned preventative maintenance. Private sector advice indicates that this can potentially lead to significant savings maintenance costs.

Suitable information and management systems are needed to facilitate delivery of the best possible outcomes, which requires skilled staff and accurate high quality information to be able to make sound business decisions. HNE Health has instituted an Asset Improvement Program with an annual budget to improve assets that are identified as a high risk to the organisation.

The Facilities Management Unit identifies issues, ranks the risk, costs the solutions and assesses and measures the required response. Often due to the cost of undertaking major fire rectification work, upgrading lifts or emergency generators this type of work is normally beyond the financial capacity of a site in one financial year. Therefore this program makes larger projects possible and has an excellent track record in delivering improved assets and reducing risks.

Critical Maintenance Issues

The HNE Health asset maintenance program has an annual budget which provides a cash flowed maintenance budget to improve the asset base regarding issues listed below:

- Fire safety
- Business continuity
- Access to services

- Risk of failure
- Safety concerns
- Compliance issues
- Condition of asset

5.5. Project Benefits

Measurable benefits from capital investment should align with the categories used in NSW MoH Performance Management Framework, which include Quality and Safety, Health Workforce, Sustainability, Efficiency, Access and Better value for money. The benefit conceptual framework diagram is shown in the figure below.

Figure 24 Health Capital Project - Benefit Conceptual Framework Diagram

The Benefits Realisation table was developed by HNE Health and endorsed by the project governance. The following table summarises the anticipated benefits as identified in the draft Benefits Realisation Plan, in line with the benefit conceptual framework. The Benefits Realisation Plan and full Benefits register is included in Appendix 16.

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Ref	Benefit	Current environment	Benefits type		How will it be measured - Measure Name
1	**Improved Service access and patient flow for Maitland Hospital catchment including:** - Improved access to emergency care; - Enhanced elective and emergency surgery performance; - Improved access to critical care services including intensive and high dependency care and ESSU and, - Enhanced ambulatory and specialist outpatient services	**Current business problem:** Service delivery needs and performance expectations for Maitland are unable to be met due to constrained and ageing infrastructure which limits the ability to provide required services and deliver contemporary models of care to meet the needs of the hospital catchment **What will drive this benefit** NSW Health priority is to Provide World Class Clinical Care — providing timely access to safe, quality care in our hospitals, Emergency Departments and in the community	**Accessible services**	1.1	Emergency Treatment Performance: Patients with Total time in ED <= 4hrs (%) ^
				1.2	Transfer of Care – patients transferred from Ambulance to ED <= 30 minutes (%)
				1.3	ED Presentations staying in ED > 24 hours (number) ^
				1.4	Total % Clients who Did Not Wait in ED (total including Non Aboriginal & Aboriginal)
				1.5	ED Presentations staying in ED > 24 hours Mental Health (number) ^
				1.6	Elective Surgery Access Performance: Elective Surgery Patients Treated on Time (%) ^
				1.7	% Planned surgery cancellations on day of surgery
				1.8	Elective Surgery Theatre Utilisation: Operating Room Occupancy (%)
				1.9	Specialist Outpatient Services (Service Events) (Number) ^
				1.10	# retrievals to ICU from the New Maitland Hospital
				1.11	% of neonates admitted to SCN with gestational age of less than 33.6 weeks
				1.12	% of women who birth less than 33.6 weeks gestation

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Ref	Benefit	Current environment	Benefits type		How will it be measured - Measure Name
2	**Improved access to ambulatory care services (including specialist outpatient services) to minimise hospital stay and readmission including;**- chemotherapy suite;- same day medical unit incorporating infusion lounge;- Rapid Access and Discharge clinics; and,- Hospital in the Home.	**Current business problem**Limited opportunity for Ambulatory Care services including Specialist Outpatient Services due to current infrastructure , workforce and inability to implement contemporary models of ambulatory care **What will drive this benefit** The New Hospital will support a "whole of system" approach that includes not only what happens in hospital but incorporates hospital avoidance and post discharge care programs including outpatient services that will assist in reaching Emergency Treatment Performance (ETP)	**Accessible services**	2.1	Hospital in the Home % ^
				2.2	Unplanned hospital readmission: all unplanned admissions within 28 days of separation (%) ^
				2.3	Specialist outpatient services (service events) number (same as measure for 1.10)
3	**Assist in Closing the Gap between Aboriginal and non - Aboriginal Health**	**Current business problem:** Opportunities to improve the health outcomes and health experience of Aboriginal people are missed due to the limited ability to provide culturally appropriate environments and services at the current site **What will drive this benefit** The new facility design and service delivery will include opportunities for co-location of Aboriginal health services and will align with the HNE Health Aboriginal Cultural Audit Tool as the minimum standard for culturally safe and welcoming health services. Consultation and negotiation processes will occur to ensure that Aboriginal health principles are reflected in the planning process.	**Better patient health and experience**	3.1	Aboriginal unplanned hospital readmission: all unplanned admissions within 28 days of separation (%)
				3.2	Total % Clients who Did Not Wait in ED (Aboriginal)
				3.3	Aboriginal workforce as a proportion of total workforce (%) Maitland ^

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Ref	Benefit	Current environment	Benefits type		How will it be measured - Measure Name
4	**Contribute to better realignment and integration of health service delivery across the LHD through appropriate referral of patient flows and improved networking of services;** - Improved intensive care services - Enhanced maternity and neonatal services providing increased support to the LHD and State Perinatal Network Service ESSU & PECC services Improved ED performance	**Current Business problem** The Maitland Hospital is limited by current infrastructure and Role Delineation and does not meet the health needs of the catchment population **What will drive this benefit** NSW Health Strategic priority: Delivering Truly Integrated Care — creating a connected health system, so that patients get the care they need, where and when they need it	**Better patient health and experience**	4..1	Emergency Treatment Performance: Patients with Total time in ED <= 4hrs (%) (same as measure for 1.1)
				4.2	ED Presentations staying in ED > 24 hours (Mental Health) (number) (same measure as 1.5)
				4.3	Elective Surgery Access Performance: Elective Surgery Patients Treated on Time (%) (same measure as 1.6)
				4.4	ED presentations staying in ED > 24hrs (same measure as 1.3)
5	**Grow and support a skilled , competent and capable workforce**	**Current Business problem** Difficulty attracting and recruiting staff particularly medical staff specialists and allied Health staff along with an ageing nursing workforce Current infrastructure and inadequate functional relationships limits the ability to provide contemporary models of care, education and training facilities **What will drive this benefit**NSW Health priority is to "Support and Develop our Workforce" - helping the hearts and hands of the healthcare system deliver first class, patient - centred care within our CORE values framework	**Workforce**	5.1	Staff turnover rate (permanent)
				5.2	Premium staff usage:average paid hours per FTE 1) medical 2) nursing
				5.3	SAC 1 and 2 events - clinical and corporate ^

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Ref	Benefit	Current environment	Benefits type		How will it be measured - Measure Name
6	**Improved workplace health and safety**	**Current Business Problem** Ageing and non-contemporary infrastructure limits the ability to maximise a safe and well maintained Work Health Safety environment **What will drive this benefit** HNE LHD is committed to ensuring an environment that is safe, well maintained with appropriate Work Health Safety and Injury Management Systems to provide a workplace that is safe for all workers, patients/ clients and visitors		6.1	Number of Workplace Injury Claims

Ref	Benefit	Current environment	Benefits type		How will it be measured - Measure Name
7	**Increased revenue opportunities due to expanded ambulatory and outpatient services, increased single rooms for private patients and car parking revenue**	**Current Business Problem** Limited opportunities for revenue reimbursements due to restricted and ageing infrastructure resulting in restricted opportunities for delivery of outpatient services, inadequate number of single rooms, limited space for car parking **What will drive this benefit** New facility will be designed to contemporary standards and models of service delivery which will maximise opportunities for revenue	**Better Value for money**	7.1	Staff specialist revenue
				7.2	Private room accommodation revenue
8	**Enhanced delivery of current evidence - based care models and clinical redesign to achieve**	**Current Business problem**Opportunities to develop and implement contemporary models of care are limited due to inadequate and	**Sustainability**	8.1	Emergency Treatment Performance: Patients with Total time in ED <= 4hrs (%) (same measure s 1.1)

Ref	Benefit	Current environment	Benefits type		How will it be measured - Measure Name
	better health outcomes, reduce length of stay and unplanned admissions	ageing infrastructure, inadequate bed capacity and poor functional relationships **What will drive this benefit** The New hospital will deliver safe and effective care and make good use of available resources		8.2	Hospital in the Home -% (same measure as 2.1)
				8.3	Unplanned hospital readmission: all unplanned admissions within 28 days of separation (%) (same measure as 2.2)
				8.4	Mental Health Acute Readmission within 28 days (%)
				8.5	Elective Surgery Access Performance: Elective Surgery Patients Treated on Time (%) (same measure as 1.6)

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Ref	Benefit	Current environment	Benefits type		How will it be measured - Measure Name
9	**Building partnerships and service integration across health and non-government sectors to increase sustainability and reduce duplication while maintaining and increasing the level of service to the community**	**Current Business Problem** Limited specialty services , limited bed capacity of some existing services results in patients referred to hospitals in Newcastle to meet demand. The hospital is functioning at capacity with limited ambulatory care services that would reduce hospital admissions and length of stay. **What will drive this benefit** Delivering Integrated Care — creating a connected health system, so that patients get the care they need, where and when they need it , by connecting state health services with other health services	**Sustainability**	9.1	Hospital in the home % (same measure as 2.1)
				9.2	Unplanned and emergency re-presentations to same ED within 48 hours (%)
				9.3	Emergency Treatment Performance: Patients with Total time in ED <= 4hrs (%) (same measure s 1.1)

Ref	Benefit	Current environment	Benefits type		How will it be measured - Measure Name
10	**Improved patient safety and reduced Clinical errors**	**Current Business Problem** Ageing and non-contemporary infrastructure including insufficient single rooms impacts on patient safety **What will drive this benefit** NSW Health priority: Design and Build Future-Focused Infrastructure — improving facilities and equipment to support world class care NSW Health priority: Supporting and Harnessing Research and Innovation — creating the evidence base for better models of care and translating research into new devices, drug therapies and procedures to deliver improved healthcare	**Safety**	10.1	SAC 1 and 2 events - clinical and corporate (same measure as 5.3)
				10.2	Unplanned hospital readmission: all inplanned admission within 28 days of sepn % (same measure as 2.2)

Table 30 Benefits Register for NMH

6. Governance

6.1. The Management Case

The Management Case articulates how the next phases for the development will be undertaken, including the development of a complete Business Case. The Management Case includes the proposed project programme and governance framework for completion of planning and for implementation.

A rigorous process to address key activities in each phase of the project is necessary to ensure the following:

- Project milestones and key deliverables are met
- Decision points for HNE Health and the Government stakeholders are addressed promptly
- Specific skills and levels of resources are available
- Equipment and materials are acquired in a timely manner where necessary
- Adequate and timely consultation with stakeholders is undertaken
- Effective change management is undertaken
- Appropriate Risk Management

This project is an asset delivery project which has a significant operational change component. The project delivery must accommodate the provision of integrated services, both within the NMH and between NMH and other health services in HNE Health. Successful project delivery is contingent upon collaboration between existing service providers, internal and external stakeholder consultation and designing and delivering a facility that supports the identified requirements. As such, this project needs to deliver both the expanded physical infrastructure and the revised operational models in a way that achieves the required integrated service outcomes.

6.2. Project Governance

As described in Section 2.4 the project governance structure described in this document is compliant with the NSW Health POFP which sets out the minimum standard from which all projects will be based. The structure and participants are characterised by HI directing the planning process in collaboration with NSW Health, Local Health Districts and key stakeholders.

The figures below illustrate the communication, governance and Project Team structure for the development of this FBC. Membership was confirmed through discussions with HI and HNE Health.

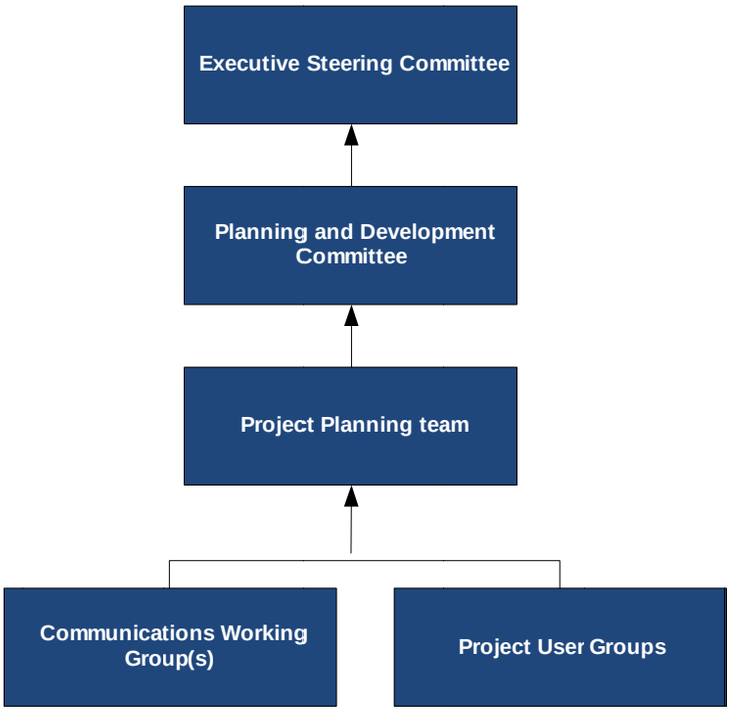

Figure 25 Project Governance Structure

Key stakeholders involved in the project governance are:

- NSW Treasury
- HI
- HNE Health
- MoH
- The Maitland Hospital
- APP Corporation (Project Manager)
- Woods Bagot (Architect)
- DCWC (Cost Manager)

7. Implementation Strategy

7.1. Preferred Implementation Strategy

This Implementation Strategy describes the methodologies to be applied in the management of the planning and implementation of the project, including the proposed project governance framework. The project extends beyond asset delivery. It includes both the delivery of contemporary clinical and support infrastructure to support improved models of care and service delivery, to deliver sustainable health services at NMH.

7.2. Planning and Implementation Process

As with other contemporary MoH / LHD capital works projects greater than $10m, HI will be responsible for the delivery of this project, within the overarching project governance requirements and structure.

The HI delivery standard aligns with the NSW Health PoFP and the NSW Government Gateway Review process to form the project delivery framework and is illustrated below.

The project delivery framework includes a set of pre-agreed deliverables and milestones against which the project will be procured, controlled and measured. This will ensure that all technical and consultation processes are completed within a proven delivery framework and that appropriate reviews and approvals are achieved prior to the execution and completion of each part in the process.

Figure 26 NSW Health PoFP, HI Delivery Standard and NSW Gateway Review Process

7.3. Risk Management

In accordance with the PoFP, NSW Health and NSW Treasury require a robust process for the identification, mitigation and management of risk throughout all phases of the development. A Risk Management Strategy has been developed for the NMH project (Appendix 14).

The Risk Management Strategy provides an overarching strategy for managing the risks associated with the NMH. It outlines the governance structure for risk management and describes the approach to analysing and managing risk in collaboration with project stakeholders to ensure that the NMH is delivered within the nominated scope, timeframe and budget. The comprehensive process of risk analysis followed by appropriate implementation of risk management strategies is described. The risk assessment is based on describing the risk and its potential impact on the development. The likelihood of each risk occurring and the consequence of that risk is also assessed to determine an overall risk rating. Existing controls and supplemental treatments to reduce the risk to an acceptable level are outlined within the project Risk Register (Appendix 14).

Risk mitigation (existing controls) has been an integral component of planning work completed to date to ensure that project risks are minimised. In addition, formal implementation of the Risk Management Strategy has commenced with a consultative process for the analysis and management of risks as documented within the Risk Register. The register is a working document which will continue to support the project governance committees in the management of project risks throughout the planning and implementation phases of the project.

The risk register has been updated to include an assessed potential value as derived from risk software used by DCWC. The total value of risk is $ 64,348,293 which is consistent with the Contingency allowance in Cost Plan B of $ 63,259,871. As the risk rating is revised so will the Assessed Potential Value.

The highest rated risks and proposed mitigation strategies for the full project life are detailed in the following table.

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Risk Ranking	Risk Category	Category	Risk Name	Cause(s)	Existing Controls	List further Tasks required to Reduce Risk to HI acceptance criteria
1	High	Communications	Political expectations are not met	Politicial expectations of timing and size	Project Governance to be maintained with regular PDC and ESC meetings to ensure transparency of progress. Communications working group to manage queries from the Ministers office with HNE and HI.	HNE regular consultation with local members/ council and coordination of Community Forum.
2	High	Communications	Inconsistent messaging regarding the project	Project team coordination and communication objectives are not met.	Media communications and management being managed by HNE. Communications working group to be reformed. Align project key messages with HNE.	HNE to manage and implement Communications plan.
3	High	Stakeholder / Partners	Community & staff inertia (reluctance to move to new ideas) Lack of clarity on the project scope and role of existing hospital	Lack of definition and communication on the project scope and role of existing hospital.	Communication and consultation strategy to include robust stakeholder analysis and plan for consultation. Develop plan for existing Maitland Hospital as part of Business Case review of options.	HNE to implement Communications plan. Regular and consistence focus on implementation via CWG.
4	High	Financial	Insufficient funding for development of preferred service delivery option.	Funding requirements not met.	Modelling viability of ongoing cost management and review.	Ongoing cost management and review. Further review of funding through Gateway Process. Establish alternate procurement method and seek additional funding as required.

Risk Ranking	Risk Category	Category	Risk Name	Cause(s)	Existing Controls	List further Tasks required to Reduce Risk to HI acceptance criteria
5	High	Workforce	Insufficient LHD resources for operational commissioning	Lack of planning for costs and resources required for operational commissioning	Early engagement with HI Operational Commissioning team to establish early planning.	Early engagement with HI Operational Commissioning team to establish early planning. Recurrent funding to align with commissioning costs and building a work force overtime. Appropriate review and financial assessment against planning. Appropriate budget allocation and establishment of resource plan.
6	High	Clinical care & patient safety	Demand for clinical services exceeds infrastructure supplied with NMH	Insufficient built capacity as provided	Planning for additional investment in the Lower Hunter clinical services is undertaken in parallel with delivery of NMH.	

Table 31 Summary of Project high rated risks

7.4. Project Programme

A Master Programme has been completed by the Project Team based on the project being delivered under a traditional procurement arrangement of Design Finalisation and Construct competitively bid with a shortlist of suitable contractors. The programme is attached in Appendix 15.

Project Key Phases

The key phases of project delivery as included in the Master Programme are:

- Documentation
- Procurement of Head Contract
- Construction
- Completion and Handover

The NMH project has been programmed using a theoretical commencement date in Q1 2017. Based on this theoretical commencement date, the provisional operational date including completion of all construction and client commissioning activities for the NMH project is October 2020.

Project Key Milestones

As noted above, assumptions have been made regarding the commencement of the project in order to inform the overall programme and cost plans. Based on these assumptions and the proposed approach, key programme milestones have been identified to facilitate successful completion of the project within time and budget constraints. Key project milestones are outlined below.

Key Milestones	Actual/Forecast Date
Project business case and budget approved	February 2016
Issue Tender Documents	January 2018
Commence Construction	May 2018
Complete Construction	March 2020
Facility Operational Commissioning Complete	September 2020
Operational Commencement	October 2020

Table 32 Summary of Project key milestones

7.5. Project Cash flow

DCWC have prepared a project cashflow based on a standard S curve to suit a Design Finalisation and Construct procurement route along with the advice provided in HI NSW Cost Planning and Reporting Standards. Cashflows reflect financial years.

The project cashflow in accordance with the Key milestones is detailed in the following table;

Option 3	Total ($)	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Land	2,500,000	-	-	2,500,000	-	-	-	-
Building costs	253,100,000	-	-	-	6,385,570	6,746,644	140,155,050	99,752,219
FF&E	40,100,000	-	-	-	-	-	-	40,067,288
ICT	7,400,000	-	-	-	-	-	-	7,399,617
Professional fees	25,500,000	2,473,283	2,429,474	5,442,330	6,797,448	5,461,345	4,434,776	3,326,082
HI Costs	8,400,000	244,751	247,300	977,896	2,034,692	1,933,598	1,933,598	1,450,198
LHD Costs	1,700,000	700,867	132,568	322,982	391,937	357,106	357,106	267,830
Authority Fees	2,700,000	2,343	13,104	90,553	191,567	2,360,539	-	-
Commissioning and Start-Up	5,100,000	-	-	-	127,711	-	-	4,933,078
Contingency	63,300,000	-	-	-	1,596,393	1,686,661	35,038,763	24,938,055
Escalation	34,300,000	-	-	-	396,745	1,300,600	15,063,318	17,460,752
ETC	**450,000,000**	**3,500,000**	**2,900,000**	**9,400,000**	**18,000,000**	**19,900,000**	**197,000,000**	**199,600,000**
ETC excluding escalation	**415,800,000**	**3,500,000**	**2,900,000**	**9,400,000**	**17,700,000**	**18,600,000**	**182,000,000**	**182,200,000**

Table 33 Project Cashflow

7.6. Site Acquisition

After undergoing an extensive selection process, a 42-hectare parcel of land on the eastern side of Metford Road near East Maitland was selected as the preferred hospital site (the "Site"). The Site is bound in the northwest by Metford Road, in the northeast by the Great Northern rail line and Raymond Terrace Road, and in the south by a high voltage electricity easement. Surrounding areas include residential areas of Metford to the south and East Maitland in the west, some light industrial areas immediately to the west, and community lands in the north including the East Maitland Cemetery and a model flying club (Don Macindoe Memorial Flying Field).

The Site is roughly triangular and includes the following land parcels as shown in the Site Survey Plan (Figure 2):

- Lot 266 and Lot 401, DP 755237
- Lot 7314, DP 1162607
- Lot 1, DP 1091727 (formerly Lot 3, DP 1091727)

The land is currently owned by Crown Land and is zoned RU2 Rural Landscape in Maitland Local Environment Plan (LEP) 2011. Consultation with MCC has commenced and a Planning Proposal is underway to have the site rezoned to SP2 Infrastructure to suit the hospital site. The Crown Solicitors Office is managing a Compulsory Acquisition process to transfer the land from Crown Land to the Health Administration Corporation. It is expected that this transfer will occur prior to the end of FY 2015/2016

The Site contains the former brickworks operated by PGH/CSR at Metford. CSR currently holds mining leases over the Crown land site, although has ceased clay mining, brick manufacturing and commercial operations. Former operations included extraction of raw materials (sandstone, siltstone and clay) for brick making and numerous product stockpiles and shallow open pits remain around the site. The main brick processing area was located in the far northern corner and comprised brick presses, kilns and storage areas. Much of the infrastructure associated with brick making has now been removed.

CSR are currently working with the NSW Government and other stakeholders to plan and implement a mine closure plan and remedial action plan that seeks to restore the site to a stable, remediated condition that is suitable for its intended use as a health site.

Consultation with Transport for NSW has occurred to ensure that the transport network will integrate with the new hospital. A project has commenced that will see Victoria St Station upgraded as part of the NSW Government's Transport Access Program. This initiative will deliver modern, safe and accessible transport infrastructure. Construction is expected to commence in 2016. Consultation has also occurred to ensure access for buses to the site with a bus stop located at the front door and work will continue to realign the bus network to suit travel patterns and facilitate use of public transport with commencement of services at the NMH.

In collaboration with RMS and Maitland City Council the project has undertaken a traffic study to confirm that the road network will have sufficient capacity to cope with the demands of the NMH. Minor road works are required to facilitate operation of the new hospital.

7.7. Project Procurement Strategy

Procurement Policy

Under the NSW Government Procurement Policy, Procurement Strategy requires the agency to determine and document how the project will be delivered. This involves deciding how the project will be managed, what contracts will be involved and how risk will be allocated in those contracts.

Treasury Circular TC 04/07 introduced an Agency Accreditation Scheme that prescribes requirements for agencies undertaking capital works projects. HI is accredited under the Agency Accreditation Scheme for the planning and delivery phases of its projects.

Selection of Procurement Method

The selection of a procurement method must take into account characteristics and constraints that are specific to the project. Project characteristics that can affect the choice of procurement method or are specific to this project are outlined in the following table.

Project Characteristic	Consideration
Funding	Funding source and availability Flexibility of budget including contingencies Cash flow requirements/ restrictions
Timing	Required start date Expectations around completion
Policy matters	Government policies impacting on the project Requirements of regulatory authorities
Project complexities	Interfaces with other contracts/ projects Stakeholder attitudes and influence Coordination with other agencies Environmental, heritage, archaeological, geotechnical, contamination and hazardous material issues
Agency requirements	Extent of control over design activities Resource limitations: availability and expertise

Brief	Completeness and clarity of the brief Likelihood of changes from outside the agency's control (political, funding or technological) Status of investigation work Availability of design or performance standards

Table 34 Project Characteristics and constraints for consideration in procurement

Procurement Options

This FBC has considered the appropriate investment option required to meet the clinical service needs of the community and to address the service and infrastructure requirements for HNE Health.

The procurement method options that may be considered include:

- Traditional infrastructure and service delivery methods
- Asset-based public private partnerships such as Design, Construct, Finance and Maintain
- Service related methods such as Full service public private partnerships including models such as Design, Construct, Finance and Operate
- The purchase of activity to meet the immediate and future demand from existing private facilities.

The 2014 State Infrastructure Strategy recommends the following approaches be pursued for delivering Health Infrastructure for NSW:

- A mix of not-for-profit/private sector delivery of infrastructure and public health services
- Partnerships for a better mix of services with the not-for-profit and private sectors.

Implementation of the State Infrastructure Strategy considers:

- Size: Whether the transaction would be large enough to attract market interest or to provide value for money against transaction costs
- Market Capacity: Whether a market exists and would be interested in the services, facility and location
- Workforce: Whether the Implications on workforce are significant and will there likely be displaced workforce with no real alternatives within their broad location of residence
- Value for Money: Whether the option is likely to create value for money and if there are downstream impacts upon the LHD's cost of service
- Facility: If an existing facility is involved, whether the facility risks are too high for private sector involvement
- Nature of Services: Whether the future services and case mix are aligned to those items able to be managed by the private sector or are they best managed by the public sector
- Risk Transfer: Whether efficient risk transfer is likely to be achieved, or are the risks better managed in another manner

The programme, governance and capital and operating budget described in this FBC have been developed to align with a traditional infrastructure and service delivery model, without limiting the adoption of the approaches outlined in the 2014 State Infrastructure Strategy.

Early and Enabling Works

The project team has investigated the ability for the project to deliver an enabling works component. Of the options available, two have presented as viable options.

The first is the provision of hydraulic infrastructure to the site boundary. A Hunter Water Main could be provided to the boundary of the site, the main could be extended down Fieldsend Street on the western side of the site for a distance of approximately 500m and across Metford Road with the interconnection to the existing water main still to be agreed with Hunter Water. Also Hunter Water Sewer Main and/or Pumping Station provisions could be provided to the boundary of the site. The sewer could be potentially installed from waste water pump station 15, which services the residential areas to the south of the site. Further negotiations are required with Hunter Water to finalise the scope of this package.

The second package currently under investigation to be part of an enabling works package is the provision of site access. Given level of staging and site investigations to be carried out within the programme, the identification and provision of separate access points would be beneficial from a business continuity standpoint. The access points are likely to be located along Metford Road toward the northern end of the site, in a location that would minimise the level of redundant works.

Both of these packages will be procured in accordance with HI procurement policies.

7.8. Town Planning Strategy

Introduction

The land is currently zoned RU2 – Rural Landscape which prohibits Health Services Facilities of any type. An appropriate zoning for the land is SP2 – *Health Services Facility* to accommodate the NMH and health precinct.

This rezoning and concept plan approval will be facilitated through the "State Significant Site Application" (SSS) process under State Environmental Policy (*Major Development*) 2005 to the Minister for Planning and Environment and PAC. Then consent for the construction of the hospital or any development over $30M will be sought from the Minister under the State Environmental Policy (*State and Regional Development*) 2011. Other development less than $30M will either be approved via the 'Without Consent' route under the SEPP Infrastructure, as a Crown DA under Council's LEP or if private company a normal DA to Council. Other development such as Seniors Living or related seniors or disabled persons facilities will rely on the SEPP *Housing for Seniors or People with a Disability (SEPP Seniors)* and will be subject to additional bushfire risk controls under that SEPP.

The first step and the intention is to submit a State Significant Site (SSS) Application to the Minister for Planning and Environment seeking approval under Clause 8 of the SEPP for inclusion of the

Maitland Hospital Site in Schedule 3 *State Significant Sites* of the SEPP *Major Development.* State significant sites are areas with State or regional planning significance because of their social, economic or environmental characteristics.

The listing of the Site as State Significant under Schedule 3 of the SEPP *Major Development* can be approved by the Minister for Planning if they consider the proposed use and/or development of the land to be of State or regional planning significance (section 37 of the Environmental Planning and Assessment Act 1979).

In most cases, amendment of the relevant local environmental plan is executed under the SEPP *Major Development* which will include desired outcomes and objectives for the development of the site. In this case new zoning, height and conservation maps etc. amending the Maitland LEP maps will be required to be gazetted under the SEPP and included in Schedule 3.

The Application will be prepared in the format outlined in the Department of Planning and Environment's *Guidelines for State Significant Site Applications*.

Steps in lodging an Application for SSS listing for the use and key development standards (Concept Plan)

- Attend pre submission meeting with Department planners

- Submit Request for Listing – Schedule 3 SEPP Major Development. This Request must be accompanied by a supporting Study containing the following information:

    - Site details: including constraints high level constraints and opportunities for redevelopment

    - Capital investment value

    - Development description: Preliminary Concept Plan and proposed rezoning/landuse

    - Permissibility and Strategic Planning

    - The State or regional planning significance of the site: the Minister will consider whether the site meets one or more of the following criteria:

(a) ***be of regional or state importance because it is in an identified strategic location (in a State or regional strategy), its importance to a particular industry sector, or its employment, infrastructure, service delivery or redevelopment significance in achieving government policy objectives; or***

(b) be of regional or state environmental conservation or natural resource importance in achieving State or regional objectives. For example protecting sensitive wetlands or coastal areas; or

(c) be of regional or state importance in terms of amenity, cultural, heritage, or historical significance in achieving State or regional objectives. For example sensitive redevelopment of heritage precincts; or

(d) need alternative planning or consent arrangements where:

(i) added transparency is required because of potential conflicting interests

(ii) more than one local council is likely to be affected.

- The suitability of the site for any proposed land use taking into consideration environmental, social or economic factors, the principles of ecologically sustainable development and any State or regional planning strategy:
- The implications of any proposed land use for local and regional land use, infrastructure, service delivery and natural resource planning;
- The local and regional economic impacts of permitting the proposed health uses on the site within the context of the Great Hunter Region.
- The local and regional traffic and transport impacts.
- The development standards for the site that should be included in Schedule 3.
- Impact on aboriginal or European heritage items or areas.
- Impact identification and assessment: Identify and prioritise the expected environmental impacts (positive and negative) associated with the development, based on a preliminary risk assessment. Briefly outline any strategies to address the impacts identified.
- Consultation: Outline any consultation (with the community, local councils, other Government agencies) already undertaken and proposed to be carried out for the proposal
- Include fee payable

Respond to Request Review by the Department

The Department may request additional information and clarifications from the Proponent prior to forwarding the Request Application to the Planning Assessment Commission (the PAC). As detailed in the Department's Guidelines for State Significant Site applications, when determining the State or regional planning significance of a development proposal, the Minister has requested the PAC consider the following general issues:

- whether the proposal is of regional or State importance because it is in an identified strategic location, or is critical in advancing the nominated strategic direction or achieving a nominated strategic outcome, contained in a relevant State policy, plan or strategy, or regional or sub-regional strategy
- whether the proposal delivers major public benefits such as large-scale essential transport, utility infrastructure, or social services to the community
- whether the proposal is likely to have significant environmental, social or economic impacts or benefits, be of a significant hazardous or environmentally-polluting nature, or is located in or in close proximity to areas or locations that have State or regional environmental, archaeological or cultural heritage significance
- whether the proposal is of significant economic benefit to a region, the State or the national economy, such as those with high levels of financial investment and continuing or long-term employment generation
- whether the proposal is geographically broad in scale, including whether it crosses over multiple council and other jurisdiction boundaries, or impacts a wide area beyond one local government area

- whether the proposal is complex, unique or multi-faceted and requires specialist expertise or State coordinated assessment, including where councils require or request State assistance

Department referral to the PAC

Once the information provided by the Proponent is adequate, the Department will prepare a report on the application for the Planning Assessment Commission. Before completing the report it will also seek the views of Maitland City Council.

Present Application to the PAC

The Proponent is given the opportunity to present the merits of the Application to the PAC.

Respond to request for additional information from the PAC (if required)

The PAC may also request further information from the Department, the Proponent, Council or other stakeholders.

PAC advice to the Minister for Planning and Environment

The PAC will then consider the Application and forward its advice about the State planning significance of the development proposal to the Minister, with a copy to the Department.

Gazettal of SSS listing

Once the Minister has obtained the Planning Assessment Commission's advice and it has been made publicly available, the Minister may decide to call-in the development proposal by declaring it (by order published in the Gazette) to be SSD under section 89C(3) of the Act.

Approval of site development works

Following the SSS declaration and gazettal of the land uses and key development standards in the SEPP Major Development, the project team (HI) or private entities (if private hospital group for example) will seek planning approval for the development of the hospital under the SEPP *State and Regional Development*, SEPP *Infrastructure* (ISEPP) or Council LEP, depending on the capital value of the individual works and who is the Applicant.

Under the SEPP *State and Regional Development*, development projects that are greater in value than $30M, for example the hospital building, are declared State Significant Developments (SSD's). This may also include approval for a refined Master Plan (Stage 1) approval. These require the preparation of Environmental Impact Statement (EIS) to support the DA and the NSW Department of Planning and Environment conducts both assessment and determination of the project.

The process of preparing the Environmental Impact Statement requires an application to receive Secretary (of Planning and Environment) Environmental Assessment Requirements (SEARs). The SEARs could be sorted during the assessment of the rezoning, however the subsequent EIS could not be determined by DPE until the rezoning is gazetted as the current R2 zone prohibits hospital and health activities.

With the exception of those that can be 'self-approved' by NSW Health, all Applications under $30M but over $5M will be determined by the applicable government planning panel (JRPP) in the region and Maitland City Council (MCC) would prepare the assessment report.

Minor or early works permissible prior to rezoning

If minor or early works are required to be done prior to the proposed rezoning a DA will be submitted to MCC and will be allowable under the SP2 rezoning. The current RU2 zone allows some limited activities to be undertaken including roads.

Once the rezoning has been completed minor or early works are allowed to be undertaken by HI through the provisions of SEPP *Infrastructure*. These include works less than $30M and not of significant environmental impact and often include extension to buildings, helipad relocations, enabling works and parking. These works are approved by HI via the preparation of a Review of Environmental Factors (REF). However, these are to be undertaken within a prescribed zone under the ISEPP and need to be related to an existing health facility or hospital.

However, the Environmental Planning and Assessment Act 1979 (as amended) and Clause 9 *Exclusion of certain complying development* of the SEPP *State and Regional Development* restricts development on the site the subject of an SSD application to works need to be clearly distinguishable from any development on the site that is or could be considered to be facilitating SSD prior to the SSD approval.

The above processes are detailed in the figure below:

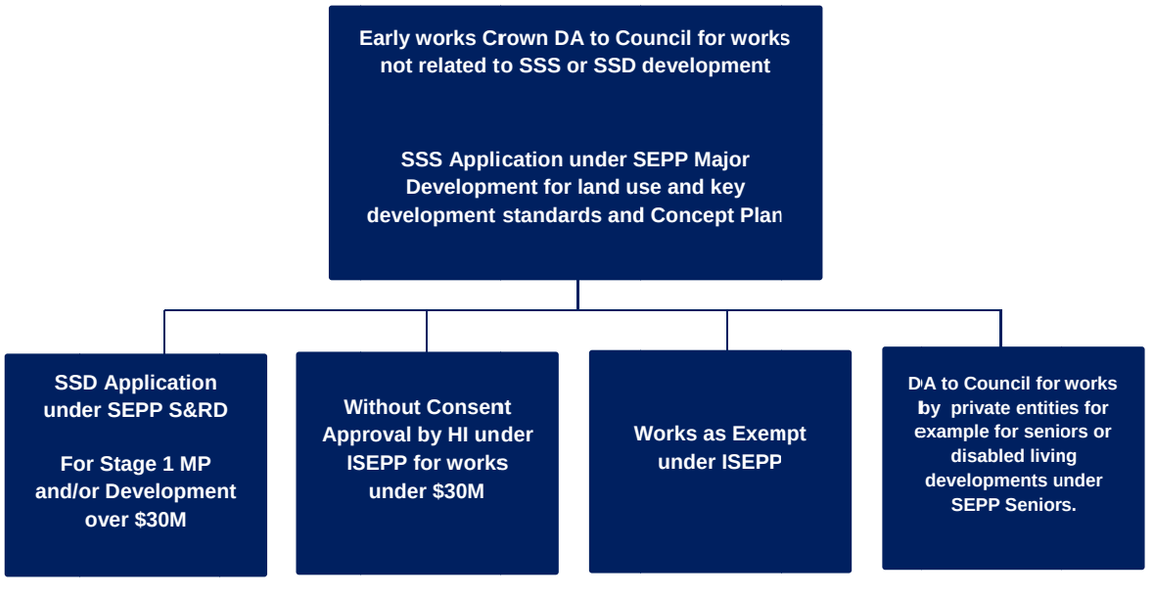

Figure 27 Town Planning Process

7.9. Transport, access and parking

Technical consultants, AECOM have undertaken a traffic and transport assessment of the proposed NMH as a result of the increased travel demand anticipated across the surrounding road network when the facility opens in 2020. This report is included in the design report in Appendix 7 and provides an understanding of the traffic network surrounding the development of the site and the required network upgrades in order to ensure that the operation of the local road network remains satisfactory on completion of proposed facility. Modelling indicates that the surrounding road network will perform at acceptable levels with the implementation of the NMHin 2020 with no additional road network upgrades.

Two potential locations were assessed during the determination of the access arrangement for the proposed hospital. Both proposed access options recommend roundabouts as the preferred configuration and are located:

- At the intersection of Fieldsend Street / Metford Road (Option A); and
- Approximately 120m south of the intersection of Fieldsend Street / Metford Road (Option B).

Both options show potential with regards to providing access to the proposed site. Of the two options assessed the roundabout located at the intersection of Fieldsend Street / Metford Road (Option A) provides greater flexibility for the following reasons:

- Greater potential to expand in future should site traffic volumes increase
- Minimal impact on the community playing fields located to the north-west of Metford Road; and
- Improved safety aspects regarding intersection spacing when consolidating the access with an existing intersection.

In addition AECOM assessed the parking requirements for the NMH was reviewed and the total requirement has been estimated at 636 parking spaces.

7.10. Systems and Equipment Management

A draft Systems and Equipment Management Guide has been prepared for NMH and is included in Appendix 18. The purpose of this guide is to document the process and define the scope for the delivery of Systems and Equipment procured, installed and commissioned in new and refurbished health care facilities in New South Wales. It defines the structure of the project by identifying what needs to be done, who will undertake the work and the how deliverables will be implemented and tracked for the duration of the projects. It comprises three separate sections – FFE, MME and ICT which collectively form the Systems and Equipment Guide.

7.11. Operational Commissioning Strategy

The Commissioning and Readiness of HNE Health to operationalize the NMH will require a robust Operational Commissioning Plan. This plan will start in parallel with the construction program. Both

the construction program will converge with the commissioning program and plan at various milestones. This will provide a framework for targets for readiness and action.

The purpose of the plan is to clearly identify all relevant tasks and responsibilities of the Commissioning Team to ensure that all aspects of the NMH commissioning program are scheduled for an efficient timely transition into the new facility. The plan will provide a definition of the project, scope & detailed tasks to be scheduled. This Operational Commissioning plan forms an agreement between the Project Manager, the Project Team & the HNE Health Executive Sponsor.

The objectives of the operational commissioning plan are to:

- Ensure all agreements, policies and plans are in place, irrespective of their delivery by the main works building contractor, third parties contracted to HNE Health, or HNE Health itself
- Install and commission new facilities and equipment so that they are ready for occupancy and use, whether by the main works building contractor, HNE Health or a combined procurement model
- Ensure staff are trained in the operation of the new facilities and equipment, implementing any new models of care and operational policies
- Prepare safety procedures including safe operating procedures, emergency planning and disaster response and testing of essential equipment
- Ensure a smooth transition during any relocation and physical moves

HNE Health has considerable experience in delivering Capital Projects of varying scale across its District. As a result the workforce required to fulfil the commissioning plan for the NMH exist within the existing workforce. This project will provide the opportunity for the HNE Health workforce to utilize their existing knowledge of policies and procedures and develop project management skills and other specific knowledge. Additional support to the HNE Health workforce will be recruited either by secondment or temporary appointments to fill the required roles.

Some of the key positions in the Commissioning team will be:

- Project Admin support
- Facility Planner
- Change Manager
- FF&E Co-Ordinator
- Recant / Decant Officer
- Engineering Technical Support
- IC&T Support
- Biomedical Support
- Purchasing Officer
- Finance Officer

A Decommissioning Team will also need to be identified and a plan developed for the existing Maitland Hospital Site.

Position Descriptions for these roles exist from previous or current projects which articulate the skills required and the scope of these roles.

7.12. Recommendation and Next Steps

The resulting proposed project and importantly, service components, demonstrate a strong strategic alignment with NSW Government's goals in health service delivery, NSW Health's objectives and HNE Health's strategic, operational and asset priorities. In developing the FBC, HI has applied the investment logic map framework (problem identification, option appraisal, responses, benefit and solutions) set out in NSW Health's 2013 Asset Strategic Plan Guidelines.

8. Stakeholder, Change and Communications Management

8.1. The Engagement Case

Stakeholder, Change and Communications Management are fundamental pillars for the success of a capital project and the successful operation of the new facility ongoing. One of the early priorities of the project was the development of a framework and project governance to enable cohesive management of communications issues and implementation of change management activities.

Consistent, transparent and proactive communications and consultation is essential to delivering a successful project outcome. Engaging with the right people at the right time informs planned design and build, as well as links stakeholders and consumers at all levels of the health system to the capital works.

It also enables the team to identify project risks early, and ensures effective mitigation measures are in place to manage those risks during the delivery phase of a project.

8.1.1. Communication Strategy

A Communication and Stakeholder Engagement Strategy has been developed for the project (Appendix 9). This strategy describes specifically how the project will deliver against the aims and objectives described in the HI Change Management and Consultation and Communication Framework.

This plan is the single reference point for all engagement and communication activity schedules. Specifically, the plan provides project specific details for the following:

- Guiding principles on how the project will manage engagement and communication
- Roles and responsibilities of key project participants and stakeholders
- Structure and protocols for managing the engagement and communication processes
- Expectations of those responsible for the facilitation and/ or delivery of parts of the plan
- Methods for collaboration, clear lines of communication and proactive issues management
- Tools and schedules to be used to measure compliance and performance against the plan
- Key project messages

This strategy is also a guide to identifying project risks early, and ensures effective mitigation measures are in place to manage those risks during the project.

The Communications Working Group (CWG) has been established to oversee the implementation of this strategy and will be the forum for the planning and development of communication materials. The CWG reports to the PDC/ PCG.

8.1.2. Stakeholder Engagement

Proactive engagement with stakeholders early in the project ensures those stakeholders who are impacted by the project, or influence the process have had an opportunity to provide input. This is an integral part of the communications process. Internal and external stakeholders have been

identified within the Communication and Stakeholder Engagement Strategy in Appendix 9. A stakeholder analysis workshop was held with the CWG to develop a robust stakeholder register with a detailed approach to managing stakeholders.

Stakeholders are categorised into three tiers based on their potential influence on the project:

Stakeholder Classification	Definition
Tier 1	Stakeholders directly involved in decision making processes and they have the ability to influence decision making processes.
Tier 2	Stakeholders who will provide input which may influence the project outcomes, but who may not necessarily influence the decision making processes.
Tier 3	Stakeholders who need to be kept informed of the project.

Table 35 Categorisation of stakeholders

In working with the various stakeholders, the project team must not only identify the individuals and groups it needs to reach, but also define the type of engagement each stakeholder will require.

The four basic types of engagement are collaboration, involvement, consultation and information, and are detailed further within the Communications and Stakeholder Engagement Strategy, and a Communication Planner and Register sets out the targeted communications activities. Engaging consumers to contribute to planning provides the opportunity to better meet the needs of patients and their families and deliver models that facilitate patient-centred care.

Consumers will be engaged throughout planning for the NMH via the project governance, consistent with Standard 2 of the National Safety and Quality Health Standards.

8.1.3. Change Management

A Change Management Plan has been prepared for the project (Appendix 10) which creates a structured approach encompassing best practice processes for clear accountability on the scope of change and the governance that will enable it. The process of change management is informed by two key documents, the Communications and Consultation Plan and the Change Management Plan.

A principle aim of the Change Management Plan for the project is to ensure a progressive, coordinated and transparent process that ensures all stakeholders including staff and community are well informed, consulted and prepared for the changes that will result. It also provides opportunities (both formal and informal) for identifying and addressing any issues with the proposed changes prior to application.

The Change Management plan will be used to guide management, staff and consumers through the planning, construction, commissioning and occupancy of the NMH. The plan considers the relocation of services at the current Maitland Hospital, in addition to the increased Role Delineation

and enhanced service provision that will be provided at the NMH. Further the plan considers the transfer of KKH emergency and acute services to the existing Maitland Hospital in 2016.

This project provides unique opportunities to review models of care and service delivery with the close engagement of clinicians to streamline and develop safe and efficient models that meet the future needs of both NMH and HNE Health. To assist this process strong links with HNE's Networks and Clinical Streams and Workforce Planning, NSW Health ACI and the MoH will be formed to ensure the implementation of the most appropriate evidence based care delivery.

Methodology

The NSW MoH supports Clinical Service Redesign as the framework for change management with Accelerated Implementation Methodology (AIM) the process for implementing change. This incorporates particular emphasis on the implementation of recognised change management tools including process mapping, essentials of care, workforce planning and development, management essentials and excellence.

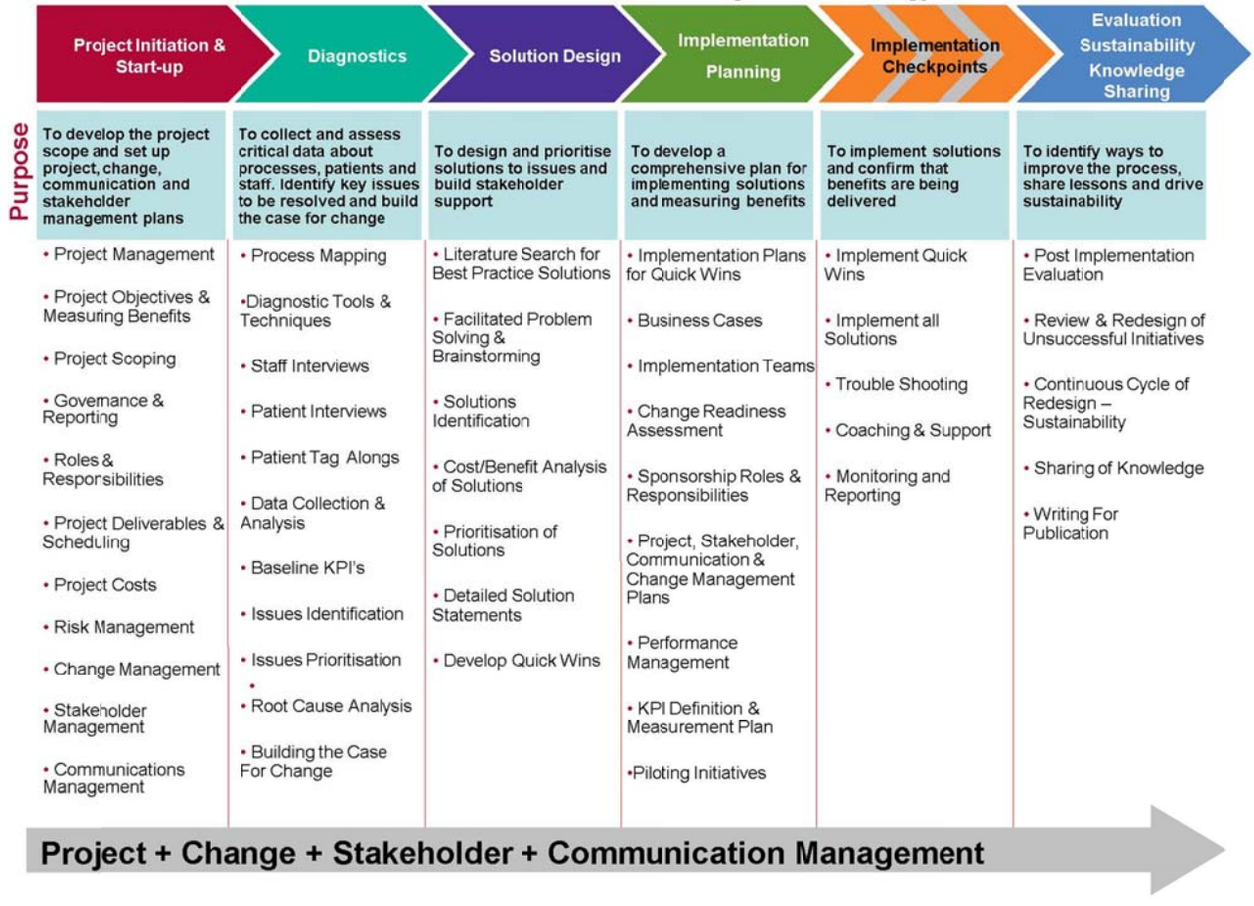

Figure 28 Healthcare Redesign Methodology for Capital Projects

Identification of key areas of Change

The chief strategic priorities for the NMH align with the HNE Health Strategic Map and include:

1. Community (The people we serve)
1.1 Deliver disease prevention, early intervention and health promotion across the lifespan
1.2 Support a healthy start to life
1.3 Empower communities to engage as partners in health and reduce health disadvantage
1.4 Close the Gap between Aboriginal and non-Aboriginal health
2. Service (The service we provide)
2.1 Improve equity of access and service delivery
2.2 Cooperate, collaborate and communicate with our partners to best meet agreed health needs
2.3 Develop a culture of service and person-centred care that includes the needs of families and carers
2.4 Sustain effective clinical networking
3. Patient Safety, Quality and Experience (Excellence – every patient, every time)
3.1 Provide a quality health service experience
3.2 Deliver safe, effective and appropriate healthcare
3.3 Provide strong corporate and clinical governance
4. Resources (Managing our services well)
4.1 Make the most effective use of the finite resources available and ensure that costs are kept under control to promote sustainability
5. Positioning for the future (Proactively preparing)
5.1 Plan and invest for future health needs
5.2 Facilitate multidisciplinary innovation, education and research
5.3 Encourage new sustainable technology to support clinical needs
6. Our staff and workplace culture (Supporting and encouraging our staff)
6.1 Attract, develop and retain competent, capable staff with the right cultural fit
6.2 Be ethical and accountable for demonstrating our shared (CORE) values
6.3 Ensure a safe working environment

Models of Care

All models of care and services provided at NMH will be reliant upon timely and efficient review of performance data. Fundamental to the success of these new services, will be the ability to gather appropriate data that encompasses the patient experience and health outcomes.

Benefits have been and will continue to be identified with appropriate indicators and measures to ensure their realisation. These benefits align with the goals of HNE Health, NSW Health and NMH. Critical to this achievement will be ensuring a “whole of service” approach to developing the

appropriate structures, processes, behaviours and communications which will improve and maximise appropriate access to care and patient flow.

NMH will offer a higher level of service provision and an increased Role Delineation in some specialties compared to the existing Maitland Hospital. These encompass clinical, clinical support and non-clinical models and include:

Clinical Models of Care

- Ambulatory care services integrated with acute services, aimed at minimising inpatient stay and incorporating outpatient clinics, same day procedural, same day medical and surgical services, oral health, GP Access After Hours (GPAAH) service, HiTH satellite renal services and chemotherapy.
- General Medicine Service incorporating chronic disease, palliative care and a day medical service.
- Acute surgical models incorporating planned and unplanned surgery, anaesthesia and peri-operative services aimed at improving surgical targets.
- Acute mental health services encompassing integrated models of care with general hospital services including emergency and inpatient care.
- Maternity and gynaecology services encompassing acute, ambulatory and community models of care linked as part of Women and Children's services/zoning. This will include collocated inpatient and same day maternity assessment beds aimed at minimising length of inpatient stay and meeting the NSW Health requirements for "Towards Normal Birth".
- CYP&F services including inpatient, ambulatory and community based models of care. This will encompass inpatient paediatric and adolescent care with collocated same day paediatric services. There will be an enhanced SCN and dedicated paediatric clinics.
- Emergency services incorporating the emergency department, ESSU and collocated PECC aimed at improving the ETP.
- Critical Care Services comprising ICU/HDU aligned with the tertiary critical care services at JHH.

Clinical Support Models of Care

- Pharmacy services incorporating inpatient and ambulatory care support with emphasis on safe medication management.
- Medical Imaging services including inpatient and ambulatory care support.
- Sterilising services incorporating a central sterile department (CSD).
- IC&T encompassing electronic medical record (eMR), integrated critical care information systems, ambulatory care and home based care systems. IC&T will also comprise workforce support, telehealth facilities while providing facility wide wireless and mobile coverage.

Non–Clinical Models of Care and Service Delivery

- Hotel and Supply services incorporating catering, cleaning, linen, waste management, security, porterage and stores management.
- Facility Support Services including engineering, fire safety and ongoing facility maintenance.
- Workforce planning and design.
- Administration models of service delivery.

Further development of models of care and service delivery will occur with project user groups prior to commencement of detailed concept design to ensure there is a clear definition and understanding of care and service delivery prior to developing the full facility plan.

Issues for further consideration

A Change Issues Register has been included within the Change Management Plan, which encompasses both infrastructure and non- infrastructure issues and outlines actions to be taken to mitigate and treat the identified issues, responsibilities for their management and timeframes for mitigation.

Key change issues include:

- Identification and appropriate planning for all services on the existing Maitland Hospital site
- Enhanced service delivery with increase in Role Delineation of services at the new hospital
- Provision of additional services at the new hospital not currently provided at the existing Maitland Hospital
- Provision of contemporary, expanded and integrated ambulatory care services
- Electronic Medication Management across facility
- Suitable Information, Communication and Technology systems to support service delivery
- Clinical Information System - implementation of Electronic Medical Record
- "Whole of system" approach that includes not only what happens in hospital but incorporates hospital avoidance and post discharge care programs
- Suitable workforce to deliver required services
- Way finding
- Inadequate resources for transition and operational commissioning
- Central Sterilising Department (CSD) - implementation of tracking system
- Implementation of moveable workspace - accessible IT system for individual user at multiple access points
- Transition plan of current HDU to reach ICU Role Delineation 4/5
- Model of Care for Children, Young People and Families focused on "the team around the child"
- Model of Care for Women's health is women centred based on the "triangle of trust" model, partnership and collaboration between the woman, doctor and midwife.

9. Appendices

Appendix 1 – Investment Logic Map
Appendix 2 – State-wide Service Plans
Appendix 3 – Hunter Valley Clinical Service Plan
Appendix 4 – The New Maitland Hospital Service Statement
Appendix 5 – The New Maitland Hospital Capacity Options
Appendix 6 – Aboriginal Health Impact Statement
Appendix 7 – Concept Design Report
Appendix 8 – Workforce Plan
Appendix 9 – Communications Strategy
Appendix 10 – Change Management Plan
Appendix 11 – Cost Plan B
Appendix 12 – Financial Impact Statement
Appendix 13 – Economic Appraisal
Appendix 14 –Risk Management Plan and Risk Register
Appendix 15 – Project Programme
Appendix 16 – Benefits Realisation Plan and Benefits Table
Appendix 17 –Value Management Report
Appendix 18 – Systems and Equipment Guide
Appendix 19 – HNE Health ICT Strategy for NMH
Appendix 20 – Functional Design Brief
Appendix 21 – Strategic Gateway Review Report
Appendix 22 – Gateway Profile
Appendix 23 – Gateway Review Report

NEW MAITLAND HOSPITAL DEVELOPMENT
better health together

Appendix 1 – Investment Logic Map

NEW MAITLAND HOSPITAL DEVELOPMENT
better health together

Appendix 2 – State-wide Service Plans

NEW MAITLAND HOSPITAL DEVELOPMENT
better health together

State Wide Service Plans

A number of key policies have been endorsed by NSW Government for the consistent governance and delivery of healthcare in NSW. These policies inform health service and facility planning. The design of the NMH will comply with the relevant legislation and policy for the designated areas. The list of relevant policies is outlined below;

Access

- People With A Disability: Responding To Needs During Hospitalisation (PD 2008_008) (reviewed 2013)
- Disability and Discrimination Act, 1992
- The Disability Discrimination Act (DDA) – The Disability (Access to Premises – Buildings) Australian Standards 2010 AS1428.
- Changing Places Transforming Lives (2015)

Access to services

- Client Registration Policy, (PD 2007_094)
- Critical Care Tertiary Referral Networks (Perinatal) (PD 2010_069) (reviewed 2013)
- Critical Care Tertiary Referral Networks (Paediatrics) (PD 2010_030)
- Emergency Department – Direct Admission to Inpatient Wards, (PD 2009_055)
- Standard Procedures for Improved Access to Area and Other Public Health Services by People of Non English speaking Backgrounds (PD 2005_483)

Accreditation – quality and safety

- In 2013, the Australian Commission on Safety and Quality in Healthcare mandated the implementation of its ten national standards for all healthcare facilities. These ten national safety and quality health service standards pertain to:
    i. governance for safety and quality in health service organisations
    ii. partnering with consumers
    iii. preventing and controlling healthcare associated infections
    iv. medication safety
    v. patient identification and procedure matching
    vi. clinical handover
    vii. blood and blood products
    viii. preventing and managing pressure injuries
    ix. recognising and responding to clinical deterioration in Acute health care
    x. preventing falls and harm from falls
- The design of the physical environment must not cause a conflict with the implementation of these standards
- The design of the Facility must use innovative and evidenced based design solutions to achieve implementation of the above standards.
- In addition to the above:
    a. Incident Management Policy (PD 2014_047)
    b. Patient Safety and Clinical Quality Program, (PD 2005_608).

c. Australian Commission on Safety and Quality in Healthcare, Australian Safety and Quality Framework for Health Care, 2010
d. .

Administration

- Office Accommodation Policy – Public Health Organisations and Ambulance Service 2005 (PD 2005_576)
- Goods and Services Procurement (PD 2014_005).

Care of the deceased

- Cremation Certificates and Related Requirements 2006 (reviewed 2013)
- Cremation of More than One Body Simultaneously (GL 2013_014).
- Deceased Persons in Health Facility Mortuaries and Management of Health Facility Mortuaries 2007 (reviewed 2012).
- Coroners Cases and the Coroners Act 2009, (PD 2010_054).
- NSW Health Death - Management of Sudden Unexpected Death in Infancy (PD 2008-070), (reviewed 2013)
- Public Health Act (2010)
- Public Health Regulation (2012)

Clinical practice

- Cardiac Monitoring in Adult Cardiac Patients in Public Hospitals in NSW, (PD 2008_055) (reviewed 2013)
- Clinical Practice – Model Policy for Safe Introduction of New Interventional Procedures, 2010
- Emergency Department Models of Care July 2012
- Emergency Patients Awaiting Care, 2010
- Emergency Surgery Guidelines, 2014
- NSW Acute to Aged Related Care Services Practice Guidelines (GL 2014_010)
- HEALTHPLAN – Medical Services Supporting Plan, 2010
- High Volume Short Stay Surgical Model Toolkit, 2012
- Minimum Standards for Intensive Care Units, College of Intensive Care Medicine, 2011
- NSW Chronic Care Program, 2005
- NSW Hospital in the Home (HiTH) Guidelines (GL 2012_006)
- Rehabilitation for Chronic Disease, 2006
- Recognition and Management of Patients Who Are Clinically Deteriorating, (PD 2013_049)
- Surgery Futures – A Plan for Greater Sydney, 2011
- Waiting Time and Elective Surgery Policy, 2012.
- Clinical Handover - Standard Key Principles, 2009
- Model of Care for Rehabilitation Services in NSW - NSW Health Redesign
- Waiting Time and Elective Surgery Policy, 2012
- NSW Health Rural Surgical Futures Final Report 2011-2021
- Same Gender accommodation (PD 2015_018) Respecting Privacy and Dignity in NSW Health - Eight ways to make a difference: for NSW Health Employees

- Volunteers – Engaging, Supporting and Managing Volunteers (PD 2011_033)
- Care Coordination: Planning from Admission to Transfer of Care in NSW Public Hospitals, (PD 2011_015).
- Emergency Department Short Stay Units (PD 2014_040) Nutrition Care (PD 2011_078)

Cultural

- NSW Aboriginal Health Plan 2013-2023 (PD 2012_066)
- Aboriginal and Torres Strait Islander Peoples – Preferred terminology to be used, (PD 2005_319).
- Aboriginal Chronic Conditions Area Health Service Standards, 2005 (reviewed 2013)
- Aboriginal Health Impact Statement and Guidelines, (PD 2007_082)
- Interpreters – Standard Procedures for Working with Health Care Interpreters, (PD 2006_053) (reviewed 2012)
- Non-English Speaking Background - Standard Procedures - Improved Access Area/Health Services, 2005 (reviewed 2010)
- NSW Health Policy and Implementation Plan for Culturally Diverse Communities, 2012–2016, (PD 2012_020).
- Aboriginal Information and Support Needs Assessment for Families and Carers, 2007.
- Building Strong Foundations Programs Services Standards (PD 2015_042)
- Culturally & Linguistically Diverse (CALD) Carer Framework: Strategies to Meet the Needs of Carers (GL 2009_018)
- Respecting the Difference: An Aboriginal Cultural Training Program Framework for NSW Health (PD 20011_069)

Disaster management

- Disaster Preparedness Education Strategic Framework, 2008–2011, 2009 (reviewed 2012)
- Disaster Risk Management Guidelines, 2009 (reviewed 2011)
- NSW Health Plan for Disaster Management, PD 2009-008
- HNE Infectious Disease Emergency Response Plan, 2008
- New South Wales State Emergency Management Plan (EMPLAN).

Environmental services

- Protection of the Environmental Operations Act 1997 and the Protection of the Environment Operations Amendment Act 2005 – NSW
- Waste Reduction and Purchasing Policy, 2011–2014, (PD 2011_0660
- Waste Management Guidelines for Health Facilities, (PD 2005_132).
- Environmental Cleaning Policy (PD 2012_016)

Falls protection

- Falls –Prevention of Falls and Harm from Falls among Older People, 2011–2015, (PD 2011_029)
- Preventing Falls and Harm From Falls in Older People: Best Practice Guidelines for Australian Hospitals, Residential Aged Care Facilities and Community Care, The Australian Commission on Safety and Quality in Healthcare, 2009

- Guidebook for Preventing Falls and Harm from Falls in Older People: Australian Hospitals, The Australian Commission on Safety and Quality in Healthcare, 2009.
- Floor Coverings in Healthcare Buildings, TS-7 Technical Series version 1.1, 2009

Fire and engineering

- Fire Safety in Healthcare Facilities, (PD 2010_024).
- Technical Series TS 11 Engineering Services & Sustainable Development Guidelines (GL 2008_002)

Food services

- Australia New Zealand Food Standards Code
- Live Life Well @ Health: Healthier Food and Drink Choices – Staff and Visitors in NSW Health Facilities, 2009
- NSW Health Nutrition Care Policy, 2011
- Food Act, 2003 and the Food Legislation Amendment Act, 2004.

Infection control

- Australian Guidelines for the Prevention and Control of Infection in Healthcare, National Health and Medical Research Council, 2010
- Australasian Health Facility Guideline, Part D - Infection Prevention and Control
- Hand Hygiene Policy, (PD 2010_058)
- Infection Control Policy, (PD 2007_036) (reviewed 2010)
- Infection Control Policy: Prevention & Management of Multi-Resistant Organisms, (PD 2007_084) (reviewed 2012)
- Infection Control Program – Quality Control Indicators, 2005
- Oral Health: Cleaning, Disinfecting and Sterilising, (PD 2013_024).

Information Management and Technology

- Health Records and Information Manual For Community Health Facilities, Amendment No. 23, 2010
- Health Records and Information Manual for Community Health Facilities, 1991
- Health Care Records - Documentation and Management, 2012
- Health Records and Information Privacy Act, 2002
- A New Way of Delivering IM&T Services, 2005
- Privacy Manual (Version 2) - NSW Health, 2005 (reviewed 2011)

Electronic Information Security Policy, – NSW Health (PD2013_033)

Medication safety

- Medication Handling in NSW Public Facilities, (PD 2013-)43)

Mental health

- Transfer of Care from Mental Health Inpatient Services, (PD 2012_060)
- Mental Health, drug and alcohol – Emergency Department and Ambulance Monitoring (GL2012_009)

- Electroconvulsive Therapy: ECT Minimum Standard of Practice in NSW, (PD 2011_003)
- Opioid Dependent Persons Admitted to Hospitals in NSW – Management, 2011.
- Aggression Seclusion and Restraint in Mental Health Facilities in NSW (PD 2012_035
- Principles of Safe Management of disturbed and /or Aggressive Behaviour and the Use of Restraint (PD 2014_050)Psychiatric Emergency Care Centre Model of Care Guidelines (GL 2015_009)

Medical imaging

- Radiation Control Act, 1990
- Radiation Control Regulation, 2013
- Radiation Protection Series – Australian Radiation Protection and Nuclear Safety Agency

Older persons

- Dementia Services Framework, 2010–2015, 2011
- Disability – People With a Disability: Responding to Needs During Hospitalisation, 2008
- Aged Care – Working with People with Challenging Behaviours in Residential Aged Care Facilities, GL 2006_014
- Dementia Enabling Design Guidelines (2013)

Palliative care

- Paediatric Palliative Care Planning Framework, 2011–2014, (GL 2011_014).
- Palliative Care Role Delineation Framework, (GL 2007_022), reviewed 2012.
- Palliative Care Strategic Framework 2010-2013 (PD 2010_003)
- Advanced Care Planning for Quality Care at the End of Life Action Plan 2013-2018
- Advanced Care Directives (NSW) – Using GL 2005_056

Pathology / laboratory

- Pathology Laboratories Accreditation in NSW Health (PD 2006_064)
- AS (ISO15189) Medical Testing
- AS ISO/IEC 17025 Laboratory Accreditation
- Laboratory Accreditation Standards and Guidelines for Nucleic Acid Deletion Techniques
- National Association of Testing Authorities, Australia
- Requirements for Packaging and Transporting Pathology Specimens and Associated Materials (Fourth Edition) 2013

Pharmacy

- Health (Drugs and Poisons) Regulation
- Therapeutic Goods Administration (TGA)
- National Vaccine Storage Guidelines - Strive for 5, Australian Government, 2013
- Storage of Vaccines in Hunter New England (HNE) Facilities

Planning and design

- Australasian Health Facility Guidelines
- Australian Standards

- National Construction Code
- Medical Helipads – Guidelines (PD 2005_128)

Security

- Protecting People and Property, NSW Health Policy and Standards for Security Risk Management in NSW Health Agencies, 2013
- Physical Security Management Guidelines – Australian Government, 2011
- NSW Health Policy & Standards for Security Risk Management in NSW Health Agencies, 2013
- Australasian Health Facility Guidelines Part C Design for Access, Mobility, OH&S and Security
- Preventing and Managing Violence in the NSW Health workplace – A Zero Tolerance Approach (PD 2015_001).
- Violence Prevention & Management Training Framework for the NSW Pubic Health System (PD 2012_008).

Sustainability

- Australasian Health Facility Guidelines
- National Strategy on Energy Efficiency, 2010

Women's and Children's

- Baby Friendly Initiative, WHO (2012)
- Breastfeeding in NSW: Promotion, Protection and Support, PD 2011_042
- Children and Adolescents – Safety and Security in NSW Acute Health Facilities, PD 2010_033
- Children and Adolescents – Guidelines for Care in Acute Settings, PD 2010_034
- Protecting Children and Young People, 2010
- Child Wellbeing and Child Protection Policies and Procedures for NSW Health PD 2013-007, 2013
- National Maternity Services Plan 2010 – Commonwealth of Australia
- Maternity - Breast Milk: Safe Management PD 2010_019,
- Maternity - Towards Normal Birth in NSW PD 2010_045,
- Maternity Management of Early Pregnancy Complications (PD 2012_022)
- Maternity Emergencies (PD 2005_161)
- Critical Care Tertiary Referral Networks (Perinatal) PD 2010_069, 2010 (reviewed 2013)
- NSW Kids + Families Guidelines Maternity and Neonatal Service Capacity Framework (Draft 2014)
- Paediatric Services Capacity: A Rapid Review Sax Institute for NSW Kids + Families (2015)
- Children and Adolescents with Mental Health Problems Requiring Inpatient Care PD 2011_016

Workplace health and safety

- Australian Work Health and Safety Strategy 2012–2022 – Safe Work Australia, 2012

- Occupational Health & Safety and Injury Management Profile, PD 2007_030, 2007 (reviewed 2012)
- Work Health and Safety: Better Practice Procedures, (PD 2013_005),
- Work Health and Safety – Controlling Exposure to Surgical Plume (GL 2015_002).
- HNELHD Work Health and Safety Policy (HNELHD Pol 13_09)
- Incident – Effective Incident Response Framework for Prevention and Management in the Health Workplace, 2005, (reviewed 2012)
- Occupational Health and Safety Issues Associated with Management Bariatric (Severely Obese) Patients, 2005 (reviewed 2010)
- Sharps Injuries – Prevention in the NSW Public Health System, (PD 2007_052) (reviewed 2012)
- Work Health and Safety Amendment Bill, 2011 – NSW
- Preventing Slips, Trips and Falls Guide – WorkCover NSW, 2007
- Work Health and Safety Act, 2011 – National
- Zero Tolerance Response to Violence in the NSW Health Workplace, 2005 (reviewed 2011)
- Australasian Health Facility Guidelines Part C Design for Access, Mobility, OH&S and Security NSW Health Information Sheets:
    - Hazardous Classification criteria for Chemicals in the Workplace under WHS Regulations 2011
    - Hazardous Chemicals Identification
    - Managing Hazardous Chemicals in the Workplace
    - Hazardous Chemicals Using, Handling, Labelling, Storage & Transportation.

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Appendix 3 – Hunter Valley Clinical Service Plan

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Appendix 4 – The New Maitland Hospital Service Statement

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Appendix 5 – The New Maitland Hospital Capacity Options

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Appendix 6 – Aboriginal Health Impact Statement

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Appendix 7 – Concept Design Report

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Appendix 8 – Workforce Plan

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Appendix 9 – Communications Strategy

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Appendix 10 – Change Management Plan

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Appendix 11 – Cost Plan B

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Appendix 12 – Financial Impact Statement

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Appendix 13 – Economic Appraisal

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Appendix 14 –Risk Management Plan and Risk Register

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Appendix 15 – Project Programme

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Appendix 16 – Benefits Realisation Plan and Benefits Table

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Appendix 17 –Value Management Report

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Appendix 18 – Systems and Equipment Guide

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Appendix 19 – HNE Health ICT Strategy for NMH

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Appendix 20 – Functional Design Brief

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Appendix 21 – Strategic Gateway Review Report

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The project team have reviewed and have no objections to the comments and recommendations made by the Strategic Gateway reviewers. The comments and recommendations have been incorporated into the Final Business Case for the project.

Findings
Service Delivery
The project is important for the ongoing provision of health services and this is deemed to be demonstrated based on socio-demographic parameters and the poor condition of existing assets.
The innovations proposed are commended but need to be given higher priority in the documentation in order to positively emphasise the importance of the project particularly of the mental health components.
The project offers genuine and multiple opportunities to positively impact on the health status of the people who will use its services.
The final business case would be expected to clearly articulate the reasons why the current sites of the Maitland Hospital and Morisset Hospital are liabilities and unsuitable for redevelopment. Verbally these are deemed to be demonstrated but are not clearly identified in the Preliminary Business Case.
It is considered that the future clinical services profile for the NMH has not been sufficiently examined and challenged to ensure its robustness and ability to provide the required levels and scope of services to meet the identified needs for the future, including any realistic flow reversals from the John Hunter Hospital (JHH).
While it was demonstrated that new and innovative models of care were developed for Children, Young People and Families Services and Mental Health Services. However, it was not clear if this same scrutiny and innovation had been applied to all service modalities. Further, it was not clear how innovative models of care had been factored in to the projected accommodation requirements
This significant future health precinct is entitled to the benefit of a comprehensive public transport strategy at its inception to ensure all-inclusive access to services for its patients, their carers, visitors and staff, regardless of whether they are in possession of a private vehicle or not. For this to occur a whole-of-government approach is required to ensure implicated agencies such as Roads and Maritime Services and Transport NSW (NSW Trains and Buses) fully appreciate what is required and have included their contribution (i.e. comprehensive bus connections and potentially a relocated train station) in their forward capital planning.
That an audit of key functional relationships and their inadequacies in the current Maitland Hospital be undertaken. This is expected to support the existing limitations of the Maitland Hospital facilities. The results of this audit would be expected in the final business case.
How the service model for the NMH links into the overall Local Health District (LHD)/Lower

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Findings
Hunter service strategy including streams and networks needs to be more clearly defined to demonstrate that the NHM is not merely a satellite of JHH and therefore a duplication of services but rather a fully developed Level 5 service which has multiple functions based on population need and defined centres of excellence with one of its roles being to support JHH.
That the proposed innovations in service delivery, which were advised at interview (e.g. Child, Young People & Families and Mental Health), need to be clearly articulated. For example, how the projections for services and the required accommodation have been adjusted to reflect the efficiencies and other impacts resulting from the new models of care.
That a review needs to be undertaken of the models of care across all service streams proposed in accordance with the principles underpinning the NMH and in accordance with the proposed services and scope in consultation with agencies such as the Agency for Clinical Innovation
Affordability of Value for Money
A review of staging options for the NMH is undertaken to include the full transfer of identified services to the new site and complete decommissioning at the old sites, followed by staging of planned future capacity via both cold shell and new build strategies.
The EA should be reviewed to ensure the substantial benefits of the relocation of Morisset Hospital and staging strategies are accurately reflected.
The impacts of the service review and efficiencies of new models of care identified in section 1 need to be fully taken into account to ensure the benefits they attract to the project have been fully considered
Sustainability
While carer's accommodation and other public amenities on site have been identified, their inclusion in the project needs to be confirmed in the final business case.
The expected public transport study as noted in section 1 should be completed and commitments obtained from relevant agencies to provide the NHM with relevant services.
Governance
While carer's accommodation and other public amenities on site have been identified, their inclusion in the project needs to be confirmed in the final business case.
Further investigation and planning is required to ensure experienced resources and a realistic approach are applied to the facility and service design and transition planning processes, which includes change management, workforce development, clinician engagement and ICT to ensure the project is appropriately resourced.
As a relevant stakeholder, ACI should be included in the consultations regarding models of care

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Findings
which will occur to inform the schematic design phase of the project.
Ownership and governance are assigned for the development and implementation of the sites disposal strategy.
Risk Management
The risk rating and consequences of decommissioning and disposal of the existing sites and the capital adequacy allocated to these tasks needs to be reviewed.
Stakeholder Management
Stakeholder engagement needs to be escalated with NSW Transport and Justice Health to achieve firm commitments related to their respective project components.
The benefits of the integrated models of care for mental health services on the NMH are well communicated and fully incorporated into the planning to ensure they are positively received for the next phase of the project.
Change Management
Site visits for relevant staff from Maitland and Morisset Hospitals needs to be organised in the near future to inform functional design briefing.
Other Matters
It is noted that the investigations of the Preferred Procurement Method have not as yet been progressed. Early identification of the procurement method has multiple implications for the project and will avoid the risk of abortive work during the business planning and the schematic design phase.
There is inconsistency in how the NMH project is described and perceived across the documentation and how the proposed service categories are described. The Review Team see this redevelopment as a Network-wide initiative and analysis and impacts should be articulated across the key affected facilities (i.e. JHH, Maitland, Morisset and Kurri Kurri Hospitals). A consistent approach to this would help educate key stakeholders and promote a standard understanding of the intentions of the project
The Preliminary Business Case documentation is inconsistent in some instances with regards to data presentation, stated objectives and other common factors across the body of the report and its attachments, including the EA and Financial Impact Statement (FIS). This detracts to some degree from the validity of the case for change. For example, the demographic profile should use the 2011 census base and 20 year age groups consistently to enable comparisons across tables (Table 6.8 profile in the service statement could be used consistently).

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Findings
Conclusions and Recommendations
That an audit of key functional relationships and their inadequacies in the current Maitland Hospital be undertaken. This is expected to support the existing limitations of the Maitland Hospital facilities. The results of this audit would be expected in the final business case.
How the service model for the NMH links into the overall Local Health District (LHD)/Lower Hunter service strategy including streams and networks needs to be more clearly defined to demonstrate that the NHM is not merely a satellite of JHH and therefore a duplication of services but rather a fully developed Level 5 service which has multiple functions based on population need and defined centres of excellence with one of its roles being to support JHH.
That the proposed innovations in service delivery, which were advised at interview (e.g. Child, Young People & Families and Mental Health), need to be clearly articulated. For example, how the projections for services and the required accommodation have been adjusted to reflect the efficiencies and other impacts resulting from the new models of care.
That a review needs to be undertaken of the models of care across all service streams proposed in accordance with the principles underpinning the NMH and in accordance with the proposed services and scope in consultation with agencies such as the Agency for Clinical Innovation (ACI).
A review of staging options for the NMH is undertaken to include the full transfer of identified services to the new site and complete decommissioning at the old sites, followed by staging of planned future capacity via both cold shell and new build strategies.
The EA should be reviewed to ensure the substantial benefits of the relocation of Morisset Hospital and staging strategies are accurately reflected.
The impacts of the service review and efficiencies of new models of care identified in section 1 need to be fully taken into account to ensure the benefits they attract to the project have been fully considered.
While carer's accommodation and other public amenities on site have been identified, their inclusion in the project needs to be confirmed in the final business case.
The expected public transport study as noted in section 1 should be completed and commitments obtained from relevant agencies to provide the NHM with relevant services.
Further investigation and planning is required to ensure experienced resources and a realistic approach are applied to the facility and service design and transition planning processes, which includes change management, workforce development, clinician engagement and ICT to ensure the project is appropriately resourced.

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Findings
As a relevant stakeholder, ACI should be included in the consultations regarding models of care which will occur to inform the schematic design phase of the project.
Ownership and governance are assigned for the development and implementation of the sites disposal strategy
The risk rating and consequences of decommissioning and disposal of the existing sites and the capital adequacy allocated to these tasks needs to be reviewed.
Stakeholder engagement needs to be escalated with NSW Transport and Justice Health to achieve firm commitments related to their respective project components.
The benefits of the integrated models of care for mental health services on the NMH are well communicated and fully incorporated into the planning to ensure they are positively received for the next phase of the project.
Site visits for relevant staff from Maitland and Morisset Hospitals needs to be organised in the near future to inform functional design briefing.

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Appendix 22 – Gateway Profile

To be confirmed

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Appendix 23 – Gateway Review Report

The project team have reviewed and have no objections to the comments and recommendations made by the Internal Gateway reviewers. The comments and recommendations have been incorporated into the Final Business Case for the project as noted below.

Findings	Incorporated in the FBC Rev 4
Service Delivery	
The finalisation of significant networking and role delineation across Maitland Hospital and related sites is to be completed in the near future to reliably inform detailed planning for the new hospital.	Yes
The development of measurable outcomes across all relevant areas needs to be completed to ensure the project benefits are fully realised and able to inform future post occupancy reviews.	No – will be undertaken as part of the next phase of the project
HI needs to incorporate measurable service outcomes in ALL post occupancy evaluations to demonstrate the success of the project and develop a bank of comparators for future projects.	No – will be undertaken as part of the next phase of the project
Development of linkages between the benefits realisation plan, the change management processes and stakeholder management plans are recommended to maximise the benefits realised from the project.	No – will be undertaken as part of the next phase of the project
The HNELHD should not only look to internal projects to identify potential benefits from the green/ brownfield site development. As this is an opportunity, which rarely arises, it is suggested that visits to other comparable sites (even those interstate) might be of great advantage to staff to ensure maximum opportunities of this project are exploited.	No – will be undertaken as part of schematic design
Affordability and Value for Money	
A fully updated Economic Appraisal needs to be prepared and included in the final business case to best represent the project especially when considered by others. The amended figures presented as an addendum to the Review will grossly affect the other parameters in the economic appraisal.	Yes
The Financial Impact Statement (FIS) will need to be revised prior to being included in the final business case, as it also will be affected by the amended economic appraisal estimations.	Yes

Findings	Incorporated in the FBC Rev 4
The project implementation plan needs to clearly articulate how the contingencies will be managed.	Yes
Evidence needs to be included in the business case that capital funding is available for the total project costs.	Yes
The site acquisition costs and value require clarification and inclusion in the business case in a consistent manner.	Yes
The costs and intentions of disposal of the existing Maitland Hospital site require clarification. This was identified as an issue in the preliminary business case but remains outstanding.	Yes
A match up of the schedule of accommodation (on which the cost plan is based) and the drawn areas in the concept plans needs to occur to eliminate discrepancies and the risk of significant cost overruns.	No – will be undertaken as part of schematic design
Further investigations and decision-making regarding the form of procurement needs to be undertaken in a timely manner so as not to affect the project program.	No
Sustainability	
Ensure that sustainability principles are fully incorporated into the Detailed Design process as per the NSW Government Sustainability Policy (and as inferred in the business case).	No – will be undertaken as part of schematic design
Governance	
The standard governance structure requires further clarification to ensure roles, responsibilities and accountabilities are clearly articulated and aligned with the specific needs of this project. An initiative is especially required to improve the linkages across the project governance that ensure seamless and fully managed decision-making and approval processes.	No – will be undertaken as part of the next phase of the project
The benefits realisation plan needs to be revisited to ensure it details who is responsible for monitoring or reporting benefits now and in the future. A review and enhancement of potential benefits would also improve the quality of this document and offer increased beneficial outcomes.	No – will be undertaken as part of the next phase of the project

Findings	Incorporated in the FBC Rev 4
Risk Management	
Review the risk register to ensure all relevant risks are identified and managed especially the risks associated with local government expectations.	No – will be undertaken as part of the next phase of the project
More specific ownership of the particular risks need to be defined (e.g. a particular job position) rather than a global organisation nomination (e.g. HNELHD).	No – will be undertaken as part of the next phase of the project
Clarification of the future role of the existing Maitland Hospital site needs to occur to minimise its risk to the future operational obligations of the HNELHD.	No – will be undertaken as part of the next phase of the project
The risk register needs to be amended to include native flora and fauna (e.g.native grasses and resident native bat colonies) and how they will be appropriately managed.	This exists on the current risk register but has not been considered a High risk due to appropriate mitigations
Stakeholder Management	
The Communication Plan is to be revised with the HNELHD taking a lead role in its development and implementation to maximise locality appropriateness.	No – will be undertaken as part of the next phase of the project
Change Management	
Nil recommendations	
Other Matters	

Findings	Incorporated in the FBC Rev 4
A concise executive summary (no more than two pages) along with a project summary sheet (stating the key parameters on one page) is to be included in the updated business case.	Yes
A proactive edit of the business case is highly recommended to enhance its readability and eliminate inconsistencies across various sections.	Yes
The Review considers that the business case would benefit from the inclusion of a section (Relevant Innovation) which presents and discusses how the project is embracing innovation in all aspects of the project. Aspects considered may include emerging and anticipated trends in contemporary models of care, exploitation of available technology, responsive facility design and new ways of working.	Yes