



West Coast District Health Board
Te Poari Hauora a Rohe o Tai Poutini

Corporate Office
High Street, Greymouth 7840

Telephone 03 769-7400
Fax 03 769-7791

11 December 2019

9(2)(a)

RE Official Information Act request WCDHB 9370

I refer to your email, dated 4 November 2019, requesting the following information under the Official Information Act from West Coast DHB.

- **Please may I see the DHB site master planning report-minutes from the DHB meeting on Friday (1 November 2019)?**

Please refer to **Appendix 1** (attached) for the information requested and as referenced in the "Resolution to Exclude the Public" section of the West Coast DHB Board Meeting held on 1 November 2019, Item 3.

I trust that this satisfies your interest in this matter.

Please note that this response, or an edited version of this response, may be published on the West Coast DHB website after your receipt of this response.

Yours sincerely

Carolyn Gullery
Executive Director
Planning, Funding & Decision Support

SITE MASTERPLAN REPORT



TO: Chair and Members
West Coast District Health Board

SOURCE: General Manager West Coast DHB

DATE: 1 November 2019

Report Status – For:	Decision <input checked="" type="checkbox"/>	Noting <input type="checkbox"/>	Information <input type="checkbox"/>
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1. ORIGIN OF THE REPORT

The attached Preliminary Site Masterplan Report provides an overview of the background and work undertaken to provide a recommended site plan that includes the new Mental Health facility. The Site Masterplan is required to be approved to enable the team to progress to the next stage of developing the Business Case for the new Mental Health facility. A preferred site will be determined during the development of the Business Case.

2. RECOMMENDATION

That the Board:

- i. Approves the Site Masterplan
- ii. Approves the progression to develop the Business Case for the new Mental Health facility

3. SUMMARY

The West Coast Executive Management Team have endorsed the Site Masterplan and approved the progression to develop the Business Case. A preferred site will be determined during the development of the Business Case.

4. APPENDICES

Appendix 1: Grey Base Hospital Site Masterplan Report

Report prepared by: Philip Wheble, General Manager WCDHB

Report approved for release by: David Meates, Chief Executive

Site
Masterplan
Report

25 | 09 | 2019

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GREY BASE HOSPITAL



DOCUMENT HISTORY AND STATUS

Revision	Date	Description	Review	Approved
A	14.08.19	Masterplan Report	CG	AF
B	25.09.19	Masterplan Report	CG	AF

WCDHB GREY BASE PRELIMINARY MASTERPLAN REPORT

Client Name: West Coast District Health Board
Document Title: Grey Base Masterplan Report
Document No: 001
Revision: B
Revision Date: 25.09.19

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Executive Summary

This Site Masterplanning (the masterplan) report has been prepared for the West Coast District Health Board as an input into a proposed Business Case for the development of a new Mental Health Facility on the Grey Base Hospital Site to replace the existing earthquake prone building.

The masterplan seeks to establish a planning strategy for the commencement of design for a new mental health facility with consideration of the existing site status and the changing status following the commissioning and occupation of the New Grey base Hospital (Te Nikau) Building. It looks ahead to anticipated future developments on the site, and flexibility for future growth and change.

The focus of later stages of the masterplan process has been to define the preferred location for the new Mental health IPU building as the most significant built forms anticipated in the near future.

The masterplanning process has been based on earlier research and planning that was undertaken as part of the design of the New Grey Base Hospital (currently under construction). That had included inputs from a range of consultants and engagement with a wide range of West Coast District Health Board (WCDHB) and external stakeholders over an extended period preceding the commencement of construction of the new hospital in 2016. This latest process over a three month period in 2019 has focussed inputs from WCDHB and consultants to inform masterplan briefing and option analysis for the New Mental Health facility. Many of the inputs have been necessarily high-level to inform preliminary planning studies, and several important areas of ongoing study have been identified as part of this process to inform further design stages.

As well as informing the status of the site, this masterplan seeks to set out parameters for the design of future developments at Grey Base generally. This prominent site in Greymouth remains the primary healthcare base for the West Coast region and the importance of careful planning for the long-term usability of services is paramount.

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[COVER PAGE] Figure 1. New Hospital under construction

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1.0 INTRODUCTION

1.0 Introduction

1.1 Vision

Grey Base Hospital aspires to be a healthcare facility providing for a wide range of primary and secondary health needs for the wider West Coast community. The site in Greymouth forms the main hub for these facilities and intends to maximise use of on site buildings and infrastructure to support best current practice in models-of-care. Development and operation of the site would focus on the following principles:

- Be patient and whānau focussed;
- Provide future adaptability, flexibility and sustainability;
- Be cost effective and efficient; and
- Promote healthy people spaces;

The Masterplan provides the framework for the design of a new Mental Health facility and is shaped by design principles and option assessment criteria developed by WCDHB representatives and the project team.

1.2 Background

As one of the twenty District Health Boards in New Zealand, West Coast District Health Board in collaboration with Christchurch District Health Board is responsible for most publicly funded hospital services and primary health care services in the West Coast region. As with other DHBs, it has a statutory responsibility for improving, promoting, and protecting the health of the population living in the region. This includes planning, funding, and providing or contracting services to meet the health needs of the population.

The WCDHB is based in Greymouth and covers a 500km length of the west coast of the south in New Zealand from Karamea to Haast. It serves a population of 32,410 people (2018/19 projection) which is older than the national average and has a low proportion of Maori and Pacific People.

The Grey Base Hospital campus serves as the main primary and secondary health care service for the West Coast. In addition, the DHB is available to provide acute care to a number of visitors to the region. Tertiary care is part of a transalpine agreement and generally referred to CDHB.

Grey Base Hospital includes the following services.

- Integrated Family Health Centre (IFHC) Planned
- IFHC Unplanned
- Emergency Department (ED)
- Perioperative Suite
- IPU
- Maternity
- Pathology
- Clinical Engineering
- Radiology
- Short Stay Unit (SSU)
- Paediatric
- Oral Health Services
- Dementia Services
- Mental Health Services
- Loan Equipment
- Pharmacy
- Clinical Equipment Services (Orthotics)
- Learning Education
- Engineering Support Services

Many services will be integrated into the new hospital facility due for completion late 2019.

This building was commissioned by the Ministry of Health following a detailed business case which outlined the poor condition of existing facilities and their earthquake prone nature, as well as the manifestation of a new model of care for the West Coast DHB.

Whilst this new building caters for majority of site activity, several parts of the service were not encompassed as part of the project. The remaining services are on other parts of the site in older existing buildings. The condition of all of these buildings is currently being assessed separately as part of a National Asset Management Plan undertaken by the Ministry of Health.

Upon completion of the New Hospital, the northern portion of the existing Hospital is to be demolished and the central portion to be decommissioned. The south end of the building will be temporarily retained with its current Mental Health service.

The mental health service was excluded from the new building due to funding constraints and a review of mental health services for WCDHB. It continues to run out of the existing hospital building with understanding that this component would need separate funding for upgrade in the near future. The earthquake prone nature of the current premises and expiry of the Building Warrant of Fitness in mid 2020 has accelerated the need for relocation/ upgrade in order to continue the service.

The Ministry of Health determined that a new business case for Mental Health would need to be preceded with a site Masterplan for Grey Base in order to correctly assess this proposal and any future developments on the site. In early 2019, WCDHB approached CCM Architects to prepare a Masterplan which encompassed knowledge from studies undertaken during the new hospital design and new high level functional briefing to inform the placement and size of a potential new mental health facility on the site.

1.3 Scope

This Masterplan seeks to provide a framework for the commencement of a Detailed Business case and Concept Design. The scope of the masterplanning considerations include briefing information from all site services to understand their potential future needs on the site. The scope of this report includes:

- Review of existing facilities
- Review of existing site infrastructure
- Review of Mental Health Services (high-level functional brief based on proposed model of care)
- Review of Site flows / connectivity / servicing of facilities
- Establish Site Masterplan
- High level schedule of accommodation to inform facility sizing.

This report does not go into the detail briefing for future developments but as a background to inform any Business Case for proposed development(s).

1.0 Introduction

1.4 Principles

The methodology that has shaped this masterplan included the establishment of principles and criteria to guide option development and act as an assessment tool for comparing options and selecting a preferred planning option. The principles and criteria are described in detail in section 5.1. The following list describes high-level features of the principles as an introduction to the objectives of the project and the masterplanning approach:



Patient & Whānau-Centred

Medical, developmental, social, cultural and spiritual needs of patients, their carer's and their Whanau'/ families will be met.

- Positive, welcoming Patient & Staff Experience.
- Quality Equitable Access to Care with focus on wayfinding and integration with transport.
- Local Culture/Runanga & Heritage Response and connection incorporated into building design and planning and delivery of care.
- Integrated health care delivery model to enhance clinical service provision and continuity of care.



Provide Future Adaptability, Flexibility & Sustainability

Ability to adapt to create responsive infrastructure and capability that supports current model of care and health system change

- Sustainable Infrastructure which maximises natural climate opportunities, minimises resources and safeguards for future generations.
- Future-Focused Strategy with whole of life and long term flexibility.
- Innovative Models of Care which are adaptable to changing needs and new technologies.
- Capacity to manage peak demand, particularly during winter demand or events such as epidemic or disasters.
- Promote agile working and spaces that support a nimble response to demand and activity.



Cost Effective & Efficient

Optimise use of total health system resources and locational relationships to reduce cost and ensure seamless and reduced-risk patient experiences.

- Health Service delivery efficiencies to connect services and minimise distances.
- Value for Money solutions including programming, existing asset maximisation, minimising service delivery risk and integrating whole of life assessment into new development.
- Design safe & functional relationships for services and patient flows.



Promote Healthy People Spaces

Create collaborative environments for staff and promote health & well-being for all through urban design.

- Foster Strong Organisational Culture – Kotahitanga with strong identity, inter-professional connectivity and interactivity.
- Support Learning & Research through accessible learning environments and collaboration with partners and community.
- Establish an active walkable campus with appropriate scale and straightforward wayfinding.

1.0 Introduction

1.5 Terms of Reference & Methodology

Startup meetings with the Executive Team were held 4 June 2019 and 13 June 2019 at CDHB Corporate Office and via VC to Greymouth. These meetings defined the scope of the exercise and established key objectives for the masterplan. (Refer Appendix A.)

With the confirmation of the Grey Base Hospital Site as the preferred location for a new mental health facility, the site masterplanning process commenced at reviewing the range of options for its placement. As part of the masterplan, principles were presented and agreed at the first stakeholder workshop held 11 July 2019.

The masterplan considered both the proposed mental health facility and the future of other out-of scope buildings in order to develop a series of options which were then refined and selected for presentation to the WCDHB.

These buildings included:

LG = Lower Ground Level, UG = Upper Ground Level

In Scope for Business Case:

New Mental Health Building
Existing Mental Health Building Wing
Existing Hospital

Out of Scope:

New Hospital and IFHC (UG/LG)
Corporate Services Building (UG)
Dementia Building (UG)
Engineering / Trades Building (UG)
New Boiler House (UG)
Incinerator Building (UG)
Mortuary Building (UG)
Laundry (Transport) Building (UG)
Diesel Tank (UG)
Water Tanks (UG)
Administration Building - relocated (UG)
Admin Portacom - relocated (UG)
Whanau Building (UG)
Mammogram Portacom (UG)
People and Capability Portacom (UG)
Fire Sprinkler Valve/Inlet (UG)
Fire Panel (LG)
Transitional Care Cottages (UG)
The Lodge (LG)
New Diesel Generator (LG)
New Diesel Generator (UG)
New Water Tanks (LG)
VIE (LG)
Network Aerials (UG)
Existing MSB (UG)
Service Tunnels (UG - underground)
CAMHS Building (Cowper Street)

The presentation of three options in a second stakeholder workshop held 24 July 2019 allowed the elimination of one option and subsequently determined two primary options for consideration.

Option A (Option 1):

- Place Mental Health along escarpment adjacent to Cottages (UG). (Described in the workshop as placement option 1)

Option B (Option 3)

- Place Mental Health over existing Flat Platform at former Main Entrance / E.D. (Described in the workshop as placement option 3)

Options Refinement

Options A and B were then compared against the masterplan principles developed in the first stakeholder workshop. The principles were used as a basis to assess the options and to highlight areas which had restrictions to their ability to adequately meet the intent of the principles. From this study the team are recommending Option A for consideration with Option B as a contingent option to take forward into the Business Case,

Functional Brief and Schedule of Accommodation

Alongside site placement and infrastructure discussions, model of care principles fed into the development of a functional brief for a new mental Health facility which sought to inform a high level Schedule of Accommodation. The subsequent accommodation volume was applied to the preferred masterplan option in a bulk form to define the spatial and adjacency requirements for a new building on the site.

1.0 Introduction

1.6 Reference Documents

The following national, regional and local plans and strategies have been used to build a firm foundation for strategic direction and alignment throughout the West Coast Health System.

- Mental Health Act
- Climate Change Response (Zero Carbon) Amendment Bill
- NZ Building Code
- Grey District Plan
- West Coast Land and Regional Water Plan
- Australasian Health Facility Guidelines
- NZS 4121 Design for Access and Mobility
- Ministry of Health. 2019. Sustainability and the Health Sector: A guide to getting started.
- The Heritage New Zealand Pouhere Taonga Act 2014
- HSNO – Storage of Flammable Materials
- Zero Seclusion 2020: Health Quality & Safety Commission (the Commission) and Te Pou o te Whakaaro Nui
- Ministry of Health: New Zealand Health Strategy: Roadmap of actions 2016
- He Korowai Oranga: Maori Health Strategy
- WCDHB - Draft Model of Care: Community Health on the West Coast - Achieving a Sustainable Future (Nov 17)
- WCDHB - Proposal for Change Consultation (Nov 18)
- WCDHB - The Time is now for Better West Coast Health - Decision Paper
- WCDHB - Working Draft Model of Care - Mental Health and Addiction Services on the West Coast (24/06/19)
- WCDHB - West Coast Mental Health Future Services Project - Locality and Community Based Services (Mar 2018)

1.7 Limitations and Assumptions

The following limitations and assumptions pertain to this document which will need to be tested and verified in any subsequent development proposal. Copies of these documents are located in the appendices to this report.

Site Information

Site Information is based on documents prepared for the new Grey Base Hospital as well as information provided by WCDHB during this masterplanning process.

New Hospital

While reference is made to the existing hospital which currently remains fully operational during the preparation of this report; masterplanning and Health Planning models refer to the New Hospital and IFHC which is expected to be operational early 2020.

Mental Health

Health planning information for a high level functional brief is based on stakeholder discussions and draft model of care information provided by WCDHB during the masterplanning process.

The Functional Brief and space planning for the New Hospital and IFHC has also informed the development of the Mental Health Functional Brief.

- WCDHB documents are noted in section 1.6.

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2.0 HEALTH SERVICE PLANNING

2.0 Health Service Planning

2.1 Context

2.1.1 Integrated Model of Care

"An integrated West Coast health system that is clinically sustainable, financially viable and wraps care around the patient to help them stay well" (West Coast DHB, 2015)

An integrated, home and community-centric health service model was identified as fundamental to the transformation and reorientation of services across the WCDHB. To support this approach the integration of primary and secondary health services within affordable fit for purpose facilities was recognised as an essential. The redevelopment of the Grey Base Hospital and Integrated Family Health Centre is intended to enable health care providers to work together as one team and ensure the right person delivers the right care, at the right place and at the right time.

The key elements of the model of care for the WCDHB which were aligned with the priority areas as identified in the West Coast DHB Health Facilities Redevelopment Detailed Business Case for the provision sustainable health services, included:

- Healthy Environment and Lifestyle
- Healthcare Home
- Single point of entry for complex care
- Transalpine Health Service
- Māori Health
- Workforce
- Information Systems
- Transport

The current service provision at Grey Base includes both acute, primary and secondary healthcare for the West Coast. This is expected to continue in the future and the planning approach below defines the services, their relationships and resources in more detail.

2.1.2 Transalpine Service Model

Since 2010, West Coast DHB has shared executive and clinical services with the Canterbury DHB. This includes a joint Chief Executive and clinical directors, as well as shared public health and corporate service teams. West Coast patients may be transferred for tertiary care and specialist appointments, some using tele-health technology.

Health Precinct

The new hospital seeks to strengthen the working relationship between DHB and community based services with the IFHC including consult space which can be used by external GPs and specialist consults.

- Promote learning and research activities and knowledge sharing through the establishment of collaborative environments including meeting spaces and simulation suite.
- Collocate a variety of clinical service delivery spaces to meet model of care integration goals.
- Embed staff resources, workspace and social space within the facilities.
- Establish complimentary and synergistic relationships on site between clinical service provision and learning and research.

2.2 Grey Base Service Configuration

The Grey Base Hospital and IFHC development provides for the functional requirements of the following services.

2.2.1 Emergency department, SSU and Medical Imaging

- Upper ground floor of the New hospital accommodates the Emergency Department with a single point triage to be established near the point of entry for ambulance and ambulatory presentations
- Emergency Department to cater for all unplanned Mental Health admissions with site proximity to Mental Health IPU.
- Other resources which are located in close proximity to the ED include the Main Entrance, Pharmacy and IFHC.

2.2.2 Inpatient Services

- The medical / surgical inpatient Unit is located within the first floor of the new Hospital and includes a zone for the provision of critical care (CCU).
- The Maternity suite with assessment unit is located on ground floor.
- The Paediatric Inpatient Unit is located adjacent to Short Stay and Oral Health (Allied Health) with provision for these services to flex into adjacent space as needed.
- Dementia Services are provided by the DHB at the south end of the site in the Kahurangi Building.
- Mental Health Services inpatient unit is proposed within a stand alone building on site - refer 2.2.4.

2.2.3 Surgical Services

- All surgical services, pre and post operative primary recovery facilities are provided at lower ground level with adjacency to CSSD and support space.
- An exterior Surgical bus park is located adjacent to the Perioperative suite at lower ground level.

2.2.4 Other clinical support services

Grey Base hospital will provide for a number of clinical support services including.

- Pharmacy is located adjacent to E.D. and the main entrance of the new Hospital in order to be accessible to both IFHC and hospital patients.
- Pathology is located on the lower ground level with a collection area on ground level.
- The existing mortuary has been maintained on site. Discrete and dignified transfer of the deceased person/tūpāpaku to the mortuary or external facility will provide for separated paths from the movement.

2.2.5 Integrated Family Health Centre (IFHC)

The integrated primary service provides physical health, mental health and social services to a variety of population groups and is delivered by individuals and teams of doctors, nurses, allied health, Kaupapa Māori nurses, Kaiarataki, navigators and many other community and PHO service providers.

- The Planned Zone is accommodated in the low level building at upper ground level.
- The Unplanned Zone is within the Main Building to support its functional relationship with the Emergency Department.
- The Paediatric and Allied Health Zone is within the Main Building.

2.2.6 Step down facilities

- Step down cottages are located at upper ground level along the entrance approach to cater for discharged patients that may require monitoring or assistance.

2.0 Health Service Planning

2.2.7 Non-Clinical Services

Procurement and supply

- The loading dock and adjacent vehicle zone to the south of the new Hospital at lower ground supports articulated and rigid truck access and provides local parking of WCDHB and contractor vehicles.
- The supply model is based on the just in time stock delivery as confirmed by the WCDHB.

Back of house services

- Services access will be located on the lower ground floor of the New Hospital to support efficient distribution and collection across the facility.

Security

- Security services is predominately a mobile service with a base located on the ground floor at reception providing adjacency to the emergency department.

Building and Property

- Storage of trades and maintenance items and facilities for Building & Property to support the operation of the new hospital are located in the existing engineering building at the south of the site.

Medical Records

- There is a commitment to the digitisation of current medical records and the development of an integrated electronic health record.
- The transition of Mental Health records to an electronic model will be explored during the next phases of design.
- There may be a requirement for a limited number of secondary records to be held on site and these are proposed for the Laundry/Transport Building.

Food services

- The masterplan response locates kitchen food services for the campus at the lower ground level of the hospital.
- The circulation strategy with service lift attempts to minimise the movement of food throughout the facility along public areas however, the integrated nature of spaces means that some crossover will occur.
- External transfer of meals and other supplies to the proposed Mental Health Unit and the existing inpatient unit in the Kahurangi Building will be required.

Environmental Services

- The WCDHB has confirmed that the existing incinerator will continue to be used until 2035.

2.2.8 Public Amenities

The site masterplan provides for the functional requirements of public amenities described below.

Whanau spaces

- WCDHB actively encourages and supports whānau participation and partnership in all levels of service delivery, recognising the involvement of whānau in the delivery of healthcare is essential in fostering the Treaty of Waitangi principles of partnership, protection, and participation.
- Whānau space is provided in the ground floor front of house zone of the new hospital and proposed to be included in a mental health inpatient unit. These spaces will also be available as multi faith quiet zones.

Cafe

- Public cafe facilities are located in the new hospital at upper ground floor level.

2.2.9 Staff Resources

The site masterplan provides for the functional requirements of staff resources as described below.

Workspace

- The Grey Base Hospital Site will provide a range of contemporary workspace amenities that support staff to efficiently and effectively undertake the functions of their roles.
- The existing Corporate Services Building will continue to provide office space for management functions.
- IFHC has workspace allocations with some flexible space allowance for growth.
- The proposed Mental Health Inpatient Unit will incorporate workspace for inpatient, acute and crisis teams.

General amenities

- Staff amenities are distributed across each department of the facility.
- The main learning and development space located at ground floor level is adjacent to the cafe.
- End of trip facilities for staff including the provision of secure bike storage will be located at upper ground level adjacent to the car park.
- Vertical and horizontal pathways support the efficient movement of staff through the facility.
- Shared public/staff amenity such as the cafe, internal courtyard and balconies are able to be utilised.

2.3 Future service requirements

2.3.1 Potential Future Services

Working towards a sustainable future demands the consideration of a range of building aspects and their immediate and long-term effects to ensure flexibility, adaptability and longevity. The planning response provides flexibility to respond to anticipated growth in the medical imaging, and services for an ageing population.

External expansion zones have been considered for continued growth in demand beyond the current planning horizon.

Medical Imaging

- A future-proofing strategy has designed the ambulance bay structure to be able to cater for a future MRI as needed. Space has been allowed south of this bay for a new ambulance bay to be constructed.

Hospital Growth

- An area north of the new hospital has been allowed for any future extension of the inpatient or perioperative zones.

IFHC Growth

- An area north of the IFHC has been allowed for any future extension of IFHC activity.

Workspace

- On site corporate services and existing space at Cowper Street is part of a DHB consolidation exercise.

2.3.2 Out of Scope Services

The masterplan response seeks to provide sufficient flexibility for future inclusion of WCDHB services not currently within the planning of any future business case. The available land on site allows for development to the south end of site. Change in hospital services requiring additional space has been discussed in 2.2.8.

The site masterplan demonstrates capacity for future buildings which may support other DHB services and/or third party providers which are not in scope. This may include the following:

- Permanent workspace on campus
- Facilities for other out of scope DHB services or third party providers.
- Accommodation to provide for out of town whānau and patients attending multiple day treatments such as radiotherapy.

2.0 Health Service Planning

2.4 Mental Health

2.4.1 Overarching planning outcomes

Mental Health and Addiction services should be:

- recovery- orientated
- provided in a therapeutically enriching environment
- integrated and coordinated across the continuum
- provided in a setting that respects and can accommodate a diverse range of cultural and consumers’ population care needs

2.4.2 Model of Care

Overview

The WCDHB Mental Health and Additions Service has the challenge of providing sustainable mental health care across a sparsely populated area spanning a narrow strip of rugged coast line from Karamea in the North to Haast in the South. In order to better meet the needs of the West Coast, the health service is developing models of care for an integrated, sustainable, person-centred mental health and addiction service that is supported by cross sectorial initiatives and a number of enablers including improved facilities, communications and transport infrastructure.

The future model of care is informed by the WCDHB Mental Health and Addictions Service Review (2014). It is based on a stepped care model wherein the WCDHB service “works in partnership with primary and community/NGO organisations to deliver most services in the community, close to where people live. The WCDHB mental health and addictions workforce is envisaged as working at the top of its scope to provide responsive care to people with acute needs and ongoing support to primary and community services so crises are avoided and the system becomes proactive rather than reactive.”

The WCDHB Mental Health and Addictions service will provide specialist clinical services within the proposed inpatient unit and MHAS and CAMHS clinics from the Grey Base Hospital and IFHC. It is acknowledged that some clients may require more intensive therapies and care from other partners and agencies including the CDHB. The focus will be on reconnecting people with their community with sufficient supports from primary and community services to prevent readmission.

Admission

Direct admissions to the unit will be facilitated by community based care providers and MHAS teams including Crisis Care. Admissions may also be coordinated from within the Grey Base Emergency Department and / or IFHC.

Ambulatory | Day programs

The MHAS will provide a number adult, adolescent and paediatric ambulatory services from the Grey Base IFHC.

Low Stimulus environment

The inpatient unit accommodation will provide low stimulus rooms and sensory modulation rooms to provide a therapeutic environment to support care and management of service users. This approach is consistent with Zero Seclusion 2020.

Non clinical support

All support for the stand-alone inpatient unit including food services, supply and environmental services will be provided from services based within the Grey Base Hospital. Separate point of access into the Mental Health unit will be provided as a service entry.

Mental Health Tribunal

Provision for Mental Health Tribunal hearings within the Mental Health unit is required. The intent is to utilise a meeting room on the perimeter of the unit which is multipurpose in nature. It will require two points of egress.

Safety and security

The facility will be compliant with all guideline recommendations for mental health service including anti-ligature. The perimeter of the building will be responsive to CPED principles.

Whanau and visitor

Provision for inclusion of family / whanau / carers and visitors is important to promote a recovery based model. The facility will provide a variety of internal and external spaces for care, support and social interactions.

Workspace

Contemporary workspace environment will be provided for the MHAS teams including

- Administrative
- Nursing
- Allied Health
- Medical
- Operational team
- Grey Community Mental Health
- Crisis Team
- Alcohol & Other Drugs
- CAMHS
- Students

2.4.3 Existing Facility

The existing facilities fail to provide a fit for purpose environment for clients. The current configuration co-locates inpatient and outpatient activity with the broader Mental Health team workspace located alongside.

2.4.4 Proposed Facility

Planning Assumptions

It is assumed that with increasing capacity across primary and community services in the region, that the demand for inpatient beds will reduce over time. On this premise the proposed facility is based on 8 inpatient beds plus an admissions zone which includes low stimulus spaces.

Mental Health and Additions Service teams including Crisis Response will be provisioned with workspace in this building.

Ambulatory and outpatient activities will be supported within the Grey Base IFHC clinic or in the community setting.

Planning approaches

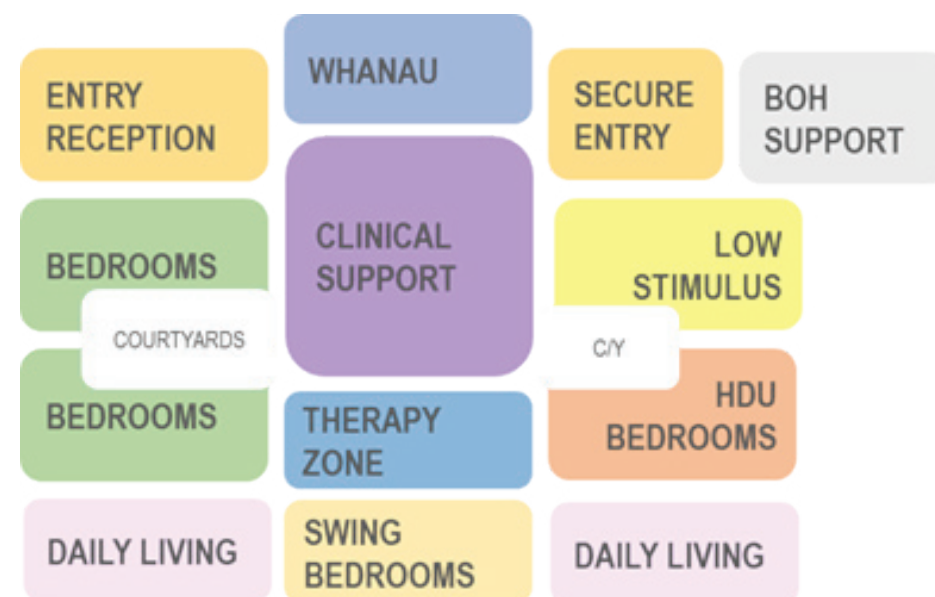
- The unit will provide a welcoming environment.
- The layout needs to be sufficiently flexible to allow for changing levels of acuity, age mix, genders and models of care over time.
- The ability to create pods / clusters for distinct service user groups (e.g. based on gender, age, diagnosis or acuity) is desirable.
- Access to natural light and pleasant outlook is essential for all areas to enhance a homelike, friendly and culturally appropriate environment.
- A variety of daily living spaces will provide the opportunity for socialisation or individual personal space/quiet time. Lounge/dining areas may be open plan but require a degree of separation.
- Activity spaces need to accommodate a range of treatment options from passive to active eg. Music therapy, interactive diversional group activities and activity spaces should generally open to outdoors.
- There will be a separate service support access for the delivery of meals, stores and the removal waste.
- Contemporary workspace environment will be provided for the MHAS teams.

Functional Zones

- Front of House
- Client Accommodation
- Daily living zone
- Therapy zone
- High Needs Accommodation
- Clinical Support
- Non Clinical Support
- Staff Resources
- MH Tribunal
- Workspace

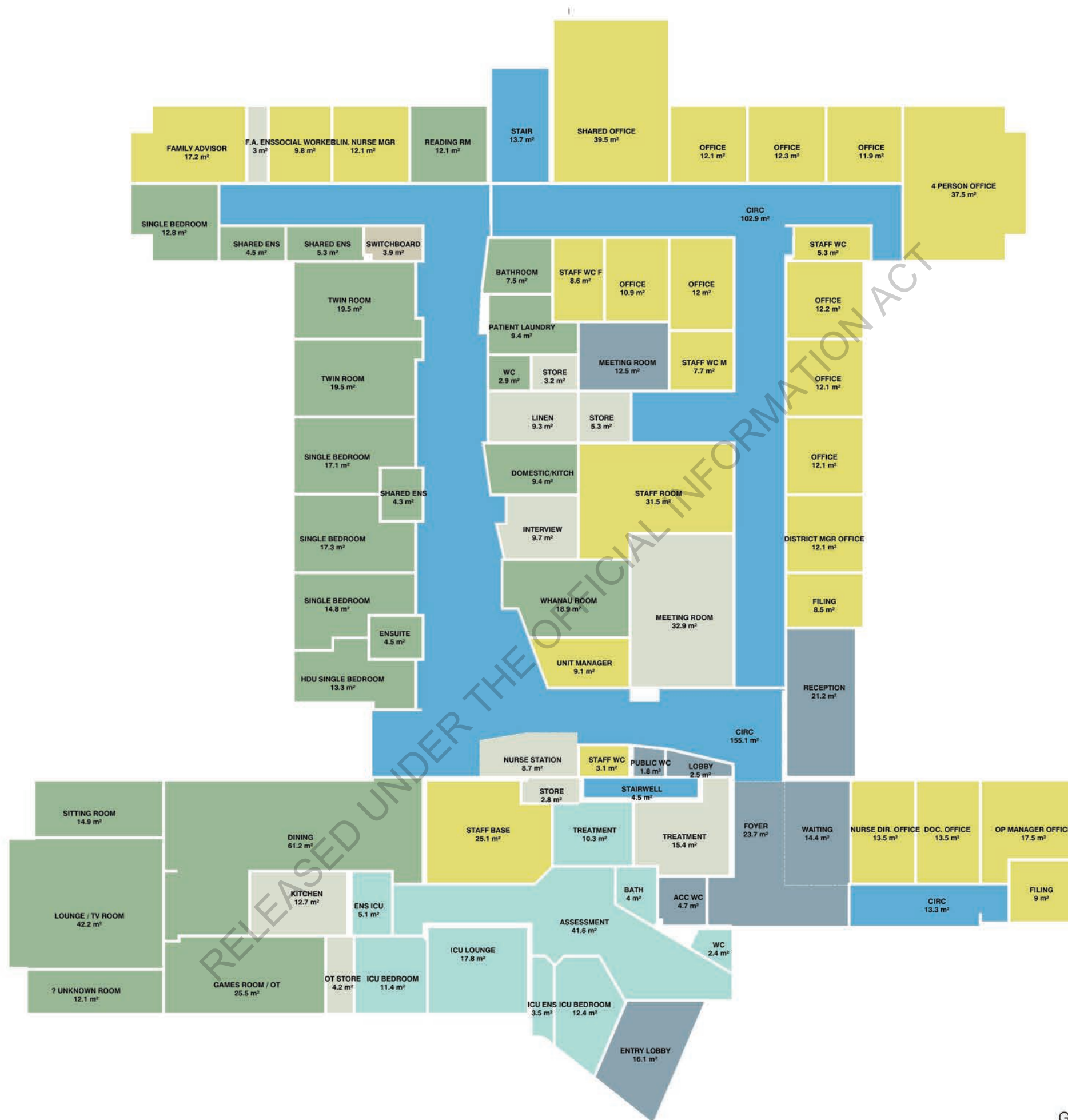
2.0 Health Service Planning

Functional Relationships



Schedule of Accommodation

Grey Base Hospital Mental Health Inpatient Unit		Date 19-07-19 Version 1.0	
Functional Zone	Units	GDA	Comments
Front of House		120	
Entry / Reception / Waiting		93	
Whanau		28	
Client Accommodation	6	194	
Accomm. Gen. A		129	
Accomm. Special		65	
Daily living zone		85	
Dining & lounge		85	
Therapy zone		74	
Therapy zone		74	
High Needs Accommodation	2	133	
Assessment zone		34	
Secure zone		42	
Accomm. Special B		57	
High Needs - Daily living zone		84	
Activity zone		84	
Clinical Support		123	
Clinical support		67	
Staff Support		57	
Non Clinical Support		6	
Non Clinical		6	
Staff Resources		41	
Staff Amenities		41	
Other MHAS requirements		281	
MH Tribunal		66	
Workspace - Crisis		215	
NDA Net Departmental Area		1143	
Travel			
Engineering		143	
GDA Gross Departmental Area		1286	



RELEASED UNDER THE OFFICIAL INFORMATION ACT



3.0 SITE ANALYSIS

3.0 SITE ANALYSIS

3.1 Location

3.1.1 Legal Location

Legal Address: 71 – 111 Waterwalk Road
Street Address: 146 High Street
Land Area: 5.3868 Ha
Land Ownership: West Coast District Health Board

Legal Description:
LOT 2 DP1362, RES 28, RES 1014, SECT 460-461 TN OF GREYMOUTH, RES 2089, RES 2001, RES 2007, PT RS 1707, LOT 1 DP 1362, SECT 499 TN OF GREYMOUTH, PT SECT 494 TN OF GREYMOUTH, SECT 337, SECT 339, SECT 341TN OF GREYMOUTH, LOT 5 DP 727, LOT 1 DP 727, LOT 2-4 DP 727, LOT 7 DP 727

The site is made up of several land parcels. Eight highlighted are on the immediate site and others are placed north above road reserve and west adjacent to the railway line.

Land records of parcels under WCDHB ownership have been identified and their legal restriction outlined in Appendix H. One relating to the height of building on the site to maintain aerodrome flight paths has been highlighted and confirmed by Urban Perspectives to affect developments over 45.7m only.

Parcels pertaining to the over-bridge and road reserve PT RES 24 have not had their ownership confirmed and will need further investigation to determine any restrictions.

3.1.2 Site Location

The existing Hospital site is located in the town of Greymouth within the jurisdiction of Grey District Council and the West Coast Regional Council. Greymouth is a coastal town with an estimated population of about 9700 (June 2018) It is a settlement at the foothills of the Southern Alps on the west coast of the south island in New Zealand.

The hospital site constitutes a linear strip of land positioned 1.8km south of the town centre. It is less than 400m inland from the coast MHWS (Mean High Water Spring) line to the west and 2km from the Grey river mouth to the north. Smaller streams and tributaries near the site from the hills behind feed into the storm water network which bypass the site to the north and south. Some waterways have gathered into the ponds and wetlands directly to the west and north.

The site is bounded by the main railway line which runs along its eastern side and the secondary vehicular route Waterwalk road to the west. State Highway 6 is the primary vehicular route from the hospital to the town centre and connects the town to other areas along the west coast. This single carriageway is located adjacent to the railway line on the east side. The railway line is used as a freight link to Hokitika and connects to the main Christchurch line in the town centre.

Surrounding properties have varied zoning and occupancy. The hospital site is located directly opposite the local aerodrome with level access to the runway from lower ground level. To the south and east lie single residential dwellings. To the north and north-east, warehouse style commercial enterprises find place.

3.2 Climatic Features

3.2.1 Temperature and Rainfall

The site has a temperate climate ranging between an average of 8degC in winter to 16degC in summer. It rarely experiences frost conditions. Rainfall is consistent throughout the year with an average 244mm per month. The council has a design value of 270mm per month.

3.2.2 Wind

Greymouth experiences consistent low wind speeds ranging between 1 and 3 knots with prevailing winds from the eastern mountain ranges in winter switching to a westerly sea breeze in summer.

Climatic Zoning Constraints

Wind Zone (NZS3604)	High
Durability (NZS3604)	High
Climate Zone (NZS4218)	Zone 3

3.3 Surface and Subsurface Conditions

3.3.1 Geotechnical

Geotechnical investigations at the Hospital site were carried out by Tonkin and Taylor and Opus in 2010, 2012 and 2015 respectively.

The site consists of two approximately flat terraces (upper and lower terraces) with an elevation difference of 5m to 5.7m. An estuary is adjoining the west side of the lower terrace. The estuary bed is 4m to 5m below the ground surface level of the lower terrace.

The site geology can be described as post glacial alluvium including river gravel, and swamp deposits. Assessments conclude that a sand layer located between 8.2 m and 9.2 m depth below the ground surface level of the upper terrace has a potential for liquefaction. Stillwater Mudstone bedrock was encountered at various depths in the deeper boreholes. Fill material was encountered on the upper terrace and at a number of locations on the lower terrace. Additional Fill has been added around the New Hospital to bring the ground level up to meet the lower ground entrance.

The Hospital Building is predominantly situated on the lower terrace, at approximately 40m distance from the estuary. The IFHC building is located on the upper terrace. Groundwater table at the upper terrace is approximately 6m below the ground surface level. Groundwater table at the lower terrace is approximately 2m below the ground surface level.

3.3.2 Topography

Opus has undertaken a full topographical survey of the Grey Base Hospital site. An updated survey was also carried out in February/March 2015 to inform the new hospital project. Following the construction of the new building, site levels around the new hospital building will be completed to meet civil engineering documentation. Any further work in this area would be subject to an updated land survey.

3.3.3 Site Levels and flooding

Grey Base Hospital is located in a low lying area of land behind a flood defence scheme that once would have likely formed part of the Grey River flood plain.

Two major flood risks were identified for the hospital following hydrological and hydraulic modelling by Opus. One is a breach of the Grey River stop bank; the second is if flooding in the Grey River causes the Sawyers Creek catchment to flood and overtop the flood defences separating Sawyers Creek from the hospital. The latter could also result from a blockage in the downstream culvert that drains the area during a significant rainfall event.

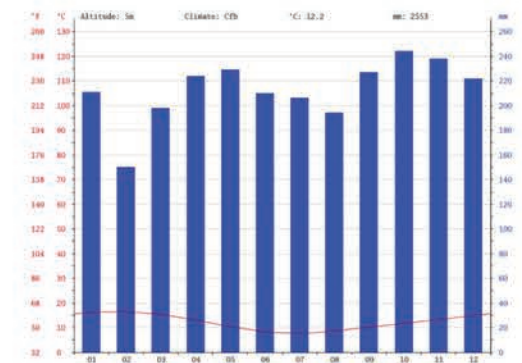
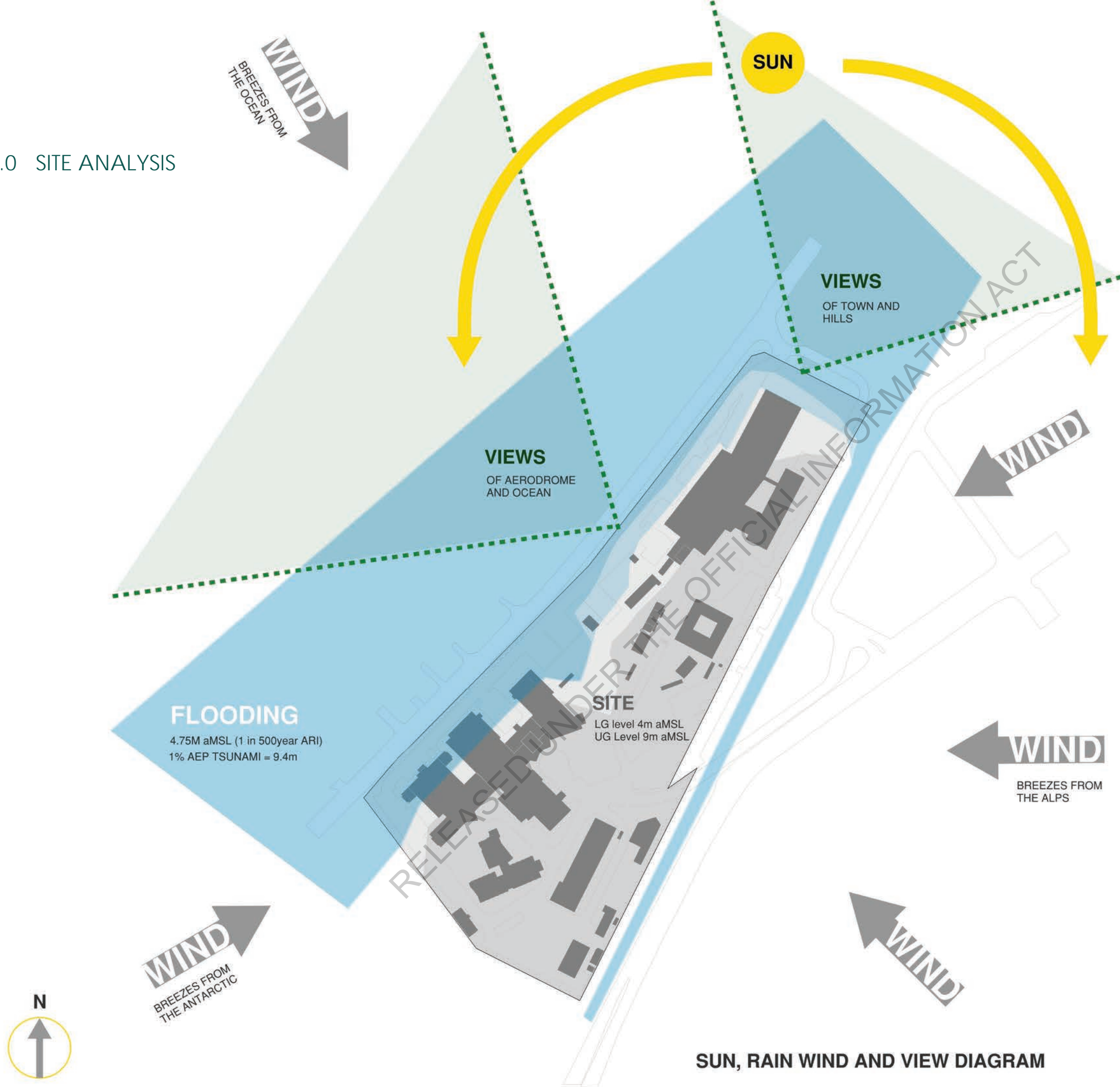
Modelling was undertaken for three storm events, including the effects of climate change – 1 in 50 year, 1 in 200 year and 1 in 500 year. Three floor levels were recommended for the new hospital based on these results:

- 5.0m aMSL: protects from a 1 in 50 year storm, allowing for a prolonged elevated boundary condition or blockage, and some smaller breach events, meets building code requirements (500mm freeboard)
- 5.4m aMSL: protects from a 1 in 200 year storm (500mm freeboard)
- 5.6m aMSL: protects from a 1 in 500 year storm (500mm freeboard) and all modelled breach events (300mm freeboard)

A floor level of 5.40m MSL was confirmed as the final floor level as a result of the Flood Report which determined that this was sufficient to protect from a 1 in 200 year storm and smaller breach events.

- Hospital / IFHC Foundations

3.0 SITE ANALYSIS



RAINFALL

<https://en.climate-data.org/oceania/new-zealand/west-coast/greymouth-19392/#climate-graph>



WIND DIRECTION

<https://www.windfinder.com/windstatistics/greymouth>

3.0 SITE ANALYSIS



TOPOGRAPHY/CONTOUR DIAGRAM
Levels based on Opus Land Survey March 2015

3.0 SITE ANALYSIS

Given the site's potential for liquefaction and lateral spreading, deep pile foundations were recommended for the new Hospital. The slab at lower ground level is designed as a restrained slab, without relying upon the loose soil underneath.

- Shed and Energy Centre Foundations

The foundation design to the Shed (IL2 - not constructed) and Energy Centre (IL3), and Generator pad (IL4) are all lightweight single storey buildings and have raft foundations on specifically designed geotechnical ground improvements.

- Minor/Future Structure Foundations

Other structures designed in the new hospital project all have shallow foundations on specifically designed geotechnical ground improvements. Ground improvements would also need consideration for any future construction on the site.

Refer to attached Geotechnical Assessment Report Issue 1.

3.3.4 Soil Contamination

Opus completed a desktop Preliminary Site Investigation (PSI) in February 2015 at the northern end of the hospital grounds to assess the probability of contaminated soils being present in relation to earthworks for construction of the hospital. Historical evidence and current day activities on the site indicates that the site has been subject to activities which are present on the Hazardous Activities Industries List (HAIL). Following the recommendations of the PSI, a Detailed Site Investigation (DSI) including soil sampling was undertaken in June 2015.

Asbestos was identified under the theatre block (S1 and S2), so Opus recommends that further sampling be undertaken to determine its extent prior to demolition.

Three of the twenty-four soil samples returned results with one or more heavy metals concentrations that were above the Class A Landfill Criteria (copper and lead). Heavy metal concentrations were also above background levels so an NES consent is required. None of the analytical results exceeded the NES soil contaminant standard for protection of human health.

An NES consent has been granted by GDC. In areas of the site identified as exceeding Class A Landfill Criteria and where there is existing fill material, any cut material shall be retained on site or removed to a landfill consented to accept such soil.

Refer to Appendix I for detail.

3.4 Environment

3.4.1 Views

The site location, away from the town centre, and the raised escarpment both assist in offering extensive views from the site to the surrounding environment. Key views include:

- Greymouth coastline to the west
- Grey River mouth to the north
- Hills to the east

3.4.2 Vegetation – Building Environs

The existing hospital and ancillary buildings are located in the centre and south of the site and have limited planting in their direct vicinity with the exception of a few areas.

- A landscaped courtyard at the south end between the Mental Health block and Lab block featuring medium sized trees and lawn.
- Lawn buffer continuous along the western edge of the site adjacent to the main hospital and car parking.
- A part landscaped courtyard between Hannan and Maurice Wards featuring low planting and small trees.
- The corporate services building has a part landscaped courtyard with small trees and low perimeter scrub around the exterior envelope.
- Large protected pohutokawa adjacent to the Corporate Services building.
- A bush buffer between the car park and HR portacom.
- Low trees in the fenced Dementia courtyards.
- Lawn surrounding corporate services and Rural Learning Centre.

3.4.3 Vegetation – Overall Site

In areas where hard surfacing has not been placed for car parking; lawn and largely native planting have established.

There is a landscape buffer of established trees and bushes separating the east boundary of the site with the railway line. This landscaping reduces at the south end by the services buildings but still provides a line of trees to screen from the tracks adjacent.

At the south boundary there is a landscape buffer of lawn and medium scale trees along most of the edge. This is punctuated by a couple of larger trees and areas of building and car parking which break the buffer in the centre.

There is a large expanse of lawn at the north end of the escarpment which leads



View of lagoon and ocean from New Hospital looking west

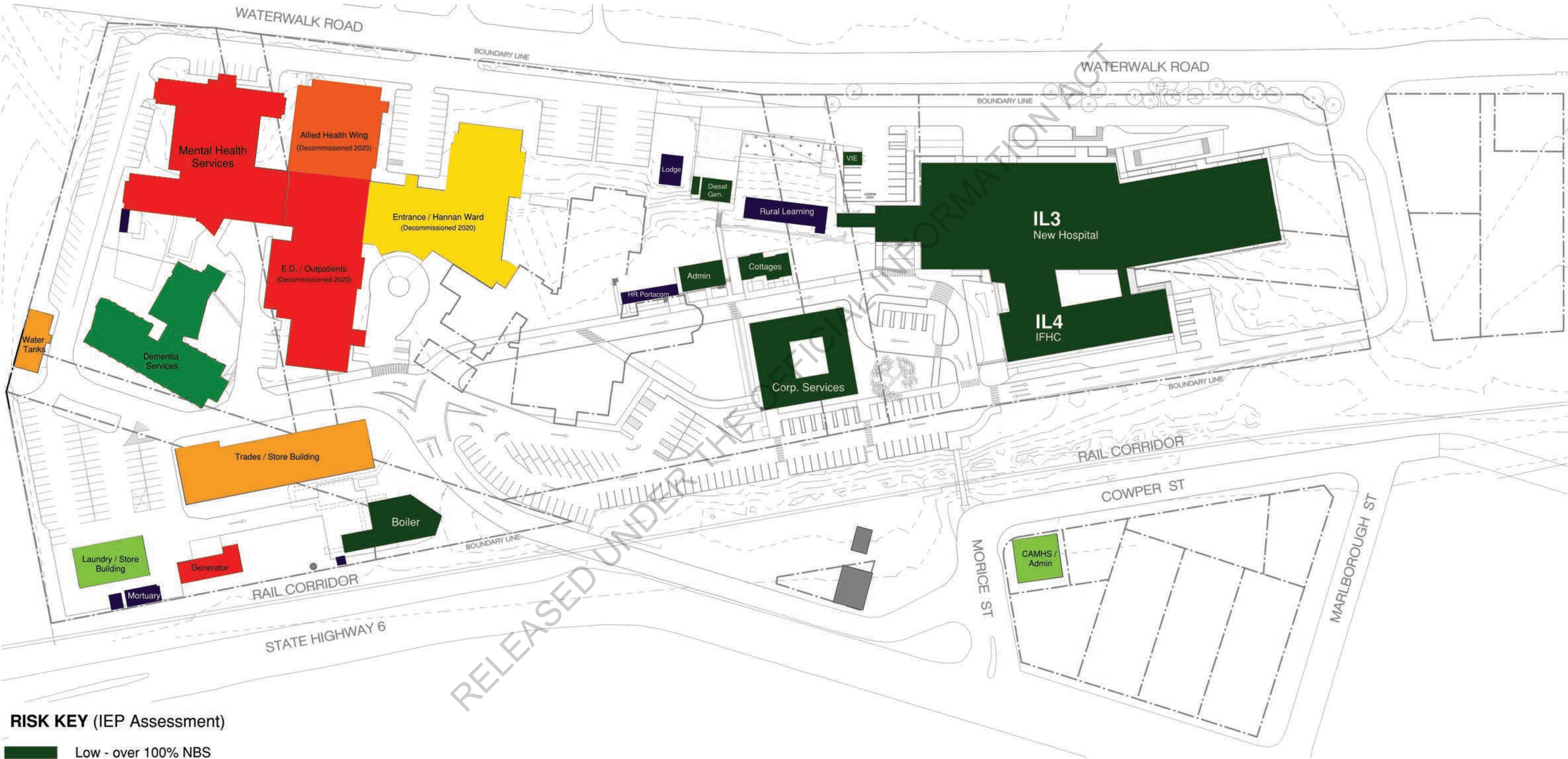


View of hills from IFHC looking north



Protected pohhutokawa by Corporate Services

3.0 SITE ANALYSIS



RISK KEY (IEP Assessment)

- Low - over 100% NBS
- Low - 100% NBS
- Low - 80-100% NBS
- Moderate - 67-80% NBS
- High - 33-37% NBS
- High - 20-33% NBS
- High - below 20% NBS
- UNKNOWN - no assessment

SEISMIC ASSESSMENT RISK

Based on Hopkinson Kelsall Team Architects Feb 2014 Seismic Risk Diagram

3.0 SITE ANALYSIS

down to a small planting of short pohutokawa trees and low scrub. The north western end of the escarpment is shielded by a thin band of trees and bush which sit on the slope and meander down to the lower level at the north.

Along the western edge of the site planting is restricted to a thin line of low flax, cabbage trees and agapanthus which run north of the Rural learning centre and adjacent to the road edge.

3.4.4 Frontage

The hospital site is aligned with SH6 at the south end. The railway line and vegetated buffer screen much of the visible frontage. The ancillary buildings at the south end of the site are primarily visible on approach from the south.

Along the west side, the site is aligned with Waterwalk road and offers visible frontage along its entire length and of the north end of the site. As this is a less frequented road, the frontage is not as prominent as it might otherwise be. The new hospital has building frontages to both the main entrance and lower ground level along Waterwalk Road.

3.4.5 Land Utilisation

The current site is used as a healthcare facility. It comprises buildings for patient care, healthcare learning and office facilities. Ancillary buildings in support of these activities include on site electricity generation via a coal boiler and emergency diesel generator, mortuary, workshop, water storage and linen facilities. There are also a series of temporary re-locatable buildings. Buildings cover approximately 30% of the site. The remainder has been covered in gravel or sealed asphalt for car parking or features landscaping as described in the existing vegetation section above

3.4.6 Seismic

The Grey District is situated adjacent to the Alpine Fault. The most active part of the Fault is the central section, which forms the western boundary of the Southern Alps from Haast to the Taramakau River at Inchbonnie. Further north the fault becomes progressively less active as movement is transferred to numerous branch faults within Marlborough. The next Alpine Fault earthquake is likely to produce very strong shaking in locations close to the Southern Alps including Greymouth.

The additional geotechnical conditions of the site subject it to significant shaking and lateral spread (Refer Geotechnical Report in Appendix) and any construction will need to be designed to accommodate this to an agreed Building Importance Level.

New Buildings have been designed to the following Importance Levels:

New Hospital	IL3
IFHC	IL4
Energy Centre	IL3
Stores (not constructed)	IL2
Transitional Cottages and Relocatables	IL2

Detailed Seismic Assessments were undertaken for the existing Buildings by Opus in 2012/13 and updated verification in 2016 following the Kaikoura earthquake. Seismic assessments have highlighted several at risk buildings which have restricted Building Warrant of Fitness and requirement for upgrade or decommissioning.

3.4.7 Post Disaster Facilities

The IFHC, located at upper ground level, has been designed to meet IL4 requirements in order to offer the post disaster zone within the Hospital campus.

3.5 Site Heritage

Greymouth (known as Māwheranui) and the West Coast has shown evidence of early Maori occupation as a popular pounamu gathering area. The earliest tribal groups to settle in the area are thought to be Waitaha followed by Ngati Wairangi in the 16th or 17th centuries. By the time of first European contact in the early 19th century Ngati Waewae claimed ownership of much of the West Coast.

The first hospital in Greymouth, the Grey River Hospital, was located near the centre of Greymouth on the corner of Tainui and Hospital Streets in 1866. The new (current) site for the hospital was chosen in October 1874.

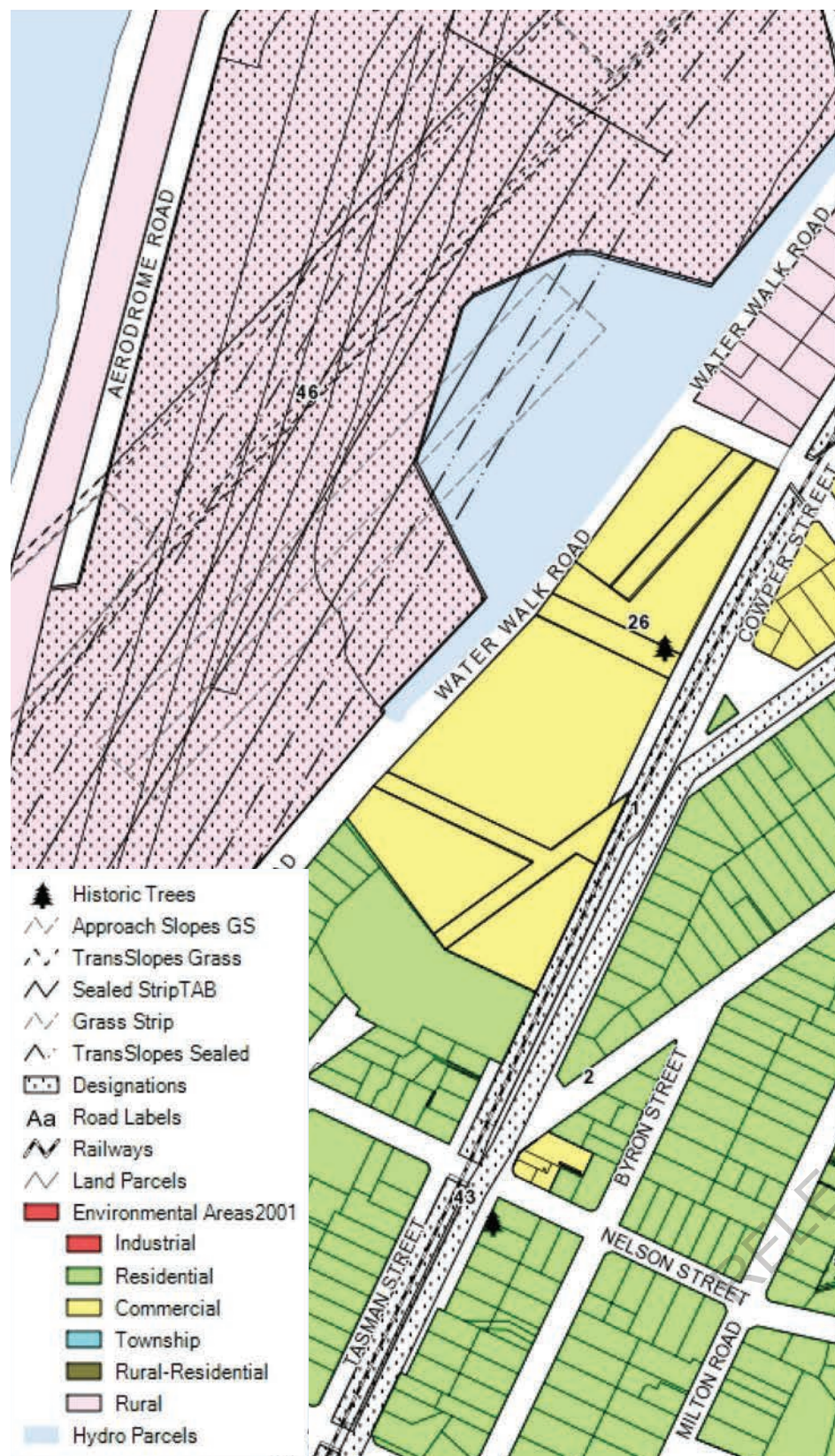
There are four recorded archaeological sites associated with the Māori occupation within 2.3 km or less from the hospital site however the Grey Hospital Site has not had any record of heritage items.

The Opus report provides further detail regarding previous settlement and suggestion that there is likelihood of some archaeological remains being present on site. None have been discovered as part of the New Hospital development to date.

Following discussions with Iwi during the new build phase, a path following the line of the escarpment has been identified as a traditional Maori pathway which the new building courtyard and IFHC direction makes reference to.



SO 3554 (1882?) showing location of hospital (Red outline) on east side of Karoro Lake



Grey District Plan Land Parcels 1:5000

3.0 SITE ANALYSIS

3.6 Planning

3.6.1 Regional and Territorial Authority

Greymouth and the Grey Base Hospital is within the region of the West Coast Regional Council (WCRC) and the Grey District Council (GDC). The WCRC Annual Plan, Economic Development Plan, Regional Policy Statements, and Resource Management Plans can be found on their website www.wcrc.govt.nz. The GDC District Plan, which describes planning objectives, policies and rules, can be found at www.greydc.govt.nz.

3.6.2 Existing Use

The site is used for the existing Grey base Hospital and ancillary buildings which constitute an existing healthcare use.

3.6.3 Zoning

The Greymouth Hospital site is within the Grey District Commercial Zone. It is flanked by residential zoning to the southern boundary, part residential/part commercial on the eastern boundary and rural to the north and west. This places it under the restrictions of Section 20 in the Grey District Plan.

3.6.4 Rules

The following rules have been highlighted as applicable to this project.

- Building height restriction
- Building setback to residential zone boundaries
- Recession planes to residential boundaries
- Aerodrome flight path protection recession planes
- Light spill and glare maximum
- Screening of outdoor storage areas
- 2m landscaping buffer to adjoining residential boundaries
- Signs – type and placement
- Hazardous Substances – use and storage
- Parking, loading & access requirements
- Heritage Items – Protection of Item 26, listed pohutokawa tree
- Noise restrictions at each boundary
- Utilities

The status of several land parcels needs to be determined. Any unformed road parcels would likely be tagged under Section 75 of the Building Act and any building over two allotments would require resource consent.

3.6.5 Designation

A designation is a provision made in the Plan to give effect to a requirement made by a 'requiring authority'. Under the Act, MoH has this jurisdiction and therefore may consider applying for designation for the site. Designations limit the use of the land to the specified description, overriding the provisions of the Plan and any resource consent, in favour of the designated purpose. If approved, the 'requiring authority' must submit an outline plan of the work to Council prior to any construction commencing rather than apply for resource consent.

3.6.6 Key Considerations

Key considerations for the site masterplan and future design stages should include:

- Impact of height on neighbouring sites including urban scale and shade
- Impact of form on micro wind environment
- Impact of noise (particularly emergency vehicles and helicopter)
- Avoidance of long uninterrupted façades, or mitigation of the effects of long façades
- Impact of car-parking on site
- Impact of any decommissioned buildings on site.
- Impact of campus density
- Impact of local aerodrome on noise to the facility

3.0 SITE ANALYSIS

3.7 Authority Requirements

Design and construction of the new facility will be subject to compliance with the following Acts:

- Health & Safety in Employment Act (1992)
- Building Act (2004)
- Health & Disability Services (Safety) Act (2001)
- Construction Contracts Act (2002)
- Resource Management Act (1991)

Examples of potential development requirements are noted below:

- Demolition of existing buildings and construction of new facilities will require Resource Consent and Building Consent.
- Archaeological authority may be required for ground-works across previously undeveloped areas of the site.
- Changes to water supply, storm-water and sewer, incoming electrical supply, and incoming communications cabling will require authority permissions.
- New vehicle crossings and access points will require authority approvals.
- Any changes to bridge links will require permissions from WCRC and NZTA
- Changes to parking, pedestrian crossings, and other features of the street-scape will require coordination, approval and funding agreements across GDC and NZTA.
- New subterranean tunnels, links, and in-ground infrastructure across or down state highways or local roads will require coordination and authority from GDC and NZTA.

3.8 Current Site Plan

3.8.1 Parameters

The current site plan demonstrates a response to the known site constraints and the requirements of the new hospital facility via parameters listed below:

- Building locations to meet Model of Care and Medical Planning
- Decommissioning certain existing buildings to meet seismic and model of care requirements as well as reduce operating costs.
- Existing infrastructure which need to serve new and existing buildings.
- Business continuity throughout build process
- Site constraints including escarpment, flood levels, requirements for sun, views and natural ventilation.
- Creating good proximity to car parking and entrances and connectivity between buildings.
- Construction Programming to manage public and construction access, decommissioning and demolition and transitions.
- Cost constraints which resulted in some preferred changes not being able to be integrated at this stage.

3.8.2 Layout and Access

The existing three storey hospital straddles the escarpment at the south end of the site. Carparking at upper ground and lower ground surrounds the hospital on the west, east and south faces and provides access to different departments of the facility and the Dementia services building (Kahurangi) which is adjacent at upper ground level. Most parts of this building will be decommissioned with only Mental Health services continuing to occupy the south portion of the hospital until any new development is completed and Kahurangi to remain operational.

The main access from a bridge from SH6 on the east side reaches the site and leads northward to the main entrance of the new three storey hospital and single storey IFHC which is located at the north end of the site at upper ground level.

The new hospital also sits on the escarpment at the north and has access from the west at lower ground level to Waterwalk road in order to provide a secondary entrance and to meet the many service access needs of the hospital.

Space has been allocated to the north of the IFHC and Hospital and south for the ambulance for possible expansion of the facility in the future.

Directly to the south of the hospital, a service zone at lower ground level provides, water and medical gas storage, VIE, MSB and generator to service the needs of the hospital and IFHC. Also in this lower ground zone, existing single storey timber buildings are located with connection to the lower ground entrance of the hospital and pedestrian stair up to the upper ground level.

Remaining services and facilities maintenance buildings including new coal boiler, incinerator, diesel generator, store, mortuary, trades and water tanks for the site are located in a series of buildings to the south east of the site at upper ground level. The coal boiler serves the entire site while other services are connected only to the existing hospital and Kahurangi Building.

At upper ground level, directly south of the IFHC, a single storey building for Corporate Services is to remain and several relocatable buildings to its south end. The site plan makes use of existing car parking layouts and pedestrian link to the existing hospital in order to minimise cost of relocation and maintain connectivity.

A new approach road runs to the west side of the Corporate services Building to a new drop off and short stay car park area and connects back to the main car park and to a new minor driveway down to Waterwalk road. Along the escarpment and the approach road to the south of the ambulance bay, a series of relocatable single storey buildings are placed in order to have direct connectivity to the new hospital.

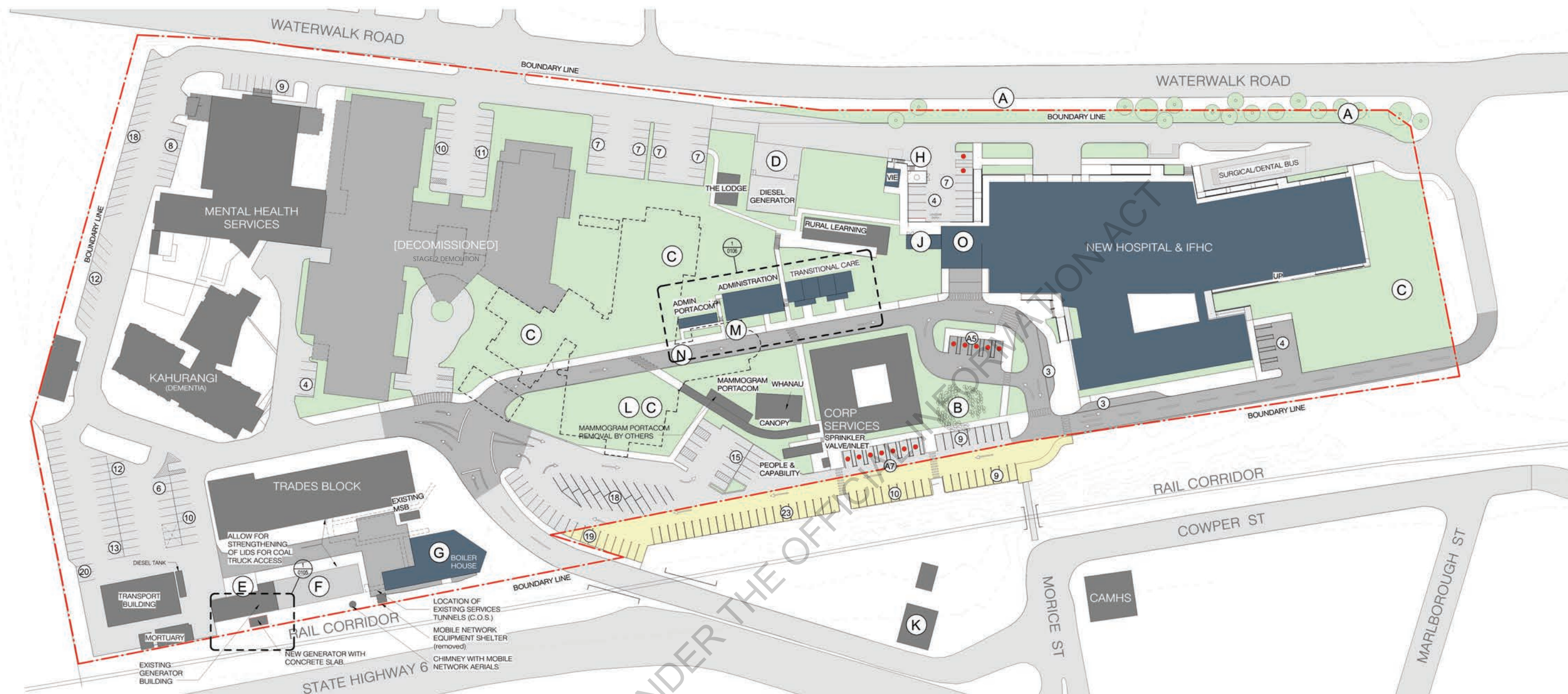
Pedestrian access to the site is largely via the existing bridge to the east of the IFHC that runs over the railway line to the street and connects directly to the main entrance of the hospital. At lower ground level, a public footpath by Grey DC was proposed in 2015, however this has not been constructed. Safe pedestrian access via stair from Waterwalk Road has been provided to cater for access from the street.

Refer to current site plan overleaf.

3.8.3 Canopies

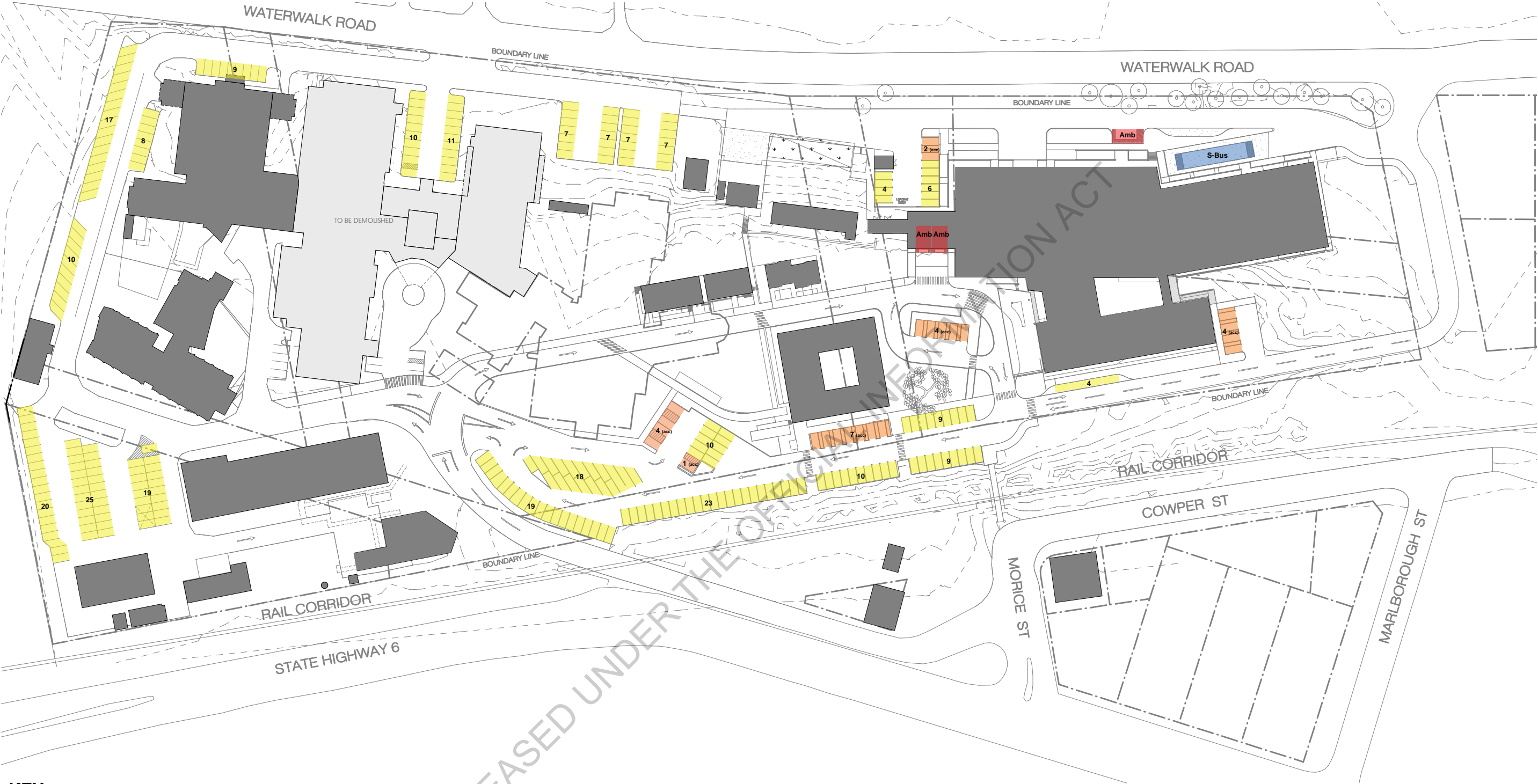
The wet climate in Greymouth has driven the request for pedestrian canopies where possible. Cost constraints limited the provision of new canopies and caused retention of existing canopies where possible.

- Canopy from corporate services southward between relocatable buildings.
- Main entrance and Ambulance Bay Canopy
- Drop off Main entrance canopy (current concept approval pending)
- LG canopy to Surgical Bus park (current concept approval pending)
- LG entrance canopy
- LG Loading Dock canopy



KEY	
GENERAL ITEMS	
A	LANDSCAPE BUFFER AS PER DISTRICT PLAN REQUIREMENTS. REFER TO PLANTING SCHEDULE
B	HERITAGE TREE
C	GRASS - RESEED IN ANY DAMAGED AREAS AND POST DEMOLITION ZONES
D	NEW GENERATOR (LOWER GROUND LEVEL)
E	NEW GENERATOR TO USE EXISTING GENERATOR ENCLOSURE
F	RETAIN CONCRETE SLAB FROM BUILDING
G	NEW BOILER HOUSE
H	NEW HSNO - VIE
J	NEW MEDICAL GASES STORE
K	140 HIGH STREET
L	POTENTIAL AREA FOR FUTURE CARPARK EXPANSION
M	RELOCATED BUILDING ZONE
N	NEW DRIVEWAY
O	NEW TANK MEDICAL GASES STORE UNDER AMBULANCE BAY
LEGEND	
	NEW BUILDINGS
	EXISTING BUILDINGS RETAINED
	EXISTING BUILDINGS DEMOLISHED
	EXISTING BUILDINGS RELOCATED
	LEGAL ROAD CURRENTLY USED FOR PUBLIC PARKING
	EXISTING DRIVEWAY RETAINED
	NEW DRIVEWAY
	PROVISION FOR FUTURE DRIVEWAY
	FUTURE BUILDINGS LOCATIONS (EXISTING-RELOCATED AND NEW)
CARPARKS	
PROPOSED COUNT	
296 CARPARKS PROPOSED INCLUDING 12 ACCESSIBLE CARPARKS (MARKED IN RED)	
FOOTPRINT AREA	
CURRENT EXISTING BUILDINGS FOOTPRINT AREA	13,104 m ²
EXISTING BUILDINGS TO BE DEMOLISHED	3,487 m ²
PROPOSED NEW BUILDINGS FOOTPRINT AREA	5,390 m ²
TOTAL PROPOSED FOOTPRINT AREA (EXISTING RETAINED + NEW PROPOSED)	15,007 m ²

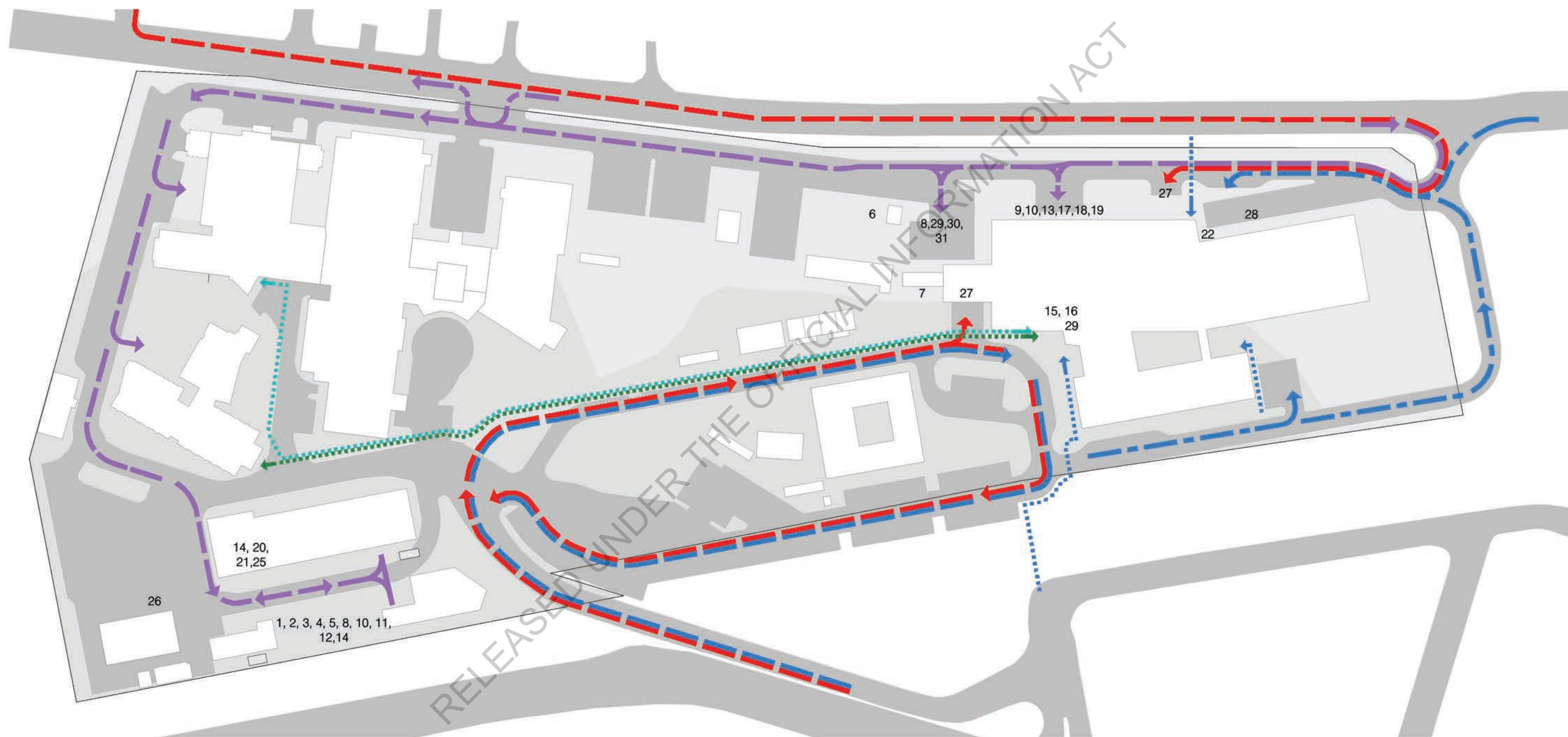
CURRENT SITE PLAN (POST NEW BUILD COMPLETION)



KEY

- STANDARD CAR PARKS (269)
- ACCESSIBLE CAR PARKS (22)
- AMBULANCE PARKS (3)
- SURGICAL BUS PARK (1)

CURRENT SITE PLAN (POST NEW BUILD COMPLETION)



KEY			
	NEW BUILD	1. WASTE - GENERAL	25. EQUIPMENT/FURNITURE MAINTENANCE
	EXISTING TO REMAIN	2. WASTE - RECYCLING	26. MEDICAL RECORDS
	EXISTING RELOCATABLE	3. WASTE - PHYCHOTROPIC (HAZARDOUS)	27. AMBULANCE
	ENTRANCE	4. WASTE - COAL ASH	28. SURGICAL BUS
	PEDESTRIAN SERVICE CIRCULATION	5. WASTE - INCINERATED	29. STAFF - ACCESS
	PEDESTRIAN PUBLIC CIRCULATION	6. MEDICAL GASES - VIE	30. GREASE TRAP TRUCK
	PEDESTRIAN DEMENTIA CIRCULATION	7. MEDICAL GASES - MANPAC/CYLINDER	31. WATER STORAGE TANK
	PEDESTRIAN MH CIRCULATION	8. MORTUARY VEHICLE	
	SERVICE VEHICLE ROUTE	9. LINEN - IN/OUT	
	PUBLIC VEHICLE ROUTE	10. LINEN - DISTRIBUTION	
	PUBLIC VEHICLE ROUTE - MATERNITY	11. COAL	
	AMBULANCE ROUTE	12. DIESEL	
	MORTUARY VEHICLE ROUTE		
	HELICOPTER		

CURRENT CIRCULATION DIAGRAM

3.0 SITE ANALYSIS

3.8.4 On-Site Circulation

Refer Circulation Diagram for circulation movement types.

- Vehicle Routes and parking

From the service bridge on the Eastern side, a sealed road runs south along the east side of the site with branches leading north and to different buildings on the site. The main road leads to the New hospital entrance and ED at upper ground level. A small road also leads to the south of the site to lower ground where it connects to Waterwalk road and parking areas below. A vehicle route north runs to the east of the IFHC also to connect into Waterwalk Road. Service access to the hospital is from Waterwalk road to a raised entrance road that leads up to lower ground level entrance and loading areas.

- Public Vehicle Circulation

The main entrance and ED at upper ground have a drop off area directly in front. Vehicles have direct access from the service road over bridge to the drop off area where they can then turn and exit over the same bridge or continue northward down to Waterwalk road.

At upper ground level, north of the service access bridge, a large car parking area is located along the eastern side of the site. This is the primary car park used by public and staff entering the hospital. The lower ground and south end parking areas are generally used by staff and will be less desirable once the new hospital is completed due to the large travel distance.

- Pedestrian Circulation

Pedestrian Circulation is largely contained within the new hospital building and designated walkways along the escarpment to Corporate Services, Kahurangi, Mental Health and other on site buildings. Informal routes across the site to ancillary buildings are via on-site roads and some areas of footpath. The following main types of pedestrian activity are evident on site.

- Public Visitor
- Hospital Patient
- Dementia Patient
- Mental Health Patient
- Staff
- Maintenance
- Public Transport and Cycling

Cycle parking is currently located adjacent to the Corporate Services Building.

There is no public transport available in Greymouth however, taxi and shuttle services operate and would use the drop off zone at the new hospital main entrance.

- On-Site Hospital and Service Vehicle Circulation

Observed on-site circulation described below: (Frequency to be confirmed by WCDHB)

No.	Circulation Type	Delivery	Collection
1	Waste - General	x	x
2	Waste - Recycling		x
3	Waste - Psychotropic (hazardous)	x	x
4	Waste - Coal Ash		x
5	Waste - Incinerated		x
6	Medical Gases - VIE	x	
7	Medical Gases - Manpac/Cylinder	x	x
8	Mortuary Vehicle	x	x
9	Linen in/Out	x	x
10	Linen Distribution	x	x
11	Coal	x	
12	Diesel	x	
13	Medical Supplies	x	
14	Trades	x	
15	Courier	x	x
16	Post	x	x
17	Kitchen - Supply	x	
18	Kitchen - Food to Dementia		x
19	Kitchen - Food to Meals on Wheels		x
20	Surgical/Medical Loan Equipment	x	x
21	Patient Loan Equipment	x	x
22	Bed Transfer	x	x
23	Pathology	x	x
24	Patient Orthotics Collection		x
25	Equipment/Furniture Distribution	x	x
26	Medical Records	x	x
27	Ambulance	x	x
28	Surgical Bus	x	
29	Staff - Access	x	x
30	Grease Trap Truck		x
NIS	Public Vehicle	x	x
NIS	Public Taxi/Shuttle	x	x

3.8.5 Parking

Parking limitations have been noted particularly during the construction of the new Hospital. Parking areas are located at upper and lower ground level. There will be very few designated staff car parks as required for specific services, the remainder are shared with public parking on a first come basis.

Parking Zones

The main public parking zone is located to the south of the corporate service building with a drop off, ambulance and short stay parking zone near the ground level entrance. Another public entrance is located at lower ground level with access to the main circulation area lifts and stairs.

Temporary Parking

An informal unsealed parking area has been created on the adjacent site north of the hospital. Future formalisation of this parking area has been suggested by WCDHB to cater for additional parking needs.

Services Parking

Loading bay parking is located at lower ground level, toward the south end of the building.

Surgical/Dental Bus Parking

Parking is located at lower ground level in front of the Peri-operative suite.

Ambulance Parking

A dedicated covered ambulance bay is located directly to the south of the Emergency Department. A secondary ambulance park is located at lower ground level adjacent to Pathology and near the LG entrance.

Other dedicated parking areas

WCDHB have requested dedicated parking areas for

- Meals on wheels (5), Orthotics (2) and loan equipment pick-ups (1). These are located at LG directly south of the hospital.
- Oncology (2). Parallel parks along the length of the east of the IFHC building can be assigned to this department as required to allow easy access via either the front or rear maternity entrance.
- Maternity Parking (4). A small area of parking has been located to the north of IFHC building where maternity patients can be directed to a close entrance near the Maternity wing at ground level. An alternative drop off area is available at lower ground.

3.0 SITE ANALYSIS

3.9 On Site Services

- Please refer to services engineering reports for details.
- Please refer to diagrams for approximate site services locations.

The site has a full network of services to serve the myriad of buildings on the hospital campus. Many services are existing and serve the south end of the site and existing hospital. New services connections have been installed to serve the new hospital at the north end of the site.

Services available on site include:

Water reticulation (refer Diagram)

- Main feed from SH6 with backup feed from south of site
- Ring main runs around site
- VPF chilled water system for new hospital.
- Hot and cold water reticulation loop in main hospital
- Central strainers and spun media filtration banks included

Stormwater (Refer Diagram)
Fed into Lagoon

Sewer drainage

- New hospital and IFHC drainage designed to withstand IL3 and IL4 respectively
- Drainage from other buildings to remain.

Electrical (Refer Diagram)

- Main Electrical Feed and distribution to all buildings
- Backup Electrical Feed for new Hospital: Diesel Generator LG 750kva
- Backup Electrical Feed for south buildings: Diesel Generator UG 350kva
- Temporary MDB by Trades building to serve south of site
- New MSB by Generator at LG to serve new hospital
- Active power quality filtering

Comms (refer Diagram)

- Copper Feed and Distribution
- Fibre Feed and Distribution

Fuel and Medical Gas supplies

- Manpac store - medical gases (LG)
- VIE - Oxygen (LG)
- Diesel Tank UG) 4000L
- Diesel Tank (LG) 10000L

Hot water

- Coal Boiler with Diesel Backup serving MTHW to whole site.

Steam

- Electric Generators in New Hospital to produce steam for

HVAC

- New Hospital has HVAC system to support critical spaces.
- Natural ventilation in all on site buildings including new hospital.
- Wall radiators in new and existing hospital and Corporate services fed by MTHW system from Coal Boiler

Automation

- Full BMS for new hospital only

Lightning Protection

- Included in New Hospital

Site Lighting

- New and existing lighting across site

Nurse Call

- IP based Digital system

Access Control

- Cardax system

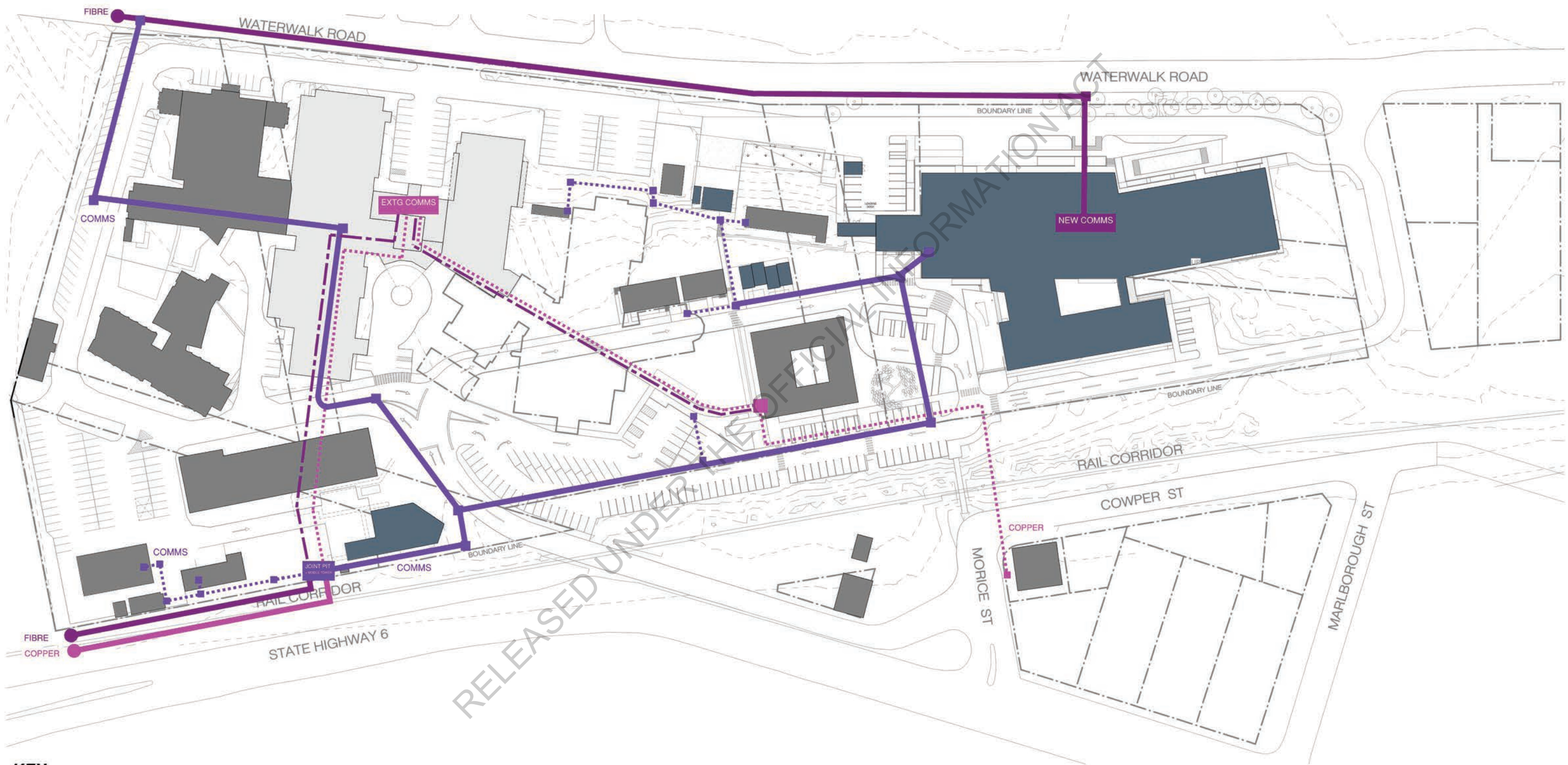
Security CCTV

- On site in. locations advised by DHB

Fire Protection

- Most buildings at Grey Base Hospital have automatic fire sprinkler protection installed.
 1. Wards (2 systems)
 2. Clinical Services / Lab and Physic
 3. Mental Health
 4. Trades, Boiler, Generator, Energy Centre, Laundry, Garage
 5. Dementia
 6. Corporate Services
 7. New Hospital and IFHC

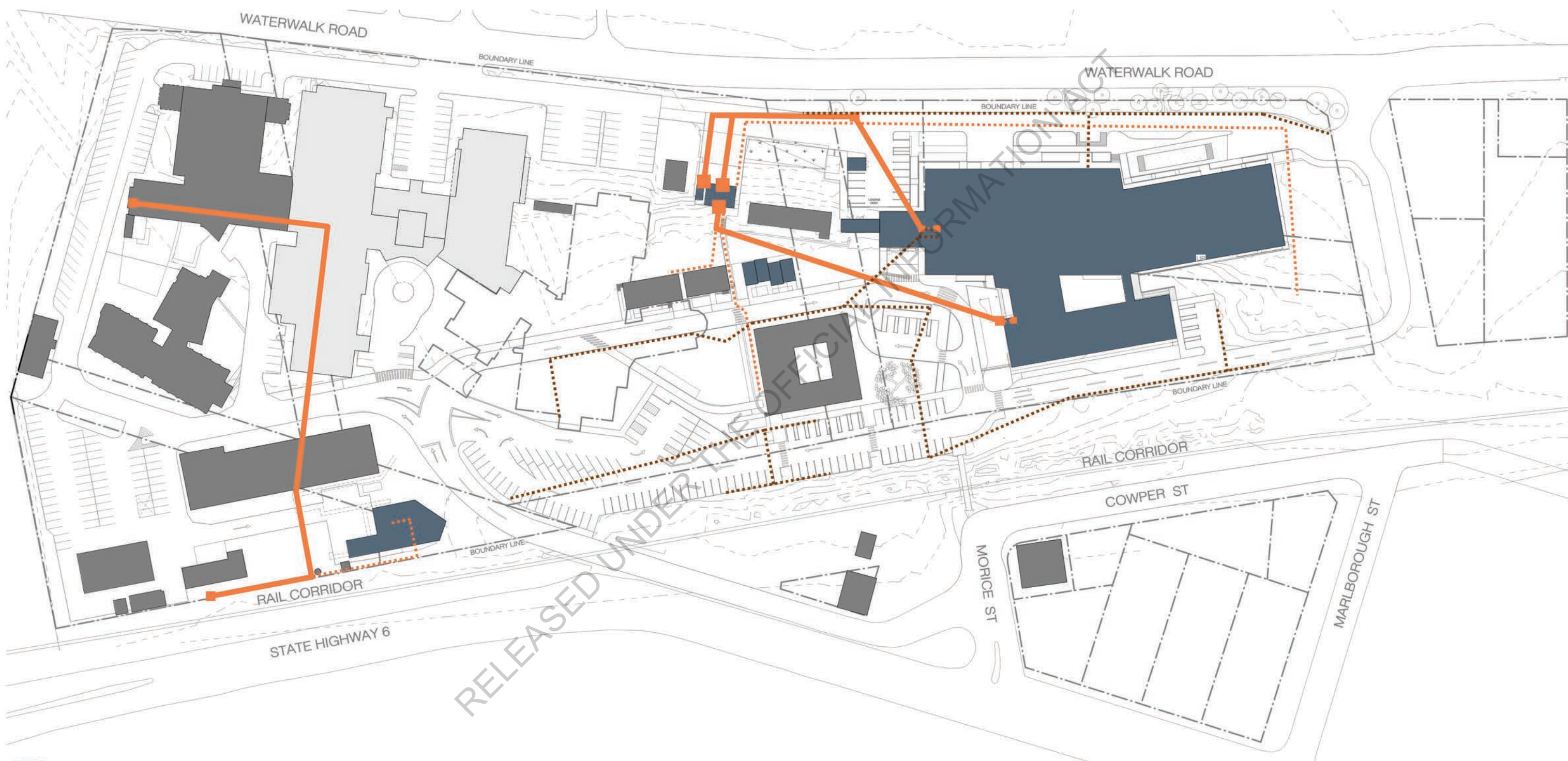
A full fire alarm, hydrant and sprinkler system has been installed in the new hospital. This and EWS are networked with the existing on-site Tyco MX4428 fire alarm systems.



KEY

- MAIN COMMS BRANCH
- - - SMALL COMMS BRANCH
- - - MAIN COPPER FEED
- — SECONDARY/TEMPORARY COPPER BRANCH
- MAIN FIBRE FEED
- - - SECONDARY/TEMPORARY FIBRE FEED

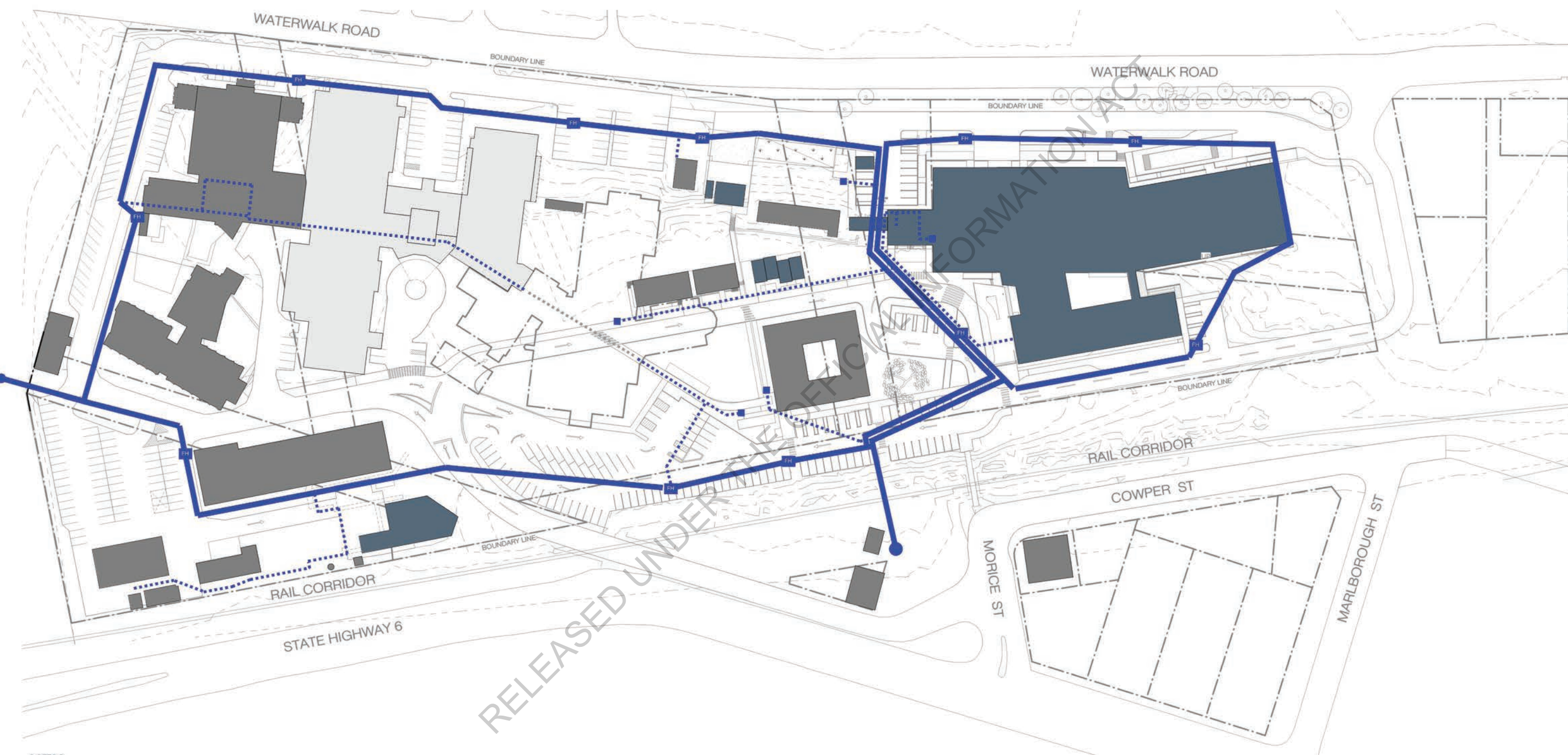
COMMS



KEY

- MAIN ELECTRICAL FEED
- BRANCH ELECTRICAL FEED
- SITE LIGHTING ELETRICAL FEED

ELECTRICITY



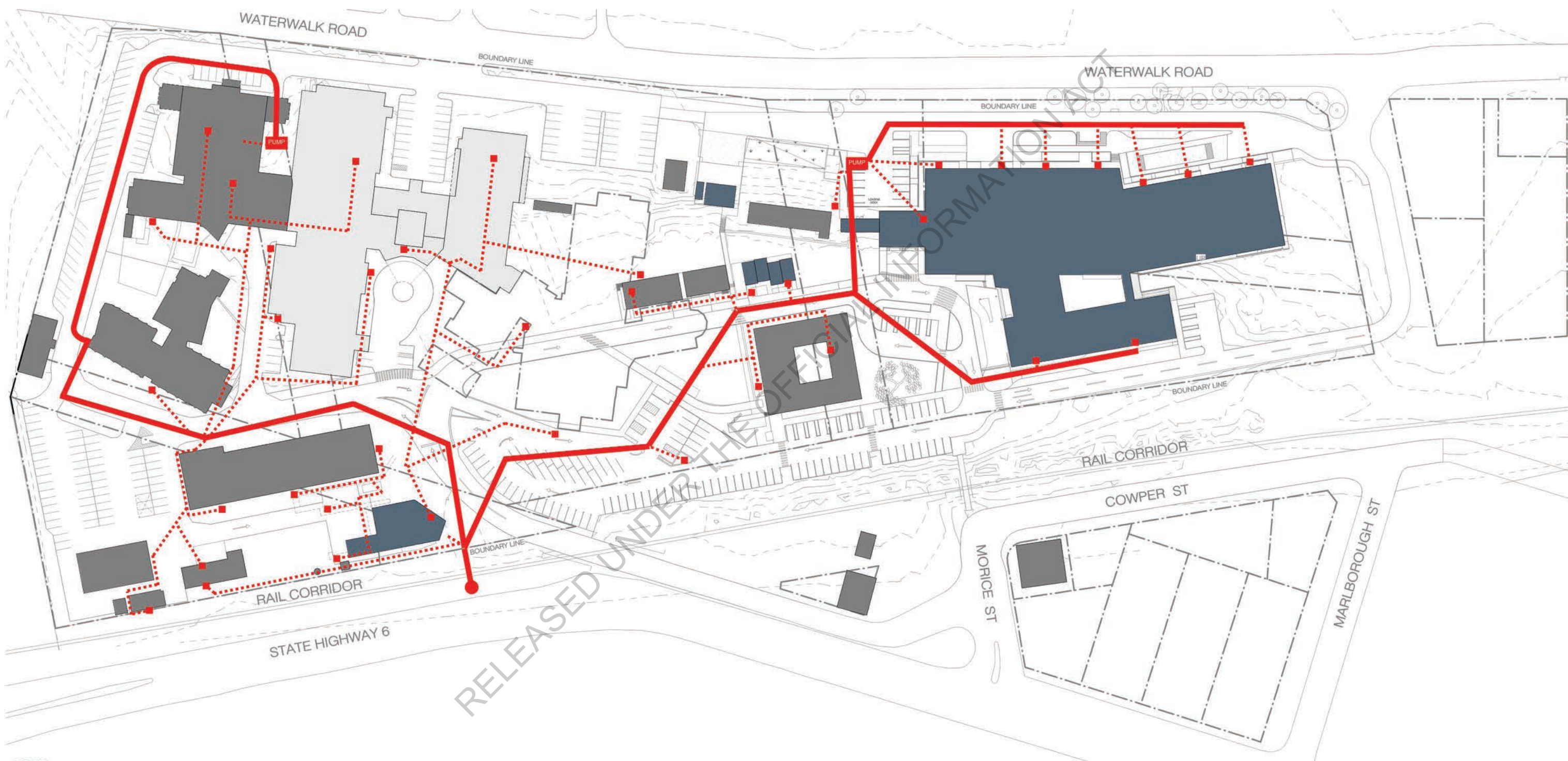
- KEY**
- MAIN WATER PIPE
 - - - - - BRANCH WATER FEED

POTABLE WATER



WCDHB MASTERPLAN
EXISTING SERVICES

Scale at A1
15 JUL 2019 Date
SKA-190714 Drawing Number
1 Revision
13039-01 Job Number

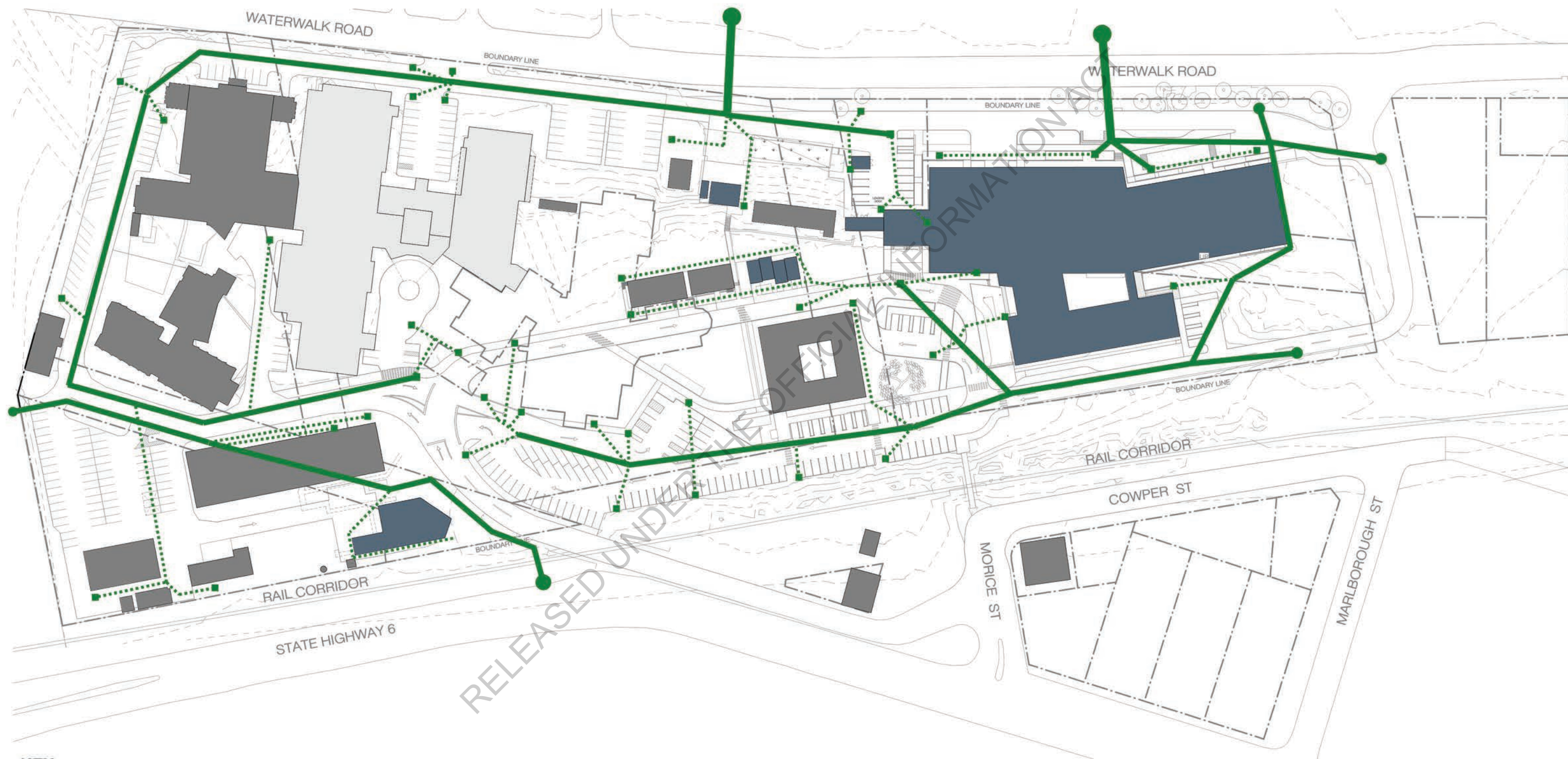




KEY

-  MAIN SEWER PIPE
-  SEWER BRANCH PIPE

SEWER



KEY

- MAIN STORMWATER PIPE
- - - - - BRANCH STORMWATER PIPE

STORMWATER

3.0 SITE ANALYSIS

3.10 Existing Building Status

New Hospital (July 2019)



- View from Waterwalk Road shows near completion status.
- IL3 Main hospital three storey building.
- Transition of services to the new hospital and IFHC is expected late 2019.

Existing Hospital



- Earthquake Prone (14-44% NBS for various wings)
- Concrete and brick clad building with flat membrane roof in poor maintenance condition.
- Building to be decommissioned late 2019/ early 2020 (except Mental Health Wing)
- Asbestos in existing building and tunnels expected to be removed in those areas set for demolition as part of new hospital project.

Kahurangi Building



- Low earthquake risk
- Timber framed and clad single storey building in good condition.
- Currently houses Dementia services. Service to continue in future unless local external operator can be found.

IFHC (July 2019)



- IL4 IFHC single storey building
- Building is clad in low maintenance glazed terracotta and powdercoated aluminium.

Existing Mental Health Wing



- Earthquake Prone (12% NBS)
- Concrete and brick clad building with flat membrane roof in poor maintenance condition.
- Building Warrant of Fitness to expire June 2020. Must be re-mediated or Demolished to meet GDC requirements.
- Currently occupied by Mental Health - service at risk due to building status.

Transport/Laundry Building and Diesel Tank



- Low earthquake risk
- Concrete frame with lightweight sheet infill panel and full height garage doors in reasonable condition.
- Diesel Tank proximity means building cannot be occupied and is used only for medical record storage.
- Laundry services have needed to evacuate and are now contracted off site

New Energy Centre and Coal Bunker



- Earthquake Prone (36% NBS) and will need to be addressed in future.
- Occupied by Facility Staff, workshop, Orthotics and stores. Occupational Therapy Store proposed for north end.
- Distance to the new building will be an issue and concern around this facility was reiterated.
- Adjacent Temp MSB serves building at south end of site and has 40 year Resource Consent.



- Single storey IL3 Building
- Coil coated steel profiled cladding
- New building houses coal boiler to serve whole site medium MTHW for heating and hot water.

Rural GP Building



Corporate Services Building



- Low earthquake risk
- Single storey timber frame building with non structural brick cladding. Good condition
- Occupied by Hospital administration.

Mortuary Building



- Low earthquake risk
- Single storey concrete clad building in reasonable condition
- Mortuary operational for hospital only - to remain.

Old Boiler House



- Earthquake prone building due for demolition as part of new building project.

3.0 SITE ANALYSIS

3.10 Existing Building Status

Generator/Incinerator Building



- Incinerator permission until 2034. After that date WCDHB may not get further permission to operate current facility.
- This part of building considered acceptable seismically once existing Boiler House removed. No separate study undertaken.
- Building currently houses Transformer / Dangerous Goods Store / generator / incinerator.

The Lodge



- No detailed assessment - considered low earthquake risk due to timber frame single storey construction with timber cladding.
- Location at lower ground level on flood plane and in high exposure area.
- Currently used as staff accommodation.

Whanau Building



- No detailed assessment - considered low earthquake risk due to timber frame single storey construction with FC sheet cladding.
- Located south of Corporate services with current use to continue.

Existing Water Tank Enclosure



- Earthquake Prone. 38% NBS.
- 120000 litre tanks feed ring main around hospital.

Rural Learning Building (Jan 2015)



- No detailed assessment - considered low earthquake risk due to timber frame single storey construction with timber cladding.
- Located on escarpment, not at upper ground level.

Relocatable Buildings



- No detailed assessment - considered low earthquake risk due to simple construction type.
- Fully relocatable as use requires.

Transitional Cottages (status at July 2019)



- Currently under construction to be completed end 2019.
- Designed to meet IL2

Antennae and flues



- Status unknown. New Boiler flues designed to meet IL3 requirements.

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4.0 SITE PLANNING PRINCIPLES

4.0 Site Planning Principles

Through the preliminary site masterplanning workshop, project principles, design principles, and assessment criteria were discussed. The initial principles tabled within the presentation material were discussed across WCDHB leadership teams. The design team have now begun to consider how the principles might be manifest in built form and the spaces between. The order of the list is not intended to suggest importance or weighting of principles.



Patient & Whānau-Centred

Positive, welcoming Patient & Staff Experience.

- Considers salutogenic principles such as access to views, natural light and outdoor space
- Supports Whanaungatanga and Manaakitanga
- Provides a welcoming, rich multi-sensory quiet environment

Quality Equitable Access to Care with focus on wayfinding and integration with transport.

- Provides intuitive wayfinding and obvious points of entry
- Provides car drop-off and parking near points of entry
- Connects to public transport near points of entry

Local Culture/Runanga & Heritage Response and connection incorporated into building design and planning and delivery of care.

- Retains or responds appropriately to the heritage features on the site
- Recognises the history and meaning of Ngai Tahu and local runanga
- Considers archaeological significance of the site

Integrated health care delivery model to enhance clinical service provision and continuity of care.

- Co-locate services where possible
- Places standalone services close to main hospital



Provide Future Adaptability, Flexibility & Sustainability

Sustainable Infrastructure which maximises natural climate opportunities, minimises resources and safeguards for future generations.

- Supports Kaitiakitanga
- Promotes lower energy load
- Optimise daylight and views through the campus
- Consider opportunities for natural ventilation.
- Long term strategies with low maintenance

Future-Focused Strategy with whole of life and long term flexibility.

- A solution which supports, change, expansion and modification over the life-cycle of the facility
- Provides long-term development plan for WCDHB services not in scope
- Allows for adaptability and flexibility in future developments on site without undermining the chassis of the site masterplan
- Describe a sustainable renewal and building replacement strategy

Innovative Models of Care which are adaptable to changing needs and new technologies.

- Responds to the whole of system needs
- Enables flexible chassis for implementation of digital hospital and evolving IT solutions
- Provides flexible planning response to better enable adaptation of facilities for changing future models-of-care
- Maximise opportunities for sharing of infrastructure with other users

Capacity to manage peak demand, particularly during winter demand or events such as epidemic or disasters.

- Flex of space to allow for changing needs
- Allow for expansion zones for future development
- Proximity of all services to Post Disaster Building
- Build above flood plane and preferably connect at upper ground level.

Promote agile working and spaces that support a nimble response to demand and activity.

- Reduced travel distances between services to ensure fast response times.
- Location of spaces to best serve wide range of uses.

4.0 Site Planning Principles

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Cost Effective & Efficient

Health Service delivery efficiencies to connect Services and minimise distances.

- Minimise travel distances within departments, between departments, and across the campus.
- Offers connectivity with neighbouring community-based services and other facilities
- Provides separation of circulation for servicing where feasible

Value for Money solutions including programming, existing asset maximisation, minimising service delivery risk and integrating whole of life assessment into new development.

- Offers a Value for Money proposition or Meets a Value For Money test.
- A solution that adopts a ‘whole of life cost approach’ in its design and construction and which enables use of existing assets where appropriate.
- Efficient buildings that have low on-going operating and maintenance costs and facilitate a sustainable asset management approach.
- Facilitates appropriate sustainability principles and objectives being incorporated in the building outcomes.
- Enables a build programme to be completed within target completion dates and budgets.
- Offers the opportunity for innovative, market-sensitive (resourcing, build-ability constraints) and time-saving design and construction methods.
- Allows any infrastructure constraints to be prudently managed in a way which will support a time-efficient build programme.
- Offers the opportunity for staged delivery and parallel design and construction packages;
- Is sensitive to, and offers, a phased business transition if needed.

- Recognises future integration and connections to existing or proposed facilities
- Optimises the site opportunity and contributes positively to the urban fabric and built environment.

Design safe & functional relationships for services and patient flows.

- Optimises spatial requirements by co-location and departmental sharing
- Optimises clinical pathways and separation of patient flows
- Minimises implications of clinical service delivery across multiple sites



Promote Healthy People Spaces

Foster Strong Organisational Culture – Kotahitanga with strong identity, inter-professional connectivity and interactivity.

- Promotes multi-discipline and inter-professional connectivity that breaks down operational silos and is independent of hierarchy
- Promotes WCDHB -wide interactivity within communal spaces
- Offers a strong sense of identity and pride
- Supports Kotahitanga

Support Learning & Research through accessible learning environments and collaboration with partners and community.

- Provides easily accessible learning environments near the clinical areas and workplace
- Promotes a learning community and culture across all staff (clinical and non-clinical)
- Promotes learning opportunities for the wide community

Establish an active walkable campus with appropriate scale and straightforward wayfinding.

- Enhances the urban environment by providing active edges, publicly accessible green space, and visual interest
- Connects with the town where possible
- Provide a built response that minimises the impact of the building scale in the context, and sits well as part of the urban fabric.
- Minimises loss of amenity due to over shadowing and considers views in all directions.
- Pathways that shelter from wind and rain and are direct between buildings.

4.0 Site Planning Principles

4.1 Post Disaster & Emergency Response

Through the development of the new hospital project brief, functional briefs, technical brief and the site plan, the following strategy was confirmed for post-disaster and emergency response as relates to the site masterplan.

We note that considerations around emergency planning for provision of healthcare services by the WCDHB, regional response, and the emergency operation of the new building remain untested until it is fully operational, and require continued exploration with the WCDHB and external stakeholders. Coordination with Civil Defence, Regional Health providers, and other DHB's should be undertaken to confirm post-disaster operations in the new hospital.

Importance Levels for Seismic Design:

All services with post-disaster functionality requirement are to be located in Importance Level 4 (IL4) buildings. Other services to be located in Importance Level 3 or 2 (IL3 or IL2), depending on building use and type of occupancy.

As part of the new hospital project, a determination was sought and provided by MBIE regarding the importance level requirement of the New Hospital and IFHC.

The IFHC has been located on the upper terrace and has been nominated as the IL4 facility for Grey Base. Its structure, architecture and services have been designed to meet the post disaster functionality requirements. This building is intended to operate as a triage centre for the region with responsibility for reception, triage, stabilisation, documentation and transfer or discharge following an event. The transalpine model with CDHB would see management of transfers to other hospitals as necessary.

The main hospital, which is seismically separated from the IFHC, and boiler house, do not have any special post disaster functionality and thus have been designed to meet IL3 requirements while other new buildings are IL2.

For future developments, all new buildings will need to meet IL2/IL3 minimums based on their use and occupancy and any extension to the IFHC would need to align or connect to the IL4 requirement.

Flood Mitigation

Following extensive consultant modelling for flood and tidal inundation recommendations were put forward for a minimum ground level for buildings to minimise flooding risk on site.

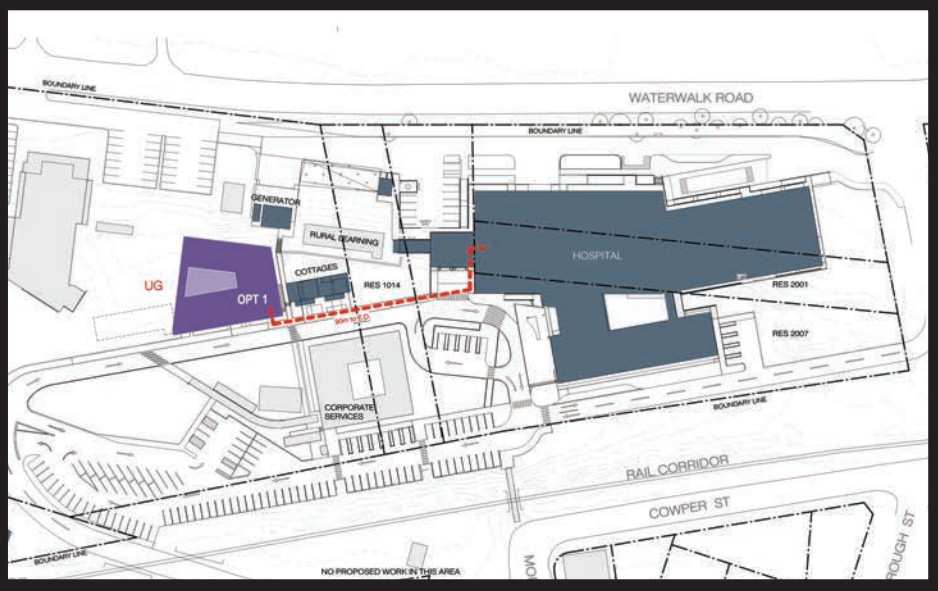
A floor level of 5.40m MSL was confirmed for the new hospital by the Ministry of Health as the final floor level. This was a result of the Flood Report which determined that this was sufficient to protect from a 1 in 200 year storm and smaller breach events.

As such, any new development on site should be built at or above this level and consideration of construction at the upper terrace would reduce flooding risk further.

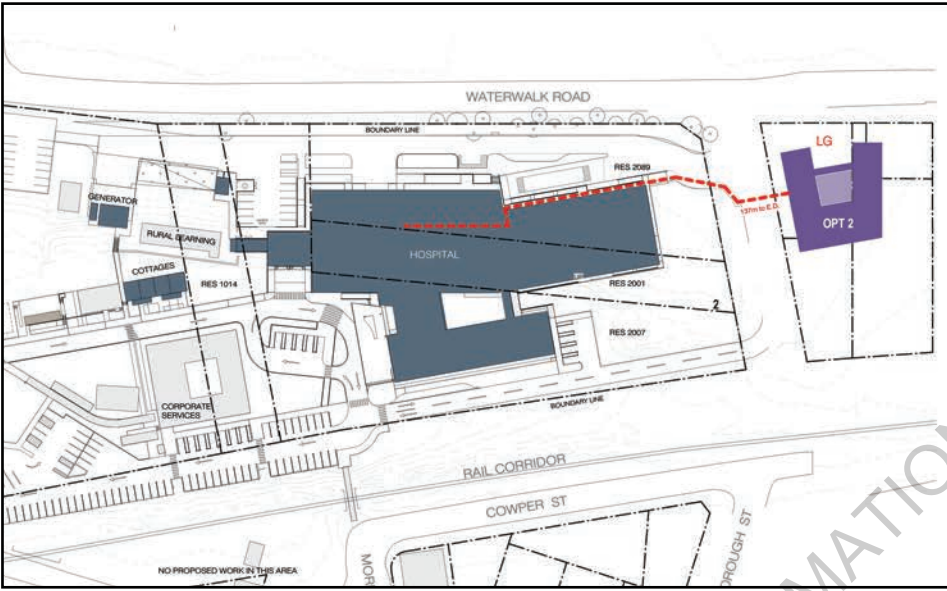
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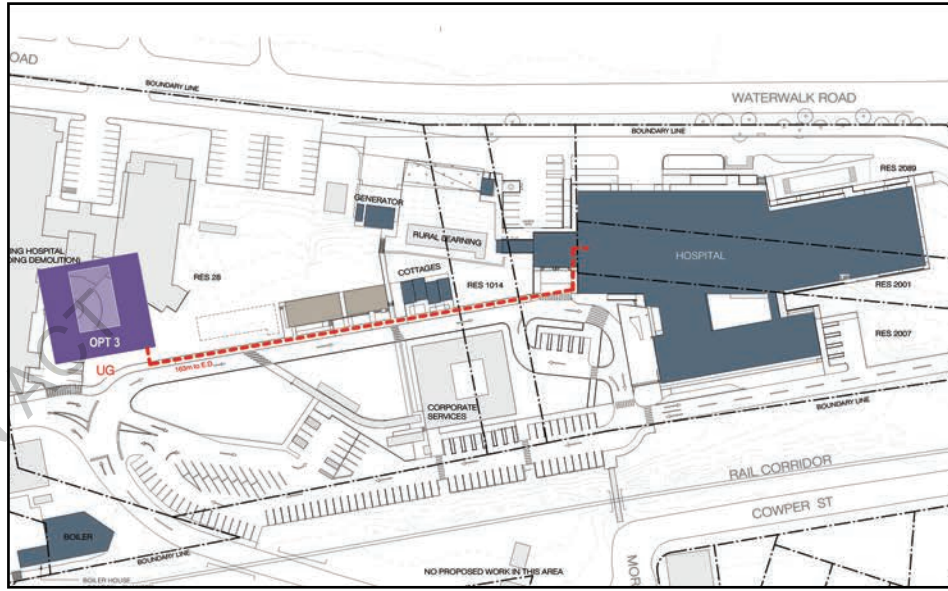
5.0 PRELIMINARY MASTERPLAN



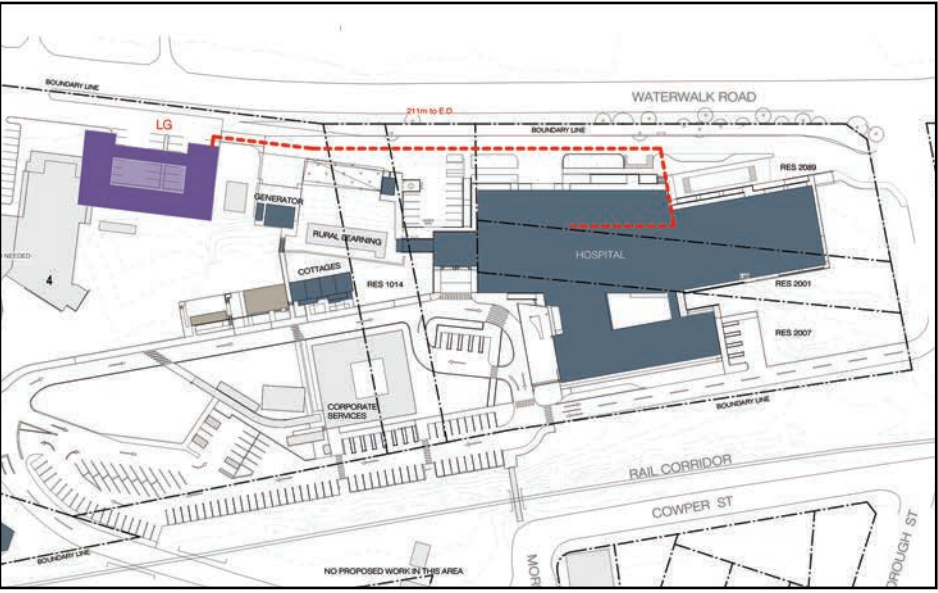
1. Main Entrance Approach



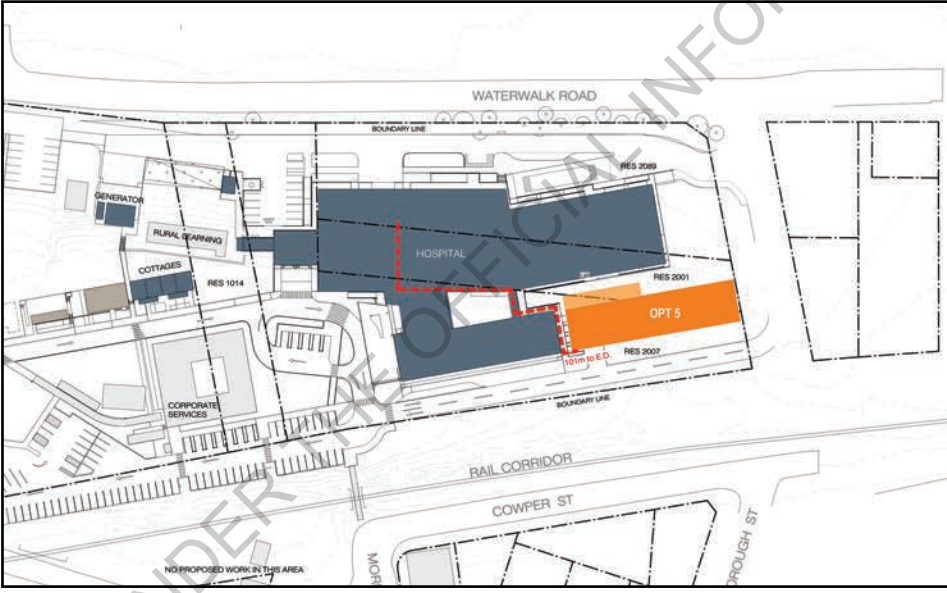
2. North of Site



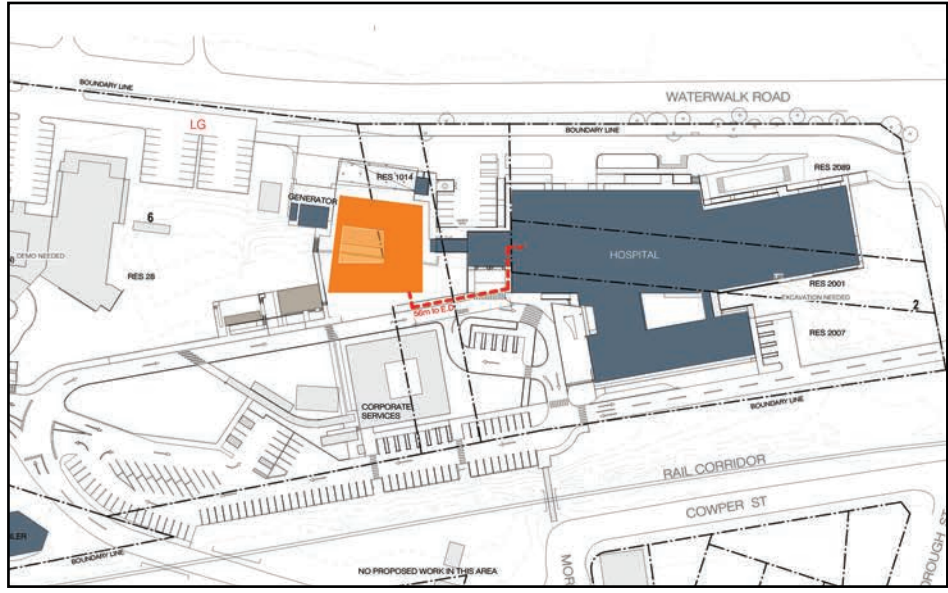
3. Along approach road to Hospital



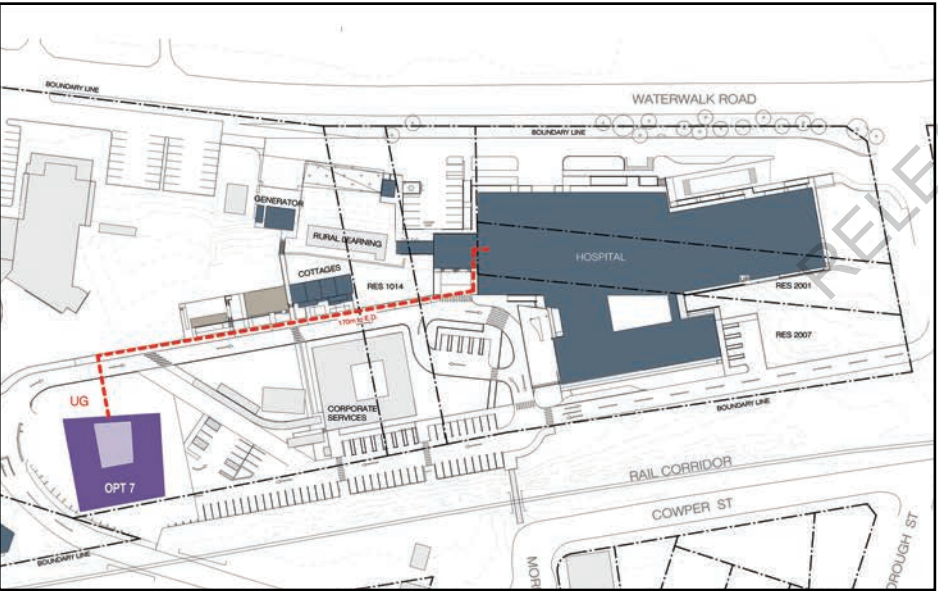
4. Lower Ground by service zone



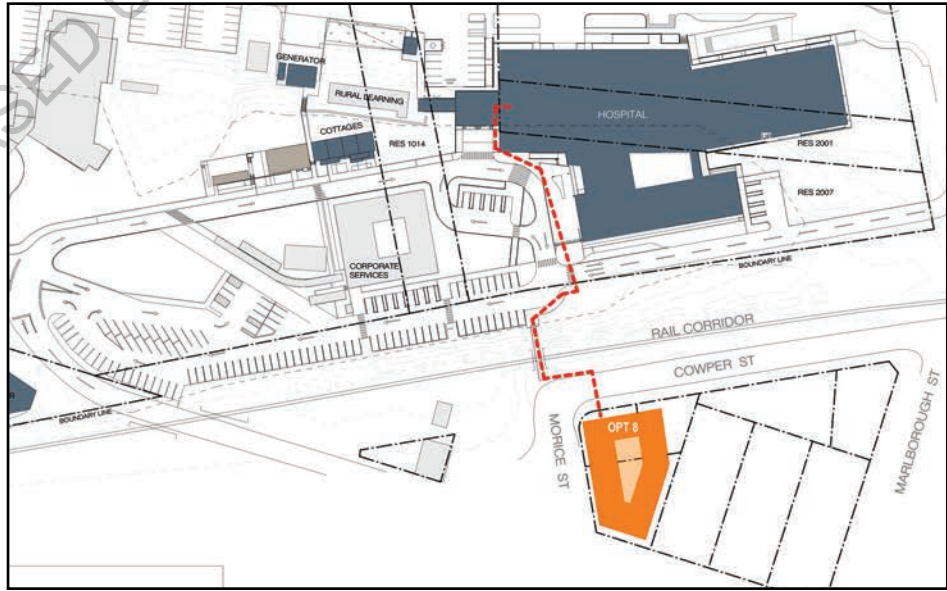
5. North of IFHC



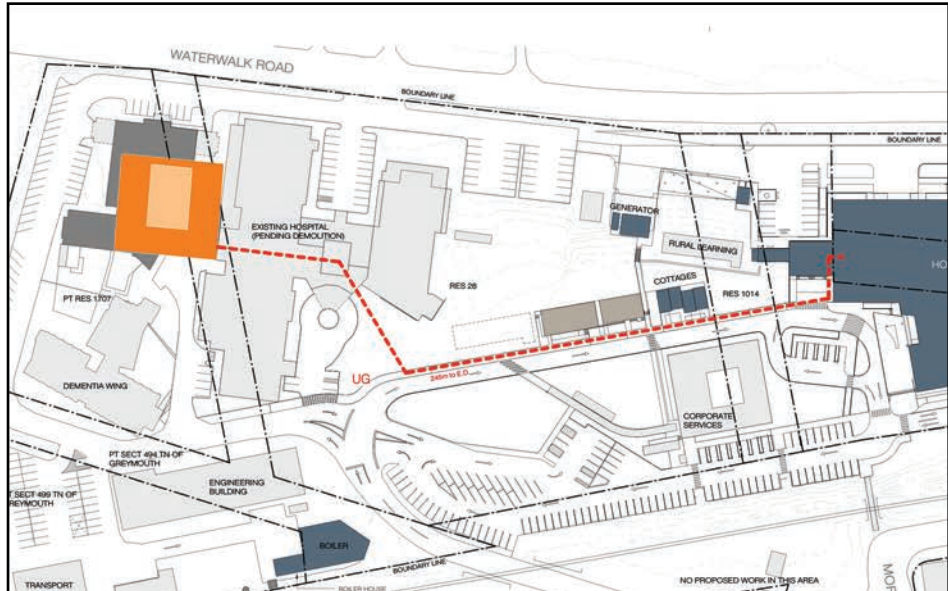
6. Ambulance Bay



7. Upper Ground Car Park



8. Off site (Cowper Street)



9. Existing Mental Health Location

5.0 Preliminary Masterplan (Option 1)

5.1 Development

The primary driver for the development of the masterplan has been the placement of a new Mental Health facility. As such a series of options were tested which each affected the layout of the masterplan.

The initial diagrams (pictured) looked at an 800sqm footprint for IPU plus courtyard only as a first example for progression. Subsequently, the design team developed a draft schedule of accommodation based on an understanding of the model of care and future service requirements for Mental Health and associated workspace. The resulting 1400sqm footprint plus outdoor space was considered going forward into the masterplan.

Following analysis of a series of options, and discussion with WCDHB, the design team undertook a comparison of preferred options 1, 3 and 5 (A,B,C) in relation to the site planning principles. (Refer to Appendix D-02 for comparison information).

OPTION 3

The main strengths of this option are:

- a. the relationship with the existing Kahurangi facility, which provides clinical adjacency and servicing proximity, and
- b. the adjacency to the residential neighbours, which positions the inpatient mental health unit alongside residential activity at the low-scale end of the site, furthest from the institutional feel of the new main hospital building.
- c. The site has an excellent western aspect, flooded with all day sun and views to the ocean. There is excellent opportunity for connectivity to landscaping and views to nature.

Whilst these positive aspects of the option are highly desirable, they are considered to be outweighed by the less favourable aspects:

- a. dislocation from the main hospital, potentially creating a mental health silo
- b. lack of clinical adjacency for ED transfers
- c. lack of clinical adjacency for day activity
- d. diverges from the site strategic development direction which focuses new development at the northern end of the site

From a practical perspective, this option requires the demolition of the existing site prior to construction of the new facility, creating an interim service provision issue, and potential double decant staging solution. The site is that of the demolished existing building, which is likely to require a split level construction, straddling the escarpment.

OPTION 1

The main strengths of this option are:

- a. the relationship with the main hospital, providing close connectivity to ED and the main entrance IFHC
- b. the site has an excellent western aspect, flooded with all day sun and views to the ocean. There is excellent opportunity for connectivity to landscaping and views to nature.
- c. The new facility will strengthen the northern campus by clustering with the transitional cottages and corporate building. Consistent with the site strategic direction; providing other opportunities for disposal or development of the southern end of the site

The less favourable aspects of this option are:

- a. Associates more with the acute end of the main hospital than the IFHC

From a practical perspective this option occupies the and area that is part of the first phase of demolition works, and therefore allows the existing service to be maintained in its existing location while the new facility is built. The site will straddle the escarpment providing an opportunity for offices and support space to the lower level.

OPTION 5

The main strengths of this option are:

- a. The diagrammatic relationship with the IFHC, supporting day activity. Connectivity with the IFHC would be relatively informal, with a door to the glazed link at the northern end of the IFHC. (The key internal points of adjacency would be the mental health consult room and the main reception which are not especially well supported through this doorway).
- b. Pleasant aspect to the north

These positives are considered to be outweighed by the less favourable aspects of the option:

- a. A facility on this site will be overlooked by bedrooms in the main hospital, which is considered problematic for patients with heightened anxiety
- b. The available footprint would make an internal courtyard highly unlikely, suggesting fenced outdoor space, which would also be overlooked from all aspects
- c. The site will be shaded in the afternoon by the main building
- d. The site has reduced visual connection to nature and the ocean views

From a practical perspective this option occupies a graded site requiring a stepped construction and complicated foundations. There are limited options for adjacent parking and discrete vehicle access.

OPTION SELECTION

Option 5 (C), placed north of the IFHC would potentially have some adjacency merit in a smaller day activity facility; however the significant limitations for a Mental Health IPU made it less favourable to achieve the outcomes of the proposed model of care.

Option 3 (C), located the Mental health over existing E.D. where existing services runs could be utilised. The benefits of cost saving does not however address the increased distance to E.D. and the resulting difficulty in achieving the outcomes of the proposed model of care.

Option 1 (A) which placed the mental health building as close as possible to the new hospital directly south was selected as it offered the largest advantage overall.

5.0 Preliminary Masterplan (Option 1)

5.2 Benefits and Limitations

The comparison against masterplanning principles set out the following benefits and limitations for the selected placement option. Limitations will need some form of mitigation through design or operational procedures.

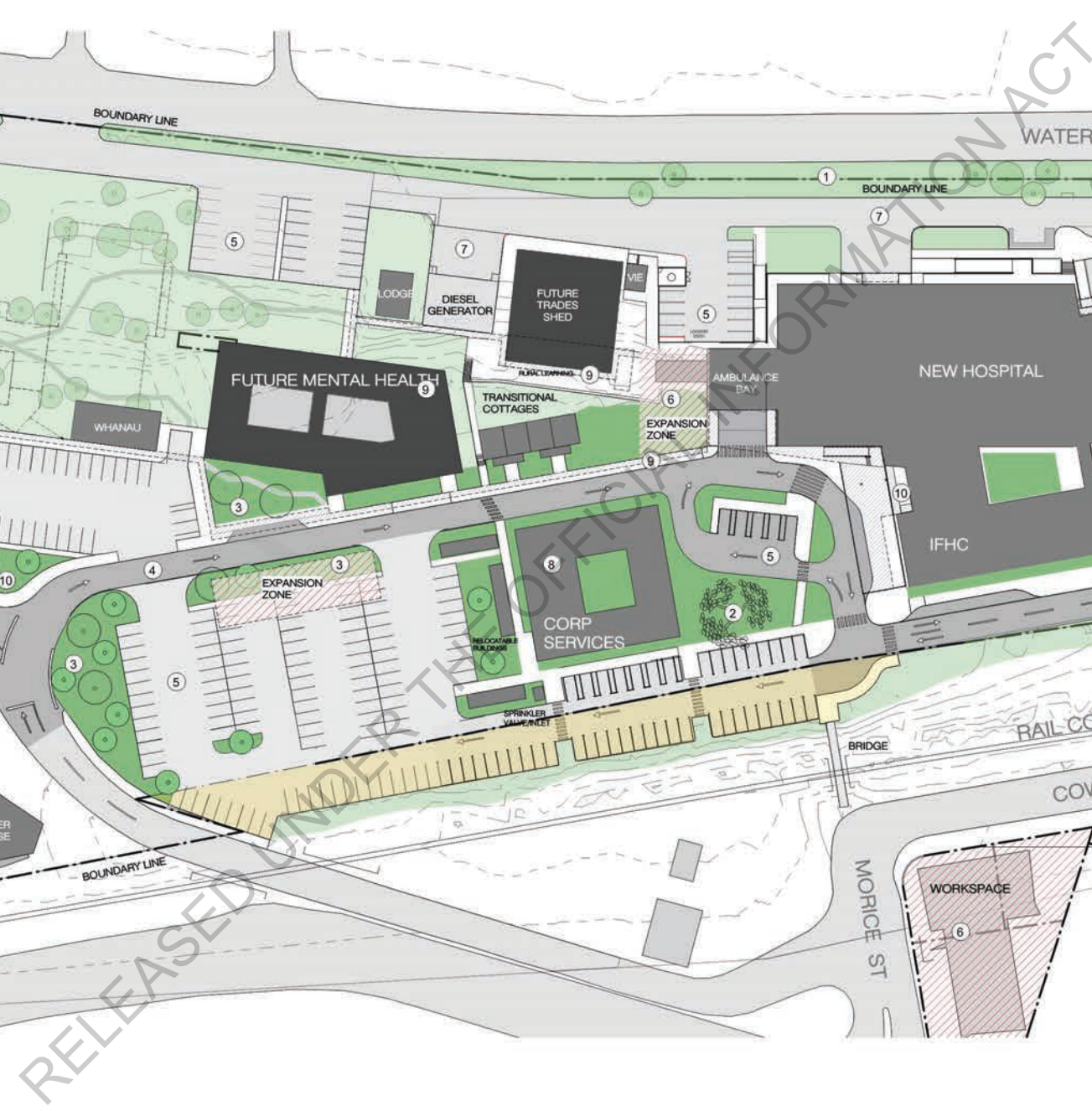
Benefits

- Closest feasible option to the main hospital emergency department for straightforward transfers.
- Direct route to main entrance and IFHC for effective service integration and way-finding.
- Being placed in proximity to hospital offers connectivity with neighbouring community-based services and other facilities.
- Relocation of buildings straightforward due to simple timber construction. No need to wait for demolition to commence construction.
- Can make use of previous demolition and excavation of Parfitt Ward for part of new build footprint.
- Service runs to Parfitt Ward could be connected into to reduce servicing costs.
- Building location close to existing hospital means it can easily be serviced by south end of site.
- Building and other related works can be staged on site to maintain full operations during construction.
- Contributes to the 'street edge' on site and the urban fabric created by the cluster of buildings.
- Works alongside and within constraints of future integration and connections to existing or proposed facilities.
- Placement of a standalone facility near the hospital of a smaller scale offers reduced stigma of being in a hospital and offers design opportunity targeted to best serve patients and staff in this department.
- Excellent access to views, daylight and safe outdoor space without need for fencing,
- Being in garden setting away from hospital offers welcoming quiet environment.
- Opportunity to crease direct vehicle parking and drop of are on existing escarpment south of building location.
- Availability of natural climate opportunities on selected site allows design to make use of these to minimise energy load and improve well-being.
- Placement allows for further southward expansion.
- Built above the flood plane with IPU at upper ground to minimise flood risk.

Limitations

- Ability to adjust building orientation toward views and away from public where needed to offer privacy.
- Building not integrated within main hospital reduces efficiency of staffing and options for full integration.
- Travel distances may affect response times and would need management.
- All options would make use of the coal boiler for MTHW which is not considered a long term sustainable fuel source.
- Escarpment location restricts building form at upper level with some workspace likely needed at lower ground level to meet proximity and adjacency requirements.
- Distance to Kahurangi Building may affect management of service between Mental Health and Dementia.
- Sloping land would require significant foundation design.

Overall Masterplan



5.0 Preliminary Masterplan

5.3 Scope

The following diagrams and text describes features of the Preliminary Site Masterplan to inform the design of the Mental Health and future stages of masterplan implementation.

5.4 Bulk and Location

The site masterplanning process has determined the New Hospital as the primary planning destination at the north end of upper ground level. The relationship of all other buildings to the new hospital main entrance, IFHC and emergency department is key to achieving the following key objectives:

- Concentrate hospital activity to the north for ease of way-finding and reduced travel distances.
- Concentrate clinical and support activities in near proximity to support multidisciplinary inter-professional connectivity.
- Co-locate services for model of care efficiencies
- Locate all key services at upper ground level away from flood plane
- Maintain expansion zones for new hospital
- Safe and walkable site

The clustering of all buildings directly south of the hospital creates an important series of nodes along the main approach street to the hospital drop off. It also forms a central admin zone at the centre of the site directly accessible to the main entrance. The massing of buildings at upper ground level is intended to be viewed as single storey to provide maximums access to daylight, views and outdoor amenity and give the campus a more welcoming, residential feel.

Where buildings are more than one storey, such as the main hospital and proposed mental health, their mass is concentrated at lower ground level over the escarpment edge, where they create a strong reception to the street edge along Waterwalk road.

Buildings have been placed to allow the following benefits to the campus:

- Maximising access to daylight to in-patient areas.
- Reducing shading by buildings to outdoor space and other buildings
- Maximise views to north and west
- Create green outdoor areas for all patient and staff zones
- Providing light-wells and courtyards within the overall massing of the building to bring daylight into all parts of the building and provide safe and sheltered outdoor amenity from wind.

- Formal landscaped approach from base of bridge down to main building entrance.
- Offering a massing strategy that allows architectural articulation of the building that can ensure appropriate scale of building and or parts of buildings.
- Provides an area that can be built on for future clinical activities
- Provides building forms that inform an obvious point of entry for pedestrians and vehicle drop-off.

These all relate to the Urban Design responses further discussed later in this section,

5.5 Site Buildings

As a key component in achieving a safe and workable site into the future, the demolition of some existing buildings was identified as necessary. The existing hospital and Mental health wing which are proposed for decommissioning create a site hazard and are not suitable for retention on site. As such the following buildings are proposed for demolition.

Buildings/Services to be demolished:

South Zone (Old Hospital)

- X1 Existing Hospital and associated services
- X2 Mental Health Wing
- X3 Water Tanks (South UG)

Buildings/Services to remain in current locations:

North Zone (New Hospital)

- E1 Grey Base Hospital and IFHC
- E2 Corporate Services Building
- E3 Transitional Cottages
- E4 Diesel Generator (LG)
- E5 VIE (LG)
- E6 Manpac Store (LG)
- E7 Water Store (LG)
- E8 The Lodge Accommodation (LG)

South Zone (Old Hospital)

- E9 Engineering/Trades Building (strengthening needed - used for storage)
- E10 Boiler House (UG)
- E11 Transport Building (used for storage - UG)
- E12 Mortuary (UG)
- E13 Diesel Tank (UG)
- E14 Diesel Generator/Incinerator Building (UG)
- E15 Temporary MSB (UG)
- E16 Kahurangi (Dementia Services)

Buildings to be relocated

North Zone (New Hospital)

- R1 Rural Learning (to Admin Zone UG)
- R2 Admin Relocatable (to Admin Zone UG)
- R3 HR Portacom (to Admin Zone UG)
- R4 Admin Portacom (to Admin Zone UG)
- R5 Mammogram Portacom (to Admin Zone UG)
- R6 Whanau Building (south of new Mental Health)

New Buildings

North Zone (New Hospital)

- N1 Mental Health IPU Building (UG) with workspace (LG)
- N2 Trades Shed (LG)
- N3 Future Admin Building in Admin Zone
- N4 New Plant building to serve Kahurangi
- N5 New water tanks to South Zone
- N6 New Workspace (part of WCDHB exercise)

5.0 Preliminary Masterplan

5.6 Site Landscaping

Primary Landscape Interventions

New landscaping is proposed throughout the site to soften the outdoor space and connect buildings.

The West Coast is home to some of New Zealand's most untouched and rugged landscapes and the site seeks to recognise both the benefit of nature and the outdoors in health and well-being but the context of the site in Greymouth with its lush backdrop of native bush and nearby wetlands. In the masterplan several main landscaped areas are proposed:

Therapy Garden

A sensory therapy garden as part of a 'Health Precinct' - sponsored and in planning by the community, this garden was proposed to encompass the area north of IFHC and the new Hospital. Accessible from the link at the new hospital courtyard and at lower ground level, this garden would be available for people of access or view from the bedrooms and spaces it surrounds. There is the potential to consider the wider public realm in this masterplan, in keeping with the principles of the 'Health Precinct' landscaping scheme, developed by WCDHB in conjunction with GDC.

Native walk

Once the Existing hospital building has been demolished, new fill would be added to the site to reform the natural slope of the escarpment down to Waterwalk road. Careful planting of native trees, shrubs and grassland would allow this part of the site to regenerate into a parkland, interspersed with walkways between buildings and at upper and lower ground levels for patients and staff to enjoy throughout the day. From the Mental Health, Whanau and Kahurangi building, views of the landscape and further to the sea offer visual amenity at all times of day.

Tracing History

In reference to the former Maori path that ran along the escarpment, a new path which traces along this edge leads people from the very north end of the site through the new hospital courtyard and continues down to the Kahurangi building at the south. This path is a mix of formal hard landscaped path and softer gravel meandering walkways which lead from nature to nature: from the sensory therapy garden north of the IFHC down to the native walk planted zone to the south.

Landscape Buffers

Main Approach Road

Once Vehicles enter the site over the rail bridge from State Highway 6, they are directed north along the main approach road to the new hospital entrance. Wide green landscaped buffers with potential to plant tall trees can mask the vast

area of car parking and direct the path northward. Green softscape runs along the road as a buffer to the buildings and around the heritage pohutokawa tree north of Corporate Services.

Waterwalk Road

As part of requirements to meet the District Plan, the planted buffer that has been integrated into the frontage of the new hospital is extended north and south to keep a strong natural edge to the site along Waterwalk Road.

North expansion car park

A large landscaped buffer has been proposed around the area north of the main hospital on the adjacent site. This would a visual relief to all spaces facing northward offering a view to nature screening a large vehicle parking area beyond.

Other areas

Green softscape buffers to buildings and surrounding the site further soften the aesthetic and have been included where possible across the masterplan.

Courtyards

In order to give occupants the maximum opportunity for daylight, views and sheltered amenity in a windy climate, courtyards are integrated into the existing Corporate Services Building and the new Hospital and the proposed Mental Health Building. The Admin expansion Zone also has relocatable buildings clustered around a central courtyard to give each access and views onto green space. Each offers the opportunity for soft and hardscape areas for use by building occupants.

Planting Palette

As proposed in the Jacobs, Kamommarsh Landscape report for Grey Base Hospital (2015) - softscape planting should be based on observations of local flora to the region and selection to prioritise native species across the site. Plants that are well suited to Greymouth's climatic conditions and require the minimum of maintenance are preferred to ensure plants are reliant only on natural rainfall, salt and soil conditions to flourish.



Native planting example



Local Flora Example



Walkway and Canopy Example

5.0 Preliminary Masterplan

Canopies and Walkways

Greymouth has a very high annual rainfall (Refer Site analysis) and as such the need to provide routes between buildings which are sheltered is prioritised. Each building entrance would provide canopies for waiting and drop-off. These are indicated at both upper ground and lower ground level to cater for the different approaches to each building,

The site masterplan indicates a continuous canopy at upper ground level connecting buildings from the main hospital southward to Kahurangi. Pedestrians are hereby able to transfer between buildings with some shelter, needing only to navigate the road crossings unprotected. These canopies may also include shelter from wind in a way that minimises its effect on the key views throughout the site.

At lower ground level canopies are indicated to connect to the surgical bus parkland loading dock of the new hospital. To the south, a continuous canopy would link service areas and connect to the lodge accommodation. As such, staff are encouraged to walk between buildings at lower ground level.

An external stair to upper ground level is uncovered recognising the reduced likelihood of using it in poor weather and ensuing that views beyond are not impacted on descent of the stair.

A footpath to lower ground from the IFHC is provided to the east face and continues to Waterwalk road, connecting to the lower ground level of the hospital and the potential car-park extension zone.

The design of all walkways would seek to use a natural palette of materials where possible and consideration of high durability requirements in material selections is paramount.

Seating

Localised external seating areas have not been placed but would be added around the campus to allow for places of rest between travel or for exterior breaks. Seating should be well placed within soft landscaping areas alongside paths and allow views to nature or to the key views beyond.

Lighting

Provision of lighting to improve accessibility, way-finding and safety within the Hospital Grounds requires all new road and pedestrian routes to be lit and integrated with any existing systems on site. Lighting over the site is key to achieving CPTED principles and would be used as a guiding set of principles in its design.

All lighting methods should consider minimisation of their long term maintenance and energy use. The fixtures in this climatic region will need to uphold extreme durability requirements to ensure they are fit for purpose for their lifetime.

Artwork

The inclusion of artwork relevant to the culture, aesthetic and history of the Coast. These are placed in strategic positions that help to create a sense of place and add a sense of vibrancy to the site.

Located in the landscape buffer on view from the bridge, users are welcomed to the site with a carefully placed piece that could be commissioned locally.

At the main entrance to the Hospital, in the courtyard and within the building, sculpture and pounamu have place as a welcome and blessing to the Hospital and a connection to the land and iwi where they have come from.

At the north and south ends of the site, at the conclusion of the traditional Maori pathway the opportunity for relevant pieces of art has been suggested.

Along key pathways, the integration of text, poetry and artwork has been suggested to tell the story of the land and its people.

Cycle Parking

Although some cycle parking has been observed at the current site, the masterplan would seek to provide cycle parking in canopy zones close to key building entrances:

- New Hospital Main Entrance
- New hospital LG Entrance
- Admin Zone
- Mental Health Building
- Kahurangi
- South Service Zone

These cycle parking areas would allow staff and residents from Greymouth to safely park their bicycles and encourage alternative forms of transport to the site.

Signage

Wayfinding signage provides both functional and aesthetic attributes to the campus but should be supplementary to natural wayfinding through clear pathway design and visual connections between buildings and space. Signage on site will align with the CDHB signage guidelines. Signage layouts were prepared for the new Hospital and would need to be updated for subsequent masterplanning taking into account which elements have been installed and which are needed to meet the wayfinding needs for Mental Health and other buildings on site.

5.0 Preliminary Masterplan

5.7 Staging

During the new build hospital project, several items did not form part of the business case or were later removed due to cost constraints. Those items included were indicated in the current site plan.

Recognising cost and business case constraints, the current masterplan has also been designed to allow for work to be completed in stages. This also ensures hospital service continuity throughout the process. Detail staging analyses have not yet been undertaken and would form part of later detail planning once required stages are known.

In order to respond to building condition and occupancy on site, the first area of priority would be the construction of the new Mental Health facility with other stages following or able to be completed alongside.

The poor seismic condition and continued occupancy parts of the existing hospital, Engineering/Trades Buildings and Water Tank would place these as next items of priority for attention.

Stage 1 - Mental Health and Existing Building Strengthening

A. *Enabling Works*

- Relocation of Admin relocatable Building and Admin Portacom to New Admin Zone.
- Site remediation
- Ground improvements if required
- Temporary services feeds
- Hoarding of Construction areas

B. *Construction*

- Construct Mental Health Building as a standalone facility
- Temporary contractor car park at lower ground level
- Seismic strengthening of Engineering/Trades building

C. *Transfer*

- Commissioning and occupation of Mental Health Building
- Decommissioning of Existing Mental Health Building
- Protection of Services to Kahurangi in Mental Health Building

Stage 2 - Existing Building Demolition

- Existing Hospital including Mental Health Wing
- Decommission and demolish Water Tanks (South UG) - temporary water tank supply from Main hospital tanks (TBC).
- Install new semi submerged water tanks and reconnect.

Stage 3 - Relocatables

- Relocate Whanau House to new location on new footings
- Configuration of relocatable buildings around courtyard.
- Relocate Rural Learning Building to Admin Zone

Stage 4 - Trades Shed

- Construct new shed at LG level. Adjust planning to suit VIE location.
- Relocate Trades and OT activities to new shed.
- Reconfigure Engineering Building for Storage.

Stage 5 - Landscaping

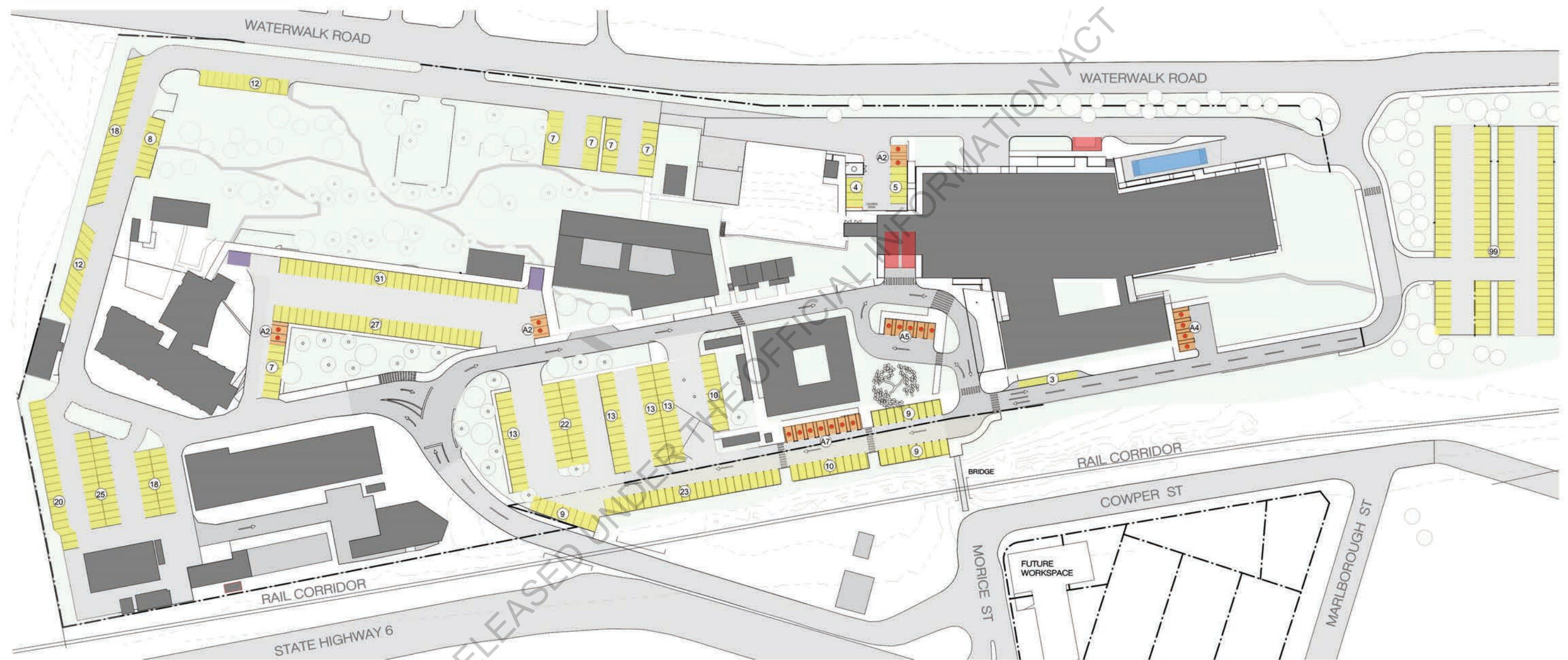
- New car parking and road layouts in sub-stages to allow continued circulation.
- New landscaped areas across site - soft and hardscape

Future Stages

- Expansion Zones as service requires
 - North of IFHC for possible extension to facility
 - North of main Hospital for ward extension
 - South of Ambulance Bay for MRI
 - Admin Zone for potential on site Admin Building
 - Cowper Street building for Admin

5.0 Preliminary Masterplan

Proposed Car Parking



KEY

- | |
|-----------------------------|
| STANDARD CAR PARKS (362+99) |
| ACCESSIBLE CAR PARKS (22) |
| AMBULANCE PARKS (3) |
| SURGICAL BUS PARK (1) |
| DISCREET VAN PARK |

5.8 Traffic, Access and Circulation

Traffic and access to the site remains unchanged in this masterplan. Established access from SH6 and Waterwalk Road to the hospital will remain and the primary access and circulation routes established as part of the New Hospital project will be retained.

The rationalisation of car parking emphasises the main approach road as the primary route and offers secondary turn off right or left to reach car parking closest to either the Hospital or Mental Health and Dementia Services,

The main loop past the drop off area of the hospital and back to the eastern parking area is adjusted to meet the approach road away from the primary intersection and thus giving emergency vehicles clear right of way and path to the front door.

It is envisaged that public would make use of the upper ground central parking areas primarily with staff making use of periphery parking at the south and north ends of the site at upper and lower ground.

The masterplan seeks to improve the use experience and natural wayfinding throughout the site and encourage pedestrian use of the site where possible by creating a better public realm.

The masterplan response includes the following access strategies and features:

A. Separation of public and servicing traffic.

Location of public entry away from main servicing locations is considered preferable for safety and clarity of access.

B. Emergency access to both levels

Clear direct routes for emergency service vehicles through the site to the new hospital

C. Concentration of servicing / maintenance access to the south end of buildings

Servicing of the new hospital and mental health proposed servicing of buildings from the south and at lower ground level where possible. This keeps separation of public and service flows and retains other building faces for natural daylight and public facing opportunities.

D. Control public entry points to main buildings to reinforce clear wayfinding strategies and simplify security management.

Providing a main and obvious public entry to main buildings establishes the start of an intuitive way-finding strategy for public and visitors. Emergency Department and Maternity access is separated to provide security controlled 24 hour access to the building and to enable other access points to the hospital to be managed. In the Mental Health building Discreet Van access is separated from public access to the south of the building.

- E. Accessibility and accessible parking.

All public entries and egress points to the buildings are expected to be ramped or provide suitable accessible solutions. Refer below for car parking provisions. .
- F. Reinforce Pedestrian Routes

Prioritisation of clear, direct and sheltered pedestrian routes between buildings and to and from the site via the pedestrian bridge to Cowper Street and from Waterwalk Road.

5.9 Parking

Parking limitations have been addressed where possible as part of the masterplan with the rationalisation of existing parking areas and the addition of new parking zones. Parking is generally unallocated unless discussed in the dedicated parking areas.

Parking Zones

The main public parking are is located to the south of the Admin Zone with a drop off, ambulance and short stay parking zone near the ground level entrance. Sheltered walkways lead from the main parking area to the new hospital via a crossing along the main approach road.

A new large parking area has been created at upper ground level over the footprint of the existing hospital entrance and along the escarpment to Kahurangi. This has allowed nearly an extra 100 car parks at upper ground level with level access to hospital services on site.

The option of formalising the adjacent WCDHB site north of the new hospital indicates an additional 99 car parks to bring a total of 443 spaces if needed.

Accessible parking is also provided close to each building and provides an additional 22 car parks.

Services Parking

Loading bay parking is located at lower ground level, toward the south end of the hospital building. This received the majority of deliveries and pick-ups for main servicing.

Buildings requiring servicing such as Mental Health, Dementia, Services Shed and Storage (Engineering) Building) have accessible loading zones adjacent to the building.

Surgical/Dental Bus Parking

Parking is located at lower ground level in front of the Peri-operative suite as in the current site plan.

Ambulance Parking

A dedicated covered ambulance bay is located directly to the south of the Emergency Department. A secondary ambulance park is located at lower ground level adjacent to Pathology and near the LG entrance. This is consistent with the current site plan.

Other dedicated parking areas

In the current site plan dedicated parks for the following were already located at LG level directly south of the hospital Meals on wheels (5), Orthotics (2) and loan equipment pick-ups (1) Oncology (2). Also, a small area of parking (4) has been located to the north of IFHC building where maternity patients can be directed to a close entrance near the Maternity wing at ground level.

Mental Health

Designated Parking

Mental health have requirement for a small number of designated parks. A proportion of the standard car parks closest to the new proposed building can be designated as needed for a minimum of staff.

Drop off

A drop off area directly outside the new Mental Health building is directly off the main access road to the new hospital to provide easy access for patients, visitors and staff to the building.

Servicing and Discreet Drop-off

For Kahurangi and Mental Health, loading bays for servicing would also provide discreet access for escorted or high needs patients.

5.0 Preliminary Masterplan

5.10 Expansion Strategy

Grey Base Hospital acknowledges the trends and direction in the delivery of care, and the speed of change which is occurring in this field. Whether from new diagnostics through to personalised medication, the hospital seeks to accommodate the capability to embrace these changes with a future-proofing strategy that enables the facility to respond to changes in demand, to implement new technology and changes to models of care.

During the new build hospital project, several areas around the new hospital were earmarked for potential expansion. As such space has been protected and some related construction prepared to allow for these developments as straightforward additions.

- IFHC expansion zone - north of IFHC
- Ward Expansion Zone - north of main hospital
- MRI expansion zone - over Ambulance Bay (structure designed to withstand weight of MRI) Ambulance Bay would extend into the south directly south,

During the masterplanning, Areas of expansion of Administration facilities and parking were identified.

- Admin Zone south of Corporate services for future consolidation of admin facilities from temporary buildings.
- Building to house Administration on Cowper Street (Current WCDHB exercise)
- Parking expansion - Utilisation of the site north of the main hospital for overflow parking

Site Future

The placement of the New Grey Base Hospital at the north end of the existing site, designates this site as a healthcare use for the foreseeable future.

The South west end of the site will have reduced occupancy following decanting of services to new buildings at the north and centre.

Should the Kahurangi Building no longer be needed for Dementia services, the option for re-purposing of the building, land banking or sale or lease of unused parts of the site may be considered.

5.11 Environmental Sustainability

The Ministry of Health Sustainability and Health Sector guidance document (July 2019) states:

"All new builds; fitouts and renovations should use a certified sustainability rating system such as Green Star, which 'designs in' efficiencies and healthy buildings."

The New Hospital has a series of sustainable strategies in place in it's design and these strategies would be continued to other buildings on site.

The site as a whole will encompass environmentally sustainable principles across all areas to ensure it performs well and minimises its environmental footprint of its buildings and landscapes, over their lifetime.

Strategies for inclusion and prioritisation include:

- High thermally efficient building envelope
- Heat island reduction
- Low maintenance, high durability materials and finishes for buildings and hardscape.
- Low maintenance, native plant selections for softscape
- Embodied Energy of materials and services
- Material Reuse
- Sustainably sourced and renewable materials
- Regional materials and technologies
- Water use reduction within buildings and across the site.
- Rainwater harvesting
- Storm water design and increased permeability
- Modularisation and waste reduction
- Increase natural habitat across the site for native flora and fauna and health promoting effects.
- Natural daylight and views
- Natural ventilation
- Energy efficient fixtures
- Efficient HVAC systems with heat recovery.
- Building Management Systems and Commissioning
- Sustainable energy sources
- Aesthetically pleasing and fit for purpose design and selection to reduce replacement instances.
- Designs to allow for flexibility and change.

5.12 Urban Design

Taking into account the Placement and Landscaping interventions proposed, the following Urban design initiatives are encompassed in the Site Masterplan include:

- Creation of a landscaped site with a welcoming residential feel which references the history of occupation. Therapeutic gardens surround the campus and views are prioritised from all directions.
- Recognition of cultural and historical aspects of the site through placement of paths and buildings, building design, inclusion of site artwork and opportunities for rest and reflection.
- Focus on walkability and accessibility by placing hospital activity at upper ground level.
- Focussing the public -facing activities and entries to the main approach road to create a suburban street feel.
- Crime Prevention Through Environmental Design (CPTED) principles should be applied to the design to support safe ongoing use of the campus. Natural surveillance, natural access control, territorial reinforcement, and maintenance should be considered in the ongoing development of the site.
- The ability to activate edges is limited by the privacy requirements of the clinical activities within the Hospital, Mental Health and Dementia Buildings, however all opportunities to maximise street activation have been suggested in the masterplanning. These include: location of more public activities on prominent corners and street edges. Place glazing for views to and from the buildings at the street edge. Create pedestrian routes through the site past buildings and features.
- The hospital project aspires to be a health-promoting facility for building users. Proximity to transport, prioritisation of pedestrian and cycling activity, provision of pleasant staircases connecting floors of the building and to the exterior, offering access to quality external spaces all respond to this principle.
- Creation of the upper ground level clustered buildings as a porous campus promotes interactivity with the public, and inter-professional links with research and other Health Precinct users. The ease of movement through the site and within the new hospital strengthening connections for public and staff.
- The masterplan diagrams point to a campus plan which has legibility and simplicity, describing a clear campus development plan based on a flexible planning spine through the site from North to South.
- While the Grey Base masterplan project fills most of the site, with the remainder suggested for key landscaping, the masterplan allows for a certain amount of flexibility and adaptability in future development and for surrounding activities.

5.13 Further Considerations

While the Preliminary Site Masterplanning process has resulted in a clear planning preference as described in this report, it is acknowledged that at the completion of the process it is evident that considerable planning risk remains, as described above. The outstanding considerations are hoped to be addressed with urgency due to the seismic condition of the existing building.

Placement of the Mental Health Facility has taken into consideration the information available for the purpose of this initial masterplanning exercise. Subject to full site investigation and targeted engineering reporting alongside detailed function briefing for the Option 1 site there may be constraints which make this option more challenging.

In the event that these future studies uncover significant issues that cannot be solved in design, the masterplanning process has identified a contingency option which places the Mental Health Facility over the existing Main Entrance and close to current E.D.

While not developed to the same level of detail as the preferred option, most of the planning principles would apply equally to both options. The main areas of divergence would be:

- Relationship between the new hospital Mental Health and model of care integration restrictions due to increased travel distances.
- Security issues due to distance from all other buildings affecting response times.
- Demolition of the existing hospital would be needed prior to construction of Mental Health IPU for space on this block. Other complementary activities may need to be sought for the remainder of the southern block.

The Contingency option is shown in Appendix D as Option 3.

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Appendix.

Additional Information

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Appendix . Additional Information

Please refer to the following pdf packages for further information:

- A. Briefing Notes and Stakeholder Meeting Minutes
- B. Model of Care Statements
- C. New Hospital Placement Options
- D. Mental Health Placement Options
- E. Engineering Reports

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