



West Coast District Health Board

Te Poari Hauora a Rohe o Tai Poutini

Business Case for
Proposed Redevelopment of
Grey Base Hospital

August 2008



EXECUTIVE SUMMARY

West Coast DHB Sustainability Project

West Coast DHB is currently engaged in a joint sustainability project with the Ministry of Health in order to determine its future funding arrangements. The process for the sustainability project involves critically examining the DHBs models of care, determining what services will or will not be provided on the West Coast into the future and determining the facilities and workforce implications of providing them. This will then be used to determine the DHBs funding requirements (both for capital and operational funding) and for determining the future funding methodology that will be applied to WCDHB.

The timeframes for the sustainability project aren't perfectly aligned to the August 2008 date for the NCC and so some elements of this business case (relating to funding and affordability) are incomplete at this stage.

It has been agreed that the process for determining West Coast DHB's capital funding requirements will follow the National Capital Committee funding process as closely as possible (hence the submission of this business case), however, the affordability of this facilities proposal will not be able to be properly ascertained until the outcome of the funding review portion of the West Coast DHB sustainability project is completed.

The Model of Care Decision

The West Coast DHB has the smallest population of all District Health Boards, but covers one of the largest geographic areas, creating some unique challenges in ensuring access to health services. These are further complicated by the fact that the population is relatively evenly distributed along the length of the West Coast and by the fact that the Southern Alps act as a barrier between the West Coast DHB and its neighbouring districts, resulting in relatively frequent occasions of isolation from tertiary or other secondary services during periods of winter conditions, spring rainfall and other adverse weather events. Grey Base Hospital is West Coast District's only secondary care hospital, even so with some secondary services being provided off the Coast by neighbouring DHBs.

There is therefore no doubt that there is a need to provide continued provision of a secondary care level emergency department, radiology, internal medicine service, high dependency unit, AT & R, mental health services, specialist dementia services, allied health and outpatient services on the West Coast.

The key model of care decision is therefore the question of whether or not acute surgical services will continue to be provided on the West Coast and if they are, how to configure them in order to ensure that they are sustainable.

Three surgical services model of care options have been examined during the preparation of this business case. Two of the model of care options involve the continued provision of a broad range of acute surgical services either on a 24x7 basis (option 1) or on a reduced availability (option 2). Both of these options also maintain the availability of a range of

elective surgical services on the West Coast and so both have much the same facilities requirements (The need to operating theatres and surgical beds in addition to the needs of the other secondary care services mentioned above).

The third model of care option involves making a decision to not provide acute surgical services on the West Coast. Even with this option, there is a need for a substantial facilities reconfiguration in order to maintain the availability of emergency department, radiology, internal medicine, high dependency unit, AT & R, mental health services, specialist dementia services, allied health and outpatient services. (Approximate Capital cost \$70M). There would be a significant increase in inter district flows as a result of a decision not to provide any surgical capacity on the West Coast and so it is likely that there will be a need to construct additional surgical capacity in other South Island locations in order to cater for the needs of patients from the West Coast.

The main issue with this option is the impact of delayed access to acute surgical services on patient outcomes, with increased mortality and morbidity from a 3 hour increase in travel time (assuming an aircraft transfer in good weather) and a potential for a 3 day delay in access during periods of extreme winter weather (usually one or two occasions per annum). This option has been ruled out as the impact on patient health outcomes is considered to be politically unpalatable.

The Grey Base Hospital Facilities Proposal

There a number of issues with configuration of the current Grey Base Hospital facility, some of which could theoretically be more easily overcome (they'd still require a fairly significant reconfiguration project), but for the fact the facility does not meet current building act requirements relating to structural integrity in the case of a seismic event and so needs to be brought up to standard at the time that these other issues are addressed.

The extent to which the facility fails to comply with seismic requirements is so severe that it is more cost effective to completely replace a number of the existing buildings than to try and upgrade them to meet requirements. None of the existing buildings are able to be strengthened to the level required of buildings that serve a post disaster function. As a result, retaining the facility status quo is not an option.

A number of master planning options have been considered in the development of this business case, however many have proven to be too expensive (with capital costs of around \$100 million to \$110 million). At \$87 million, the preferred option is somewhat cheaper than the other options; however it does have some risk associated with it as it relies on refurbishment and seismic strengthening of a number of existing buildings.

West Coast DHB's ability to afford this project depends on the outcome of the funding decision component of the sustainability project and so cannot be determined until West Coast DHB's future funding has been finalised.

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STRATEGIC ANALYSIS AND BACKGROUND

Project objectives

The project proposes the replacement of Grey Base Hospital with a new purpose built secondary care hospital with a co-located and integrated primary health centre.

Strategic context

West Coast DHB is currently engaged in a joint sustainability project with the Ministry of Health in order to determine its future funding arrangements. The process for the sustainability project involves critically examining the DHB's models of care. This involves critically considering what services will or will not be provided on the West Coast, by who and where, into the future. Then determining the facilities and workforce implications of providing the agreed model of care. This will then be used to determine the DHB's funding requirements (both for capital and operational funding) and for determining the future funding methodology that will be applied to WCDHB.

The timeframes for the sustainability project aren't perfectly aligned to the August 2008 date for the NCC and so some elements of this business case (relating to funding and affordability) are incomplete at this stage.

The West Coast DHB serves a population of 31,326¹, spread over an area of 23,000 square kilometres, making it New Zealand's most sparsely populated District Health Board. The region is approximately 650km long and has only 1/10th of New Zealand's average population density. This unique situation provides a number of challenges, both clinical and financial, which have culminated in a need to re-think the way that health services are provided for the West Coast population.

Configuration Issues – Current Facilities

The Grey Base Hospital facilities are aging; they are poorly configured and are inflexible.

Critical after hours services (those where there is a likely hood of a patient requiring resuscitation) are spread across the hospital site with a Critical Care Unit (CCU), Paediatrics and Accident and Emergency Services effectively in three different corners of the hospital site. This makes it both inefficient in terms of its staffing costs and potentially unsafe in terms of the ability for specialist resuscitation staff to back one-another up in an unexpected event.

Medical and Surgical services are located on different floors, making it difficult to adjust bed numbers or staff numbers between these services in the case of a crisis or as a response to changing patient demand. These services cannot easily be changed in order to be co-located or integrated with one-another, partly because most of the ward areas of the hospital are on the second or third storey, dramatically increasing the cost of extending or changing

¹ 2006 Census

them so that they are interconnected, and partly due to the seismic issue, which requires that the building be substantially strengthened or replaced at the time that the DHB seeks a building consent in order to rectify this issue.

As the owner of a number of primary health practices on the Coast, the West Coast DHB is a leader in the development of models of integrated service delivery. However the DHB owned Primary Health practice in Greymouth is physically separate from the Grey Base Hospital facility (in a temporary premise that the DHB only has a short term lease for). This situation dramatically impedes the DHB's ability to realise service improvements and efficiencies that could be realised through the close integration of primary health and secondary care services in Greymouth. In the future this could be further improved by the co-location of all primary services on site.

The current Greymouth Hospital facility site has insufficient office accommodation for the DHB's needs and so the DHB is currently leasing additional building space in Greymouth.

Current Infrastructure Risks

In 2004, Government updated the Building Act, dramatically increasing the structural requirements for buildings that serve a post disaster function (including medical facilities). Greymouth Hospital has been assessed by structural engineers in order to determine its level of compliance against these new standards (see appendix 13) and has been found not to comply even with the lower standard required for buildings which do not serve a specific post-disaster function. Detailed engineering studies have shown that it is impractical to strengthen some of the buildings, even to the building act requirement for a building which does not serve a specific post-disaster function (see appendix 16). None of the buildings are able to be bought up to the standard required of a building which serves a specific post disaster function.

There are numerous other facilities design issues with the existing facility. For example, the hospital has a flat roof with internally guttering, not an ideal design for an area that is known to experience heavy rainfall. The Butynol surface on the roof leaks and the flat concrete surface under the Butynol then make it near impossible to find the actual source of the leaks.

Many of the service ducts through the building contain electrical and IT services, alongside water reticulation, steam reticulation and internal guttering, a situation that dramatically increases the impact of what might otherwise be a minor water or steam leak.

There are also issues with the hospitals water supply, electrical system and the air filtering system for its operating theatres.

Changes since the Strategic Stage Submission

West Coast DHB submitted a strategic stage submission for this project in 2007. A considerable amount of work has been undertaken since then, mostly as part of the joint Ministry of Health / West Coast DHB Sustainability Project.

The DHB has completely updated its model of care planning and has documented its intended future model of care into one summary planning document (see appendix 6).

During this process, a considerable amount of effort went into identifying and examining different models of care options, across the service continuum, but particularly regarding the

scope, volume and level of acuity of secondary care services available on the West Coast. These are documented in a separate secondary care options paper (see appendix 7).

We have also updated our bed number modelling for the 2006 census data (appendix 10).

Following on from this, the DHB has also completely reconsidered its site master planning for the Greymouth and other sites on the Coast (Buller and Reefton) and has commissioned detailed structural engineering studies of each of the existing Greymouth Hospital buildings in order to determine which can be bought up to new building standard and which cannot. New service relationship diagrams have been developed and a considerable amount of staff and stakeholder engagement has occurred in order to determine the optimal size and configuration of health services in Greymouth, based on the preferred model of care.

Board resolutions

This project is a strategic priority for the West Coast District Health Board.

The Board originally intended to submit a business case for the 2006 capital round, but has pushed this out to 2007 in order to allow more time for facilities master planning. This decision is reflected in the resolutions passed by the West Coast District Health Board in its 30 June 2006 meeting as detailed below.

1.1.1 Motion

“THAT the Board extend the completion date for the Business Case to August 2007 to ensure adequate time for staff and community input at all stages of the project.

THAT the Board ensures that the development of the new Primary Health Centre and Grey Base occur in tandem and in such a way as to facilitate primary/secondary integration through co-location and in a timely fashion to minimise the delay in establishing the Health Centre.

THAT the Board adopts the “Parameters for Models of Care Fundamentals” as follows:-

Parameters For Models Of Care Fundamentals

- **Seamless continuum of care from Primary Care, Population Health, Public Health, Secondary Care, Tertiary and End-Stage Care a key priority**
- **Models of care and service planning should aim to optimise health outcomes**
- **Services should be provided in ways that balance equity of access against other dimensions of quality (including safety and efficiency)**
- **All services should exemplify excellence through the highest possible quality given the constraints of the rural environment**

- **WCDHB will seek innovative solutions to service delivery and organisational problems**
- **WCDHB will seek to agree an equitable and reasonable basis for funding secondary care services on the West Coast with the Ministry of Health and then to manage services within this funding**
- **WCDHB will seek to collaborate with other DHBs where this will improve the quality of services available to West Coasters.”**

Carried.

The Board formally considered this business case document in its meeting on 29th August 2008. Board resolutions from that meeting are included below.

Motion:

“That the West Coast District Health Board;

- **Approve the submission of a business case to the National Capital Committee seeking funding and approval for the proposed redevelopment of the Grey Base Hospital (Identified as ‘Option F – Brownfield 5’ in the draft National Capital Committee business case). Capital Cost \$87.0 million.**
- **Note that this submission is based on a proposed Model of Care Option One, which is subject to approval by the West Coast District Health Board and the Minister of Health as part of the joint Ministry of Health and West Coast District Health Board Sustainability Project.**
- **Note that this submission is based on the assumption that the joint West Coast District Health Board and the Ministry of Health Sustainability Project will establish a sustainable funding model which supports this model of care option and therefore the facilities requirement that is identified in this business case.**
- **This is to be funded by a mixture of Crown Health Financing Agency Debt and Crown Equity, along with \$1 million from the sale assets or from Free Cash flow contributed by the West Coast District Health Board. The final mix of funding will be negotiated with these parties following business case approval.”**

1. Carried.

During its meeting on 29th August 2008, the board carried out the following assessment of this business case.

That the Board

<p>a) Note that following the Submission of the Strategic Stage Business Case for Greymouth, the following options were considered</p> <ul style="list-style-type: none"> ➤ 5 different options for redevelopment of the existing facility ➤ Demolition of existing facility and completed rebuild 	Yes / No
<p>b) Agree that the option identified as Option F – Brownfield 5 is the best option</p>	Yes / No
<p>c) Note that the preferred option is consistent with the overall hospital site master plan</p>	Yes / No
<p>d) Note that the preferred option is consistent with Model of Care recommendations that the Board have received from the Sustainability Project.</p>	Yes / No
<p>e) Note that the preferred option will deliver a high and acceptable level of clinical quality and a modern delivery of health services</p>	Yes / No
<p>f) Note that this project has been supported by the Regional Capital Committee and issues raised by the Committee have been addressed.</p>	Yes / No
<p>g) Note that the project design and costings have been developed with and confirmed by the DHBs health planners, health architects and independent QS advisors</p>	Yes / No
<p>h) Agree that the complete project budget, including all consequential financial impacts, will be \$87M</p>	Yes / No
<p>i) Note that the project will result in increased annual operating costs (e.g. IDCC, utilities costs, staffing etc...) of \$9.6 M</p>	Yes / No
<p>j) Note that the new facility is planned to result in annual operating savings of \$1.25M, with the potential for additional savings in locum costs of up to \$2.0M in addition to this.</p>	Yes / No
<p>k) Agree to the establishment of a change management program to achieve these planned savings</p>	Yes / No
<p>l) Note that it is proposed that the project will be funded via</p> <ul style="list-style-type: none"> ➤ \$1M contribution from Asset sales (the Mobil service station block). Alternatively this funding will come from the DHB's free cashflow ➤ CFA debt \$53M ➤ Crown equity injection \$35M 	Yes / No
<p>m) Agree to reserve \$1M from asset sales or from free cashflow for the project.</p>	Yes / No
<p>n) Note that taking into account the net cost impact of this project the DHB will continue to achieve a breakeven result</p>	Yes / No
<p>o) Agree to request new debt and equity of \$86M from the Crown</p>	Yes / No
<p>p) Note that new debt from the CHFA will require agreeing to banking covenant requirements with them. These banking covenants will need to be approved when the actual CHFA loans documents are</p>	Yes / No

finalised. It is proposed that the DHB amortise the debt over 40 years.	
q) Note that the implementation and project management planning to deliver the project will need to continue, in anticipation of business case approval.	Yes / No

Regional Capital Committee peer review

The South Island Regional Capital Committee has reviewed this business case in its meeting on 22nd August 2008.

In its meeting it made the following decisions;

RCC response to the Greymouth Business Case was that from a surgical providers perspective the option of continuing to provide much the same surgical services as West Coast currently does, seems to be unsustainable for the following reasons:

Range of surgery required and therefore the range of staff required.

Ability to maintain sufficient surgical staff to maintain a roster

Population size does not suit the volume that the facility would be capable of providing.

May be alternative arrangements for elective surgery for northern half of West Coast population travelling north or east rather than south to Greymouth for surgery.

Cost of infrastructure outweighed the capital and operation cost

RCC consider Option 2 of the Business Case i.e. reduced provision of surgical services to be more sustainable than the other options outlined within this business case.

Due to the timing of the RCC meeting, West Coast DHB is still awaiting formal notification of these decisions. The text above is from their draft meeting minutes.

West Coast DHB have undertaken to provide more information to RCC, with regard to whether or not there is a political imperative to maintain the current range of health service provision on the West Coast and with regard to the per unit construction costs identified in this business case.

CLINICAL/SERVICE ANALYSIS AND REQUIREMENTS

Population needs assessment

West Coast DHB covers the area between Karamea in the North and Big Bay in the South and is bounded on the Western side by the Tasman Sea and on the Eastern side by the main divide of the Southern Alps. The length of this landmass is approximately equal to the distance between Auckland and Wellington, has a land area of 2.3 million hectares and has a population of only 31,326 people.

The 2006 census shows a small increase in population residents in the region. However, in terms of total national population, the West Coast fell from 0.8% to 0.7% of the total population.

Projected Population Change for West Coast over the next 20 years

Variant	Population at 30 June					Change 2006-2026	
	2006	2011	2016	2021	2026	Number	Percent
High	31,200	31,400	31,500	31,500	31,400	200	1
Medium	30,600	30,000	29,300	28,500	27,700	-2,900	-9
Low	29,900	28,600	27,200	25,700	24,000	-5,900	-20

The West Coast region has 3 Districts – Buller, Grey and Westland District and consequently 3 Territorial Local Authorities. The population of the region is spread among the districts as follows:

West Coast Population by Districts. [Source: Census 2006 Statistics NZ]

Buller District	9702
Grey District	13221
Westland District	8403

The West Coast is also home to the most socio-economically deprived population in the country. This combination of large geographical area, sparse population, rugged terrain, isolated areas, high deprivation and low socio-economic status make the West Coast one of the most difficult and expensive areas in New Zealand for any public or personal health service delivery. Of the three Territorial Local Authorities (TLAs) that make up the West Coast DHB area, the Buller district consistently has the highest level of deprivation when compared to the Westland and Grey districts. This deprivation is further exacerbated by the districts' rural isolation, and transport and communication difficulties. South Westland, while having a better socio-economic status compared to the other TLA in the West Coast, is disadvantaged by its extreme geographic isolation. Maori make up 9% of the total West Coast population.

Health Status

Consistent with the above demographic and socio-economic issues is the picture of higher morbidity and mortality rates and lower life expectancy on the West Coast compared with the New Zealand average. Mortality from cancer and cardiovascular disease are significantly higher on the West Coast than other regions. Overall, males experience higher rates of mortality compared to the New Zealand average and their female counterparts on the West Coast. In particular, men have higher rates of mortality from cancer, circulatory disease and respiratory disease (statistically significant using a 99% confidence interval). Injury is also of particular concern for men, with five times greater likelihood of mortality from injury than women on the West Coast, and nearly twice the probability compared to men elsewhere in New Zealand. West Coast Residents aged 65 years and over have higher mortality rates than the New Zealand population of older people, particularly from cardiovascular disease, diabetes and respiratory illness.

Hospitalisation rates are also significantly higher when compared to the New Zealand average. The overall rate of hospitalisation is also high. Lead causes of ambulatory sensitive admissions² for the West Coast population over the recent years in terms of total raw hospitalisations are: angina; CORONARY HEART DISEASE; ischemic heart disease; stroke; respiratory infections; cellulitis; kidney and urinary tract infections; gastroenteritis; congestive heart failure; and dental conditions.

The health status of children and young people on the West Coast is poorer than the New Zealand average. In particular, children have among the worst oral health status in the country, and the West Coast has the lowest rate of caries free five-year-old children in New Zealand. The relatively high rate of dental decay in young children is a concern, especially with the absence of fluoridation.

West Coast residents have higher smoking rates compared with other areas in New Zealand. West Coast teenagers have the second highest rate of smoking in New Zealand. There is higher than average levels of drug, alcohol and substance abuse, with the availability and acceptability of cannabis being a particular cause for concern.

The priority environmental health issues affecting West Coast residents are substandard drinking water supplies and sewage disposal. The large majority of water supply in the West Coast is untreated and none of the drinking water supplies comply with the New Zealand Drinking Water Standards 2005. Also many communities in the West Coast have inadequate provisions for proper sewage or waste disposal. Because of this there have been periodic occurrences of water related or water-borne diseases. The West Coast has industries like mining, pastoral farming, forestry, cement and the region also receives a large number of tourists. Inadequate infrastructure for waste and sewage disposal for Dairy farming and Tourism industries in some areas could lead to potential outbreaks of acute gastro-enteritis. Apart from substandard water supplies and improper waste disposal, the other environmental health issues the West Coast region faces are - Substandard Housing, Industrial activity leading to potential environmental health problems and air quality issues.

² Reducible Hospital Admissions

Māori Health

Māori residents on the West Coast perform slightly better across some demographic indicators than their counterparts from other regions, although fare substantially worse in other areas. For example, West Coast Māori have a longer life expectancy than New Zealand Māori generally and lower unemployment rates, however they earn lower incomes and a considerable proportion has no qualifications. A smaller proportion of West Coast Māori also speak the Māori language than the New Zealand average. Our understanding of the West Coast Māori community has increased significantly, due to information from the 2006 Census and the Māori health needs analysis currently underway. The West Coast Māori Health Profile-2007 confirms that in terms of health, West Coast Māori have a poorer overall health status than non-Māori in the region. A range of indicators, including cardiovascular disease, cancer, diabetes and respiratory disease, demonstrates this. Though in many instances West Coast Māori have lower mortality and morbidity rates than Māori nationally, it is to be noted that West Coast Māori are under-represented among primary care utilisation data and have higher rates of smoking, which is a key risk factor for a range of morbidities such as cancer and cardiovascular and respiratory diseases.

Access to Health Services

Grey Base Hospital is located roughly in the middle of the West Coast, 3 hours from Karamea in the north and 4 hours from Haast in the south. On a fine day, with clear roads, Buller Health (a primary health centre with some inpatient medical beds) in Westport is 1.5 hours from Greymouth and the smaller Reefton Health facility is 1 hour from Greymouth. From Greymouth it is 3.5 hours to Christchurch in the east, via Arthur's Pass and the Southern Alps or 4.5 hours to Nelson or Wairau Hospitals to the North.

The road along the West Coast is subject to delays and closure associated with unfavourable weather conditions. Bad weather also frequently closes the Arthur's Pass route and also disrupts both fixed wing and helicopter emergency flights.

Only 64% of West Coast residents reside within 60 minutes ("The Golden Hour") travel time by car from secondary hospital services. Less than 2% are within 180 minutes travel time by car from the nearest tertiary hospital in Christchurch.

Rainfall is around twice the national average, which may have implications for people with such illnesses as respiratory diseases or arthritis as well as having implications for the availability of transport routes throughout the West Coast.

The absence of regular public transport for people living on the West Coast exacerbates the situation for those who do not have access to private transport.

Future Health Needs for the West Coast

With a projected growth in specific populations such as the elderly population and Māori youth population³, present health inequalities among these groups could continue into the future. Moreover with a projected overall population decline over the next twenty years, difficulties for health service delivery will persist because of the sparsity of the population distribution and geographical isolation.

³ Statistics New Zealand

Managing and treating chronic diseases will be an important issue to consider while forecasting health needs for the West Coast as with elsewhere in New Zealand. However the rurality, socio-economic deprivation and shortage of health resources and health professionals on the West Coast may compound this problem further.

Hence future models of care or health programmes have to place a heavy emphasis on population health principles such as health promotion, increasing upstream investments, applying multiple strategies, collaborating across sectors and levels and employing mechanisms for public involvement⁴. This approach will decrease the incidence of chronic diseases in the long-term, ease the burden of managing chronic diseases for the primary and tertiary health sectors and place some of the responsibility of managing health in the hands of the community.

Further to this, ensuring availability of health care professionals and adequate primary and secondary health services, consideration of environmental health issues in planning health services, and use of innovative health technologies to fill in gaps of health service delivery would all be necessary to answer future health needs of the West Coast population.

Current service utilisation

As part of the Model of Care development work undertaken during the West Coast DHB Sustainability Project, WCDHB has undertaken a considerable amount of analysis into the utilisation of various services on the Greymouth Health site. This information is summarised in appendix 8 and 9.

The key points from that analysis are:

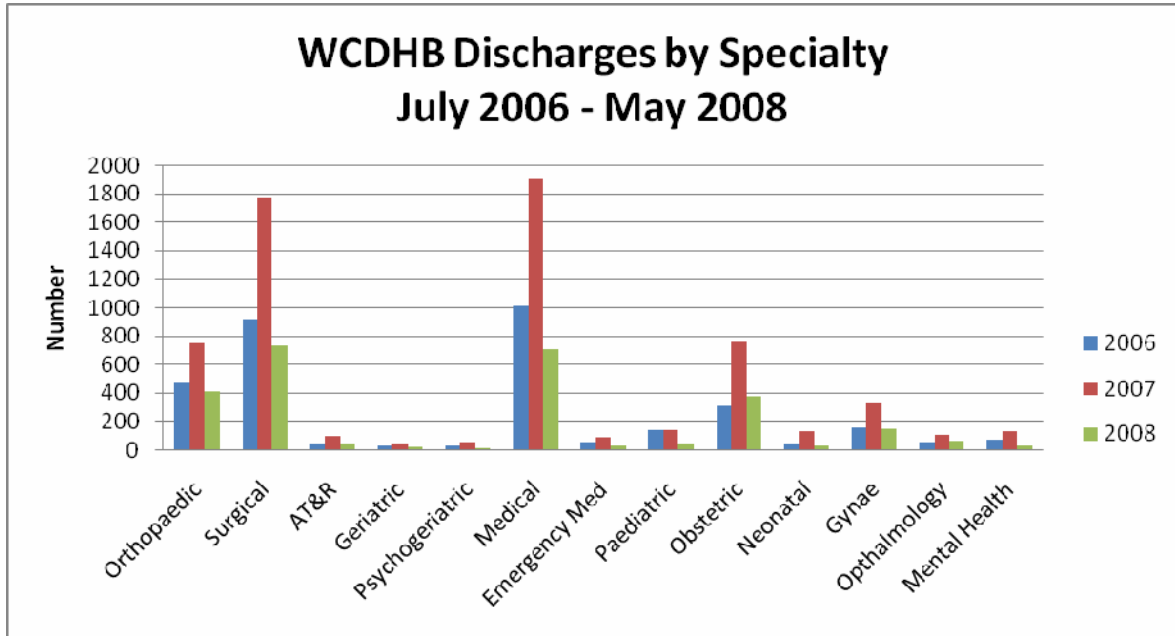
For the period 1 July 2006 to 31 May 2008 (22 month period) there were 12,176⁵ patient discharges from all hospitals (Buller, Reefton and Grey Base Hospital) on the West Coast. 10,471 (86%) of these were from Grey Base Hospital. This excludes emergency department data and equates to an average of 554 discharges per month across the Coast and an average of 476 per month from Grey Base Hospital (5,712 discharges per annum).

50% of admissions to Grey Base Hospital are acute.

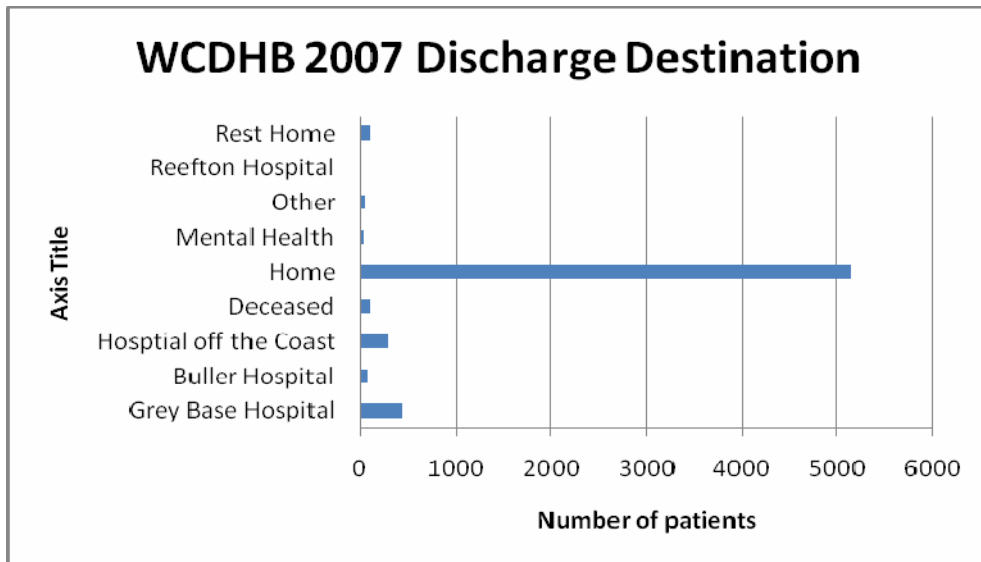
In 2007 30 % of admissions were medical, 28 % surgical, 12 % obstetric, 2 % paediatric, 1 % emergency medicine, 5 % gynaecology, 2 % neonatal, 2 % ophthalmology, 2 % mental health, 2 % AT&R and 1 % geriatric.

⁴ Public Health Agency of Canada - "What determines health?" - <http://www.phac-aspc.gc.ca/ph-sp/phdd/determinants/index.html>

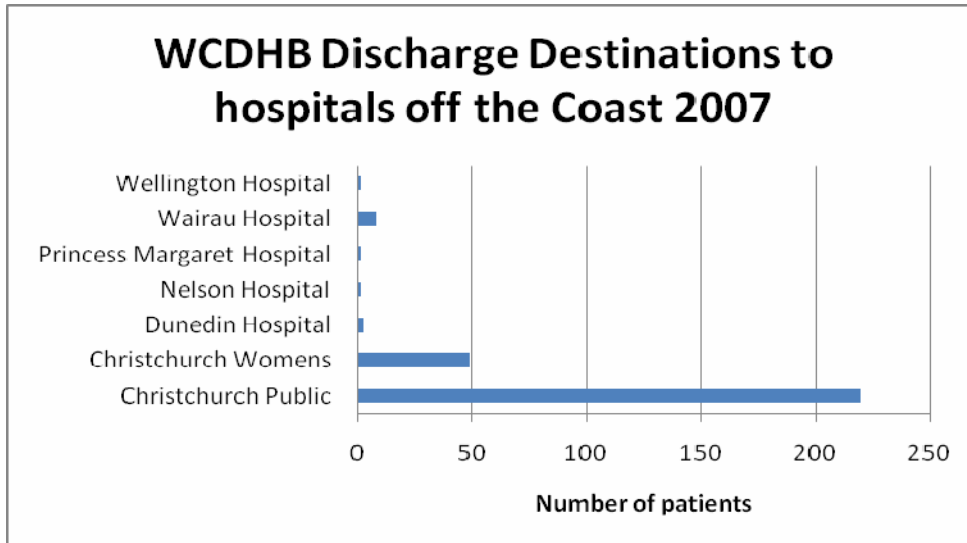
⁵ Cleansed data set. There were 13,743 entries in the data dump.



Coast wide 82 % of patients returned home, 4 % to hospitals off the West Coast, 2 % to rest homes, 7 % to destinations within West Coast District Health Board (this accounts for transfers between hospitals and between wards), 2 % deceased whilst in hospital and the remaining 1 % were to other locations (e.g. temporary place of residence).



Of those patients discharged to hospitals off the West Coast⁶ in 2007, 200 were to Christchurch Public Hospital and 49 were to Christchurch Women's Hospital accounting for 96 % of discharges from West Coast DHB that was off the West Coast.



Model of Care (for all services on the West Coast)

As part of the sustainability project a significant piece of work looking at options and possibilities for future models of care has been undertaken. This has considered what services should be provided on or off the Coast, by whom and where. Many stakeholders have been involved in this work including the establishment of a sub regional DHB network and planning group. This includes Nelson Marlborough, Canterbury, West Coast and South Canterbury District Health Boards and consists of planning and funding, chief operating officers, clinical medical advisors and directors of nursing. The group has met and teleconferenced several times and has agreed an approach for the development of collaborative models of service delivery across the upper South Island, which will include a collaborative model of service delivery for the West Coast.

The next step is to arrange a series of clinical network meetings based on service lines, across the DHBs. The purpose of this is to get clinicians to consider how best service configurations can work in the future in order to ensure ongoing clinically sustainable, quality and safe care.

The future sustainability of services, whatever the range and scope on the Coast, depends on collaboration between DHBs and also on having core facilities on the Coast. The strategic direction for the future West Coast models of care include continuing to provide as much as possible of the current range of services on the West Coast however a vital change being HOW and by WHO these are delivered. No longer can the Coast strive to employ all required staff themselves, or provide all services 24/7.

⁶ Note that inter district flow data will include those patients that were never admitted to WCDHB but received services off the Coast. These figures are for those patients discharged from WCDHB.

The next level of detail to be worked through involves the sub regional DHB and clinical network detailing what of the services for the West Coast population should be provided where, and what of the services provided on the Coast might some of other DHB populations have the choice to access, e.g. low level elective surgery. Taking the premise that there will be some range of low to medium complexity acute and elective medical and surgical services remaining on the Coast whatever the outcome of this next phase of work the implications for Grey Base facility planning will be the same. There will be a need for operating theatres, wards / beds and the ability for electives and acute services to continue.

In addition for an integrated model to work there will be co-location of primary and community care on site with secondary services and allied supports such as radiology and laboratory. This will lead to improved patient outcomes, efficiencies and sharing of scarce resources.

In the next level of detailed planning the priorities to work with the clinicians to resolve are:

- Obstetrics and gynaecology
- Orthopaedics
- Child health
- Cardiovascular

Model of Care Key Changes

In summary the changes to the West Cost DHB model of care are more about how things might be provided in the future. Joint DHB clinical appointments (medical, nursing and potentially even allied health) will be the way of the future. This will be for services provided both on and off the Coast. In summary the required model of care changes for sustainability are:

Home and Community Care

- Change of strategic emphasis to having home and community care as the nucleus, supported by hospital based and emergency care
- Increase investment in home and community care over time through planned efficiencies and dis-investment in some hospital based care
- Co-locate primary and hospital for an increase in patient focus, support and better use of scarce workforce resource and efficiencies
- Increase over time the use of allied health in the community and establish
- Have a Coast wide nursing strategy to develop a stronger career pathway and more recognition of the Rural Nurse Specialist roles
- Increase the focus on rehabilitation
- Improve how after hours services are delivered
- More outreach services

Mental Health

- Shift the emphasis for mental health services from hospital based to community based to be in line with international practice and evidence
- Reduce the number of inpatient acute beds to be in line with Blueprint benchmarks and increase the number of community acute beds, supported by changes in community staffing and practice

Hospital based care

- Critical to this proposal is the collaboration approach across DHBs
- The key is HOW things are done: planning, surgery scheduling to have more acute at front end of the week to reduce staff requirements over weekends for efficiencies and improved rosters for staff
- The proposal involves trying to have as many services as possible on the Coast, utilising clinical networks across DHBs, but recognising that this may not achieve 24/7 for all services and that some will be 24/5, and others off the Coast as they are now
- The ability for West Coast clinicians to be rostered into other DHBs in order to keep their clinical skills up
- The ability for off the West Coast clinicians to be rostered on to the West Coast in order to gain experience in more generalist skills
- Joint appointments of clinical staff with other DHBs
- The ability for the other DHBs to offer the West Coast as a choice for their patients needing low level services they cannot provide or that they have long waiting lists for

Enablers

- Collaboration with other DHBS - mainly Canterbury and Nelson Marlborough, establishing clinical networks and shared resources (this is key to keeping the range of services on the Coast)
- Increase the use of information technology
- Have a planned approach to travel and accommodation for patients and clinicians.
- Improved facilities to allow for better patient flow and efficiencies in work practice and rostering

Model of Care - Grey Base Hospital Options

Approximately 21,000 of the West Coasts 31,000 people live within 1 hour of Greymouth Hospital. 28,000 live within 1 ½ hours of it. Access to alternative hospitals with acute surgical capability (Nelson, Blenheim or Christchurch) involves transporting acutely unwell patients over treacherous alpine passes, which can be closed to air and road transport (sometimes both simultaneously) during periods of inclement weather. Retrieval to an alternative hospital by air ambulance generally takes 3 hours (to arrange a retrieval team, scramble a plane, fly to the West Coast, pick up a patient and then fly them to an alternative hospital). Road transfers can take twice as long (assuming that a plane or a road ambulance is available at the time of the call).

There has been significant work undertaken to identify and analyse the options for a future model of care for West Coast wide services including Grey Base Hospital as part of the matrix and continuum of care.

An options analysis paper considering different model of care options for secondary care services is included (as detailed earlier) as appendix 7 of this document. Please also refer to the Model of Care appendix for the wider view.

There are three key options that have been developed and analysed for Grey Base Hospital. These options all involve continued provision of a secondary care level emergency department, radiology, internal medicine service, high dependency unit, AT & R, mental health services, specialist dementia services, allied health and outpatient services, but vary in the location in which or the way in which acute surgical services are provided.

These are:

Option 1: As close to the patient as possible

Integrated services delivered collaboratively as close to the patient as possible as a rural centre of excellence for health services, supported by a comprehensive subregional approach.

Option 2: Low complexity services on the Coast

Low complexity services, supported by specialist emergency services and some visiting specialists, delivered collaboratively on the Coast by sub regional arrangements, with stabilise and transfer all others to other DHBs.

Option 3: Rural outpost

Only low complexity planned for on the Coast, with heavy reliance on other DHBs off the Coast.

An analysis of these options is included below.

Model of Care Option 1: As close to the patient as possible

This model of care option involves the continued provision of the current range of acute surgical services on the West Coast. (Secondary level Obstetrics and Gynaecology, General Surgery and Orthopaedic Surgery).

Current Issues: West Coast DHB is struggling to maintain the provision of its current range of acute surgical services on a 24/7, 365 day a year basis, mainly due to international shortages of specialist medical staff, resulting in an increasing reliance on expensive locum staff and therefore a deteriorating financial performance.

Advantages: The public of the West Coast have an expectation that the current range of acute services will continue to be provided on the West Coast. In particular, they want the DHB to be able to manage acute presentations in periods of isolation due to inclement weather or due to a disaster such as plane crash or an earthquake.

Disadvantages: The continue provision of a full range of acute surgical services on a 24/7, 365 day a year basis necessarily involved the provision of a capacity for the provision of elective surgical services (theatres and staffing availability in between acute cases) that outweighs the West Coast populations demand. It is conceivable that this excess capacity could be sold to other DHBs, however this has proven impractical in the past.

Key Risk: The key risk of this option is the risk that the DHB will continue to struggle to attract and retain a full roster of surgical staff, resulting in increased costs through the engagement of locums and periods of service unavailability when locum staff are unavailable.

Mitigation Strategy: The main mitigation strategy for the risk that the DHB could continue to struggle to attract and retain a full roster of surgical staff involves the sharing of clinical staff with other DHBs so that they can be shared amongst DHBs in order to maintain service provision, resulting in increased costs through the

engagement of locums and periods of service unavailability when locum staff are unavailable.

Infrastructure Requirement: This option requires that the DHB have the capacity to cope with the range acute surgical interventions that it currently provides, alongside emergency department, radiology, internal medicine, high dependency unit, AT & R, mental health services, specialist dementia services, allied health, elective surgery and outpatient services. Capital Cost approx \$87M.

Model of Care Option 2. Low complexity services on the Coast

This model of care option is very similar to model of care option 1. It involves the continued provision of the current range of acute surgical services on the West Coast most of the time, with planned periods of unavailability for some services, managed through close support arrangements with other DHBs. Some acute services may be available 24/5, for example, really in response to the high cost of weekend cover and the onerous nature of providing 24/7 cover with a limited pool of specialist staff.

Current Issues: West Coast DHB is struggling to maintain the provision of its current range of acute surgical services on a 24/7, 365 day a year basis, mainly due to international shortages of specialist medical staff, resulting in an increasing reliance on expensive locum staff and therefore a deteriorating financial performance.

Advantages: This option allows for the continued provision of acute surgical services on the West Coast most of the time.

Disadvantages: The continue provision of a full range of acute surgical services on a 24/7, 365 day a year basis necessarily involved the provision of a capacity for the provision of elective surgical services (theatres and staffing availability in between acute cases) that outweighs the West Coast populations demand. It is conceivable that this excess capacity could be sold to other DHBs, however this has proven impractical in the past.

Key Risk: The key risk of this option is the risk that an acute service might not be available on the West Coast on a day that it is required for a life preserving function. There will be occasions when the unavailability of treatments that would otherwise be available on a different day of the week would result in disability or death, however there will occur at planned intervals, with alternative arrangements carefully planned in order to minimise risk.

Mitigation Strategy: The main mitigation strategy for the risk that the unavailability of treatments that would otherwise be available on a different day of the week involves planning the timing of service unavailability around times when there is the least risk of there being a requirement for surgical intervention. Generalist medical staff located in the emergency department will be upskilled, to be able to provide some surgical emergency interventions in cases where a patient would otherwise die, with remote support from another DHB. This essentially requires that these doctors work outside their normal scope of practice on occasions, putting both themselves and the patients at an increased risk than would otherwise be the case.

Infrastructure Requirement: This option requires that the DHB have the capacity to cope with the range acute surgical interventions that it currently provides (but with a

different level of availability), as well as providing emergency department, radiology, internal medicine, high dependency unit, AT & R, mental health services, specialist dementia services, allied health, elective surgery and outpatient services. Capital Cost approx \$87M.

Model of Care Option 3: Rural outpost

This model of care option involves the cessation of most of the current range of acute surgical services on the West Coast in favour of a “stabilise and transfer” model.

As mentioned above, the DHB would continue to provide emergency department, radiology, internal medicine, high dependency unit, AT & R, mental health services, specialist dementia services, allied health and outpatient services in Greymouth. There would also be limited elective surgery capacity (i.e. one theatre available) for use by visiting specialists. As a general rule, acute surgical intervention would be unavailable on the West Coast.

Advantages: The continue provision of a full range of acute surgical services on a 24/7, 365 day a year basis necessarily involved the provision of a capacity for the provision of elective surgical services (theatres and staffing availability in between acute cases) that outweighs the West Coast populations demand.

Disadvantages: The continue provision of a full range of acute surgical services on a 24/7, 365 day a year basis necessarily involved the provision of a capacity for the provision of elective surgical services (theatres and staffing availability in between acute cases) that outweighs the West Coast populations demand. It is conceivable that this excess capacity could be sold to other DHBs, however this has proven impractical in the past.

Key Risk: The key risk of this option relates to the fact that it would result in delays in access to acute surgical treatment, which will on occasion result in disability or death.

Mitigation Strategy: The main mitigation strategy for the risk that the unavailability of treatments that would otherwise be available on a different day of the week would result in disability or death involves the upskilling of generalist medical staff located in the emergency department, to be able to provide surgical interventions such as an emergency caesarean section in cases where a patient would otherwise die, with remote support from another DHB. This essentially requires that clinicians work outside their normal scope of practice on occasions, putting both themselves and the patients at an increased risk than would otherwise be the case.

Infrastructure Requirement: This option involves a deliberate decision not to build the capacity to cope with the range acute surgical interventions that West Coast DHB currently provides. The DHB would still need to provide emergency department, radiology, internal medicine, high dependency unit, AT & R, mental health services, specialist dementia services, allied health, elective surgery and outpatient services. Capital Cost approx \$70M. There would also be increased operating cost due to increased IDF costs and increase in patient transfer costs.

Other DHBs may need to construct additional surgical infrastructure in order to cope with demand from the West Coast population, including demand for elective surgical services.

Political Imperative: The main issue with this option is the impact of delayed access to acute surgical services on patient outcomes, with increased mortality and morbidity from a 3 hour increase in travel time (assuming an aircraft transfer in good weather) and a potential for a 3 day delay in access during periods of extreme winter weather. There are usually one or two occasions of a 3 day road closure on either Arthur's Pass or the Lewis Pass delay per annum and there are 30 to 60 occasions per annum where there is a partial unavailability of either road or air transport. These occasions relate to weather events that contribute to accidents and so correlate to times of demand for acute surgical intervention.

With this option, There is also a significant transfer of costs on to the community for those patients who need to access elective surgical services, as patients would have to travel an additional 3 hours and find overnight accommodation even for a routine elective day surgery procedure.

This option has been ruled out as the impact on patient health outcomes is considered to be politically unpalatable.

Model of Care – Co-location of Primary Health with Secondary Care

The primary health work stream (of the sustainability project) has recommended the building of a primary health care facility/medical centre as part of the proposed new Grey Base hospital facility. The proposal recommends that the primary health centre be attached to the secondary services but located and designed in such a way that it is "user friendly"; does not appear hospital focused, is a first point of contact visually for patients and readily accessible by the main route and entrance to the whole facility. The reasons for this relate to improved care for patients, improved sharing of scarce resources and improved efficiency.

Improved Care

- Primary health clinicians and patients have easy access to laboratory and radiology services (one stop shop)
- Patient pathways, referral processes, etc, can be streamlined, as all services will be co-located on the one site
- The primary facility can be utilised for after hours care provision and will be easy for patients to locate as well as being safer for lone primary clinicians
- Pharmacy services both dispensing and educational may be able to be co located with the primary health service
- Close proximity to community health services [district nursing, allied health etc] will improve intra professional communication and multi disciplinary health care management
- A triage nurse can assess patients as to the appropriate place of treatment (primary health or the emergency department)
- The hospital land is centrally located easy to find and easily accessible with potentially excellent parking, reducing the capital cost that would otherwise be required for a separately located primary health centre

Sharing of Scarce Resources

- There is a daily opportunity for strengthening peer support through “corridor” conversations with hospital based colleagues through shared café, amenities and work space
- The primary health and secondary care staff can share training sessions, facilities and opportunities within close location
- There can be shared clinical resourcing to flex between services, as demand requires
- Primary health clinicians and other staff would feel more collegially supported and less isolated

Efficiencies

- The practice(s) and other primary clinical functions can share scarce administrative resource under one roof
- The co-location of primary centre facilitates and enables Accident and Emergency staff to direct triage 4 and 5 patients to the more appropriate service
- Some costs could be shared
- There is opportunity for to extend the primary care facility and include retail outlets and for other primary health practices (at retail leasing rates) at some future date
- The arrangement would go a long way to address the presentation of triage 4 and 5 patients to A and E and after hours issues currently being experienced
- The primary health service would have ready access to outpatient clinics and improved access to visiting specialists
- Rooms could be set aside for local and visiting NGO consultations e.g. podiatrist, primary and secondary mental health, etc

Greymouth has a population of approximately 12,000 and is not big enough to have a primary health super clinic located elsewhere in Greymouth. The number of primary care professionals is short, due to challenges around recruitment and retention. A number of consumers with triage level 4 and 5 tend to go to Grey Base Hospital's Accident and Emergency department (average 20 per week day per for day time attendance) due to there being no cost and for easy access (waiting times at GP surgeries can be several weeks for a standard visit. Some GP practices have closed their books to new enrollees). The solution of co-location of primary health and secondary care matches the pattern of service provision elsewhere on the West Coast (Buller and Reefton for example). It would reduce individual practice overheads and make it a lot easier for locals and visitors to access primary care.

Risks

There are a relatively small number of risks with the co-location of primary health with secondary care. These include community perception of having primary services on a hospital site meaning all health care is sought at a “hospital” therefore not supporting the primary care direction of community based care. The mitigation for this is in the facility design, sign posting and car parking.

WORKFORCE PLANNING

Workforce requirements

Initial analysis has identified workforce saving in the following areas;

- Reduced staffing in the inpatient wards, due to the close integration and co-location of services
- Improved cover for the Emergency Department (reduced locum costs) , due to the co-location of primary health services
- Reduced locum costs through increased co-operation and collaborative staffing arrangements with other DHBs. These will be more expensive than if the West Coast DHB directly employed its own staff but cheaper than the DHB's current cost structure as the reality is that we are currently reliant on locum staff in a number of specialist disciplines
- There will also be a substantial shift in staffing for some services (including paediatric nursing and mental health services) to a more community focussed service

Each of these changes is expected to be managed through the re-assignment of staff and through attrition. No redundancies are anticipated.

Change Management

Over the next few years there will need to be many changes within the structure and functions of the services provided by the West Coast DHB. Some of those changes will be incremental in nature and others will be far more significant in size and impact.

The last 48 months (inclusive of the Buller Health project and the Grey Base 2020 project) has been a period of generating ideas, examining alternative models of care and exploring and planning associated service changes. There has been a considerable amount of communication and inclusion of employees, other clinicians and Colleges in these planning processes, including those that occurred as part of the sustainability project and this has created a certain amount of acceptance of the need to change. Employees can already begin to envisage the different roles and understand the ways in which services need to change. There is already an acceptance of the need for additional training and up-skilling and the need to change our workforce in order to deliver health services in a more sustainable manner.

In a rebuild of a hospital, whether via a green field approach or the refurbishment of existing buildings there is a need to carefully manage change. Inherent within this type of organisational change project are some significant risks. These revolve around the need for significant change to occur quickly in order to ensure that periods of employee uncertainty are short and so that resistance does not become embedded within the organisation. It is therefore imperative that decisions are made in a timely manner so that the period of instability is short and that the organisation can re-orientate itself quickly to the new facility and adapt systems and processes in order to implement the new model of care.

The West Coast DHB has so far followed a planned approach to organisational change. It has been deliberate and considered, with the development of strategic plans and business cases to mobilise the resources to be able to carry out the work involved to make these significant changes.

This is organisation wide change and also affects some other organisations in the future provision of services. The intended outcomes of this change proposal involve increasing the effectiveness and the health of the organisation, by using state of the art approaches to health care, utilising staff so that they are able to practice to the edges of their scopes of practice, improvements to the quality of health services with redefined roles and expanded scopes and living within the financial funding parameters.

Planning the changes throughout this project will be crucial to its success. There will need to be careful planning and coordination of the human resources of the organisation in order to be able to achieve the intended outcomes of the project. So far participation in the project has been considerable from Senior Managers, down through to tier four managers who in turn have had opportunities to consult with their teams who are operating at the coal face of the organisation. All Unions have had updates and some have attended briefings on this project.

Union discussions

There are eleven unions engaged as parties to various collective employment agreements at the WCDHB. The unions involved are as below in the table and this also identifies the different workforce groups that they represent.

UNION	WORKFORCE
NZ Public Service Association	<ul style="list-style-type: none"> • Mental, Community & Public Health Nursing • Allied and Technical Services • Clerical and Administrative • Home Based Support Workers • Unit Managers
NZ Nursing Organisation	<ul style="list-style-type: none"> • Secondary Service, Practice and Senior Nurses • Medical Practice Receptionists
National Distribution Union	<ul style="list-style-type: none"> • Pharmacy
APEX	<ul style="list-style-type: none"> • Medical Radiation Technologists
Resident Doctors Association	<ul style="list-style-type: none"> • Resident Medical Officers
Association of Salaried Medical Specialists	<ul style="list-style-type: none"> • Senior Medical Officers • General Practitioners • Medical Officers
Midwifery Employee Representation & Advisory Services	<ul style="list-style-type: none"> • Midwives
Amalgamated Workers Union of NZ Engineering, Printing and Manufacturing Union of NZ NZ Building Trades Union	<ul style="list-style-type: none"> • Trades • Laundry • Transport
Medical Laboratory Union	<ul style="list-style-type: none"> • Laboratory

As with the planning and analysis phases of this project, as any changes occur to service delivery and to facilities, there will need to be on-going discussion and consultation with staff and unions, both informally and formally. When organisational change is required, protocols will need to be followed that take into consideration the following.

1. Current legislative requirements.
2. Management of Change Policy and Procedure.
3. Collective and individual employment agreements and those provisions contained within.

Management of Change Process

West Coast DHB has a sophisticated change management process in place. The last major service reconfiguration that occurred on the West Coast involved the closure of the 130+ year old Seaview Psychiatric Hospital site as a result of the relocation of West Coast DHB's specialist dementia service to a new, purpose built Dementia Unit in Greymouth (November 2007).

This process involves agreeing change management principles with staff and unions prior to the formal initiation of a change process and sticking with these principles through the entire change process.

Lessons learned from the recent Dementia Unit change management process will be incorporated into the Grey Base Hospital change management process.

Principles

1. The primary objective of the change management process is to retain people in jobs and retain skills within the WCDHB. All options within employment contracts would be explored before any redundancies would be considered.
2. Management of change will be conducted in accordance with existing WCDHB policies, processes, systems and collective agreements.
3. All processes will be fair and transparent in accordance with the State Sector Act, and all affected employees will be treated the same within the process.
4. WCDHB will provide access to employee assistance programmes for affected employees and their families in order to help them to deal with issues as they arise out of the change process.

Conflict

If there is any conflict between the above process and employment agreement provision the applicable employment agreement will take precedence.

More detail can be added around reconfirmation and reassignment processes when the final mix of employees that are affected by the change has been determined and the relevant employment agreement arrangements have been consolidated into one combined change process.

FACILITY ANALYSIS AND REQUIREMENTS

Current Facilities – Configuration Issues

There are a number of configuration issues with the current Grey Base Hospital facility, rendering it inefficient, ineffective, and unsafe.

- Critical services (those where there is a likely hood of a patient requiring resuscitation) are spread across the hospital site with CCU, Paediatrics and Accident and Emergency Services effectively in three different corners of the hospital, making it both inefficient in terms of its staffing costs and potentially unsafe in terms of the ability for specialist resuscitation staff to back one-another up in an unexpected event.
- Medical and Surgical services are located on different floors, making it difficult to adjust bed numbers or staff numbers between these services in the case of a crisis or as a response to changing patient demand. These services cannot easily be changed in order to be co-located or integrated with one-another, partly because most of the ward areas of the hospital are on the second or third storey, increasing the cost of extending or changing them so that they are interconnected, and partly due to the seismic issue, as the Building Act requires that the building be substantially strengthened at the time that the DHB seeks a building consent in order to rectify this issue.
- As the owner of a number of primary health service, the West Coast DHB is a leader in the development of models of integrated service delivery, however, the DHB owned Primary Health practice in Greymouth is physically separate from the Grey Base Hospital facility (in a temporary premise that the DHB only has a short term lease for). This situation dramatically impedes the DHB's ability to realise service improvements and efficiencies that could be realised through the close integration of primary health and secondary care services in Greymouth.
- The current Greymouth Hospital site has insufficient office accommodation for the DHB's needs. The DHB is currently leasing an additional building in Greymouth. Some portions of the existing Greymouth Hospital facility will be converted into office space as part of this project.
- West Coast DHB cannot currently use all of the bed spaces available in Greymouth Hospital, however the size and configuration of the wards mean that the extra space cannot be re-configured into office space without negatively impacting on clinical service delivery.

Current Facilities –Infrastructure Issues

There are also a number of critical infrastructure issues with the current facility.

- In 2004, Government updated the Building Act, dramatically changing the structural (seismic) requirements for buildings that serve a post disaster function (including medical facilities). Grey Base Hospital contains a number of critical post-disaster services. yet most of the buildings don't even meet the seismic requirements for buildings which do not have a specific post disaster function.



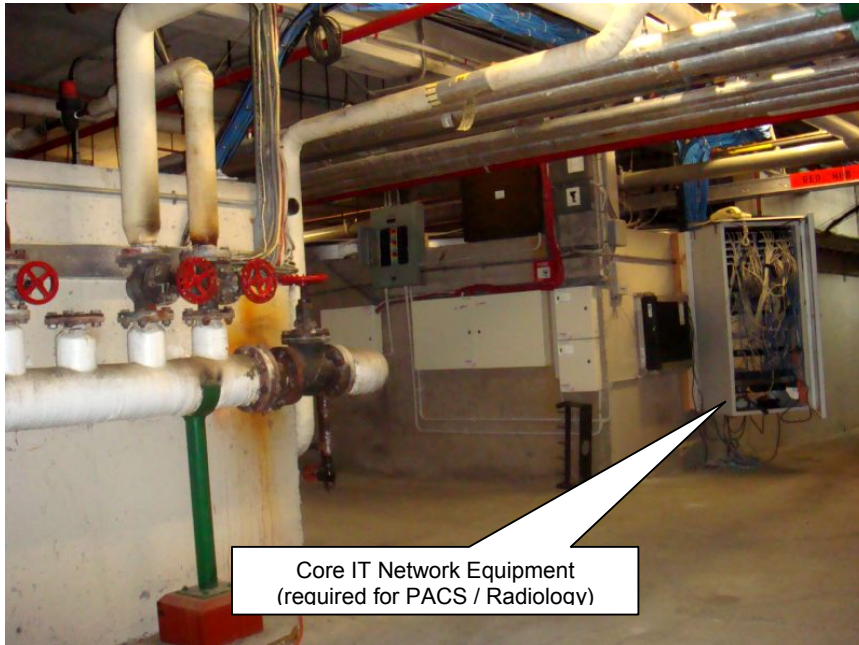
Picture – visible cracks in the water tank which acts as Greymouth Hospital's emergency water supply.

- The hospital has a flat roof with internally guttering, not an ideal design for an area that occasionally experiences heavy rainfall. The Butynol surface on the roof leaks and the flat concrete surface under then make it near impossible to find the actual source of the leaks.



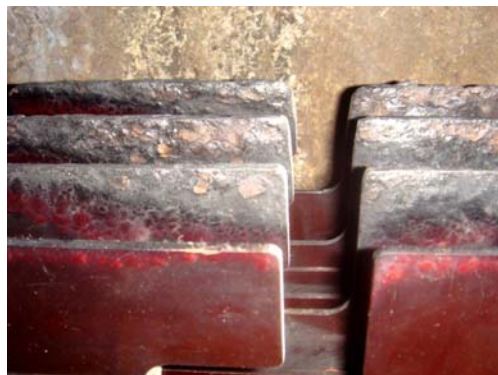
Picture – an example of Greymouth Hospitals flat roof.

- Many of the service ducts through the building contain electrical and IT services, alongside water reticulation, steam reticulation and internal guttering, a situation that dramatically increases the impact of what might otherwise be a minor water or steam leak.



Picture – Greymouth Hospital's main service duct. IT and electrical services are at risk in the case of a pipe leak.

- There is only one water supply into the site, an old (so potentially brittle) asbestos pipe that runs under the railway line. There is also only one electricity supply, though we have mitigated the direct risk of this issue by installing a new emergency generator.
- There is not a separate fire fighting ring main. As a result, the Greymouth Hospital facility does not comply with current fire safety requirements.
- Electrical services are due for a major upgrade mainly as a result of an electrical fire that occurred in one of the main switch boards in the early 1990's.



Picture – Burn marks on the electrical switch which feeds Greymouth Hospital's current theatre block.

- Parts of the facility still contain encapsulated asbestos.



Picture – The black polythene on the basement floor is in place in order to encapsulate asbestos.

- Access from emergency helicopter retrieval is inefficient as double transfers are required.

The Seismic Issue – Why is it a problem

“Greater attention is now being paid to seismic risk and as a consequence adverse seismic reports more common. It is important that these risks (which are not new risks, rather they are a continuation of the status quo since a building was opened) do not become key drivers of a major project. Although remedial action might reasonably be driven by an adverse seismic report, a major development should not be.”

- National Capital Committee, 2008.

West Coast DHB is aware of the National Capital Committee’s policy regarding seismic issues and so has focused our efforts on identifying a clinically sustainable model of care and identifying the best possible clinical configuration for new facilities.

The problem posed by the seismic issue is that the DHB cannot obtain any building consents for the Greymouth Hospital site what-so-ever, until the seismic issue is resolved. As a result, a growing number of relatively small service improvements have not been actioned and so clinical service delivery is becoming less and less effective over time and will continue to do so until the DHBs ability to maintain public confidence also becomes compromised.

Facility Options (including Fit with Site Master Plan)

West Coast DHB has completely revisited its facilities master planning for Greymouth Hospital site as a result of the independent review that was conducted in April 2008.

We have now sought detailed structural engineering advice regarding options for upgrading the existing facilities to meet current building act requirements, however this advice has been that a number of existing facilities cannot easily be strengthened to meet importance level 3 (for medical facility buildings that do not serve a post disaster function) and none of the buildings on site are able to be strengthened to meet importance level 4 (for buildings that serve a specific post disaster function).

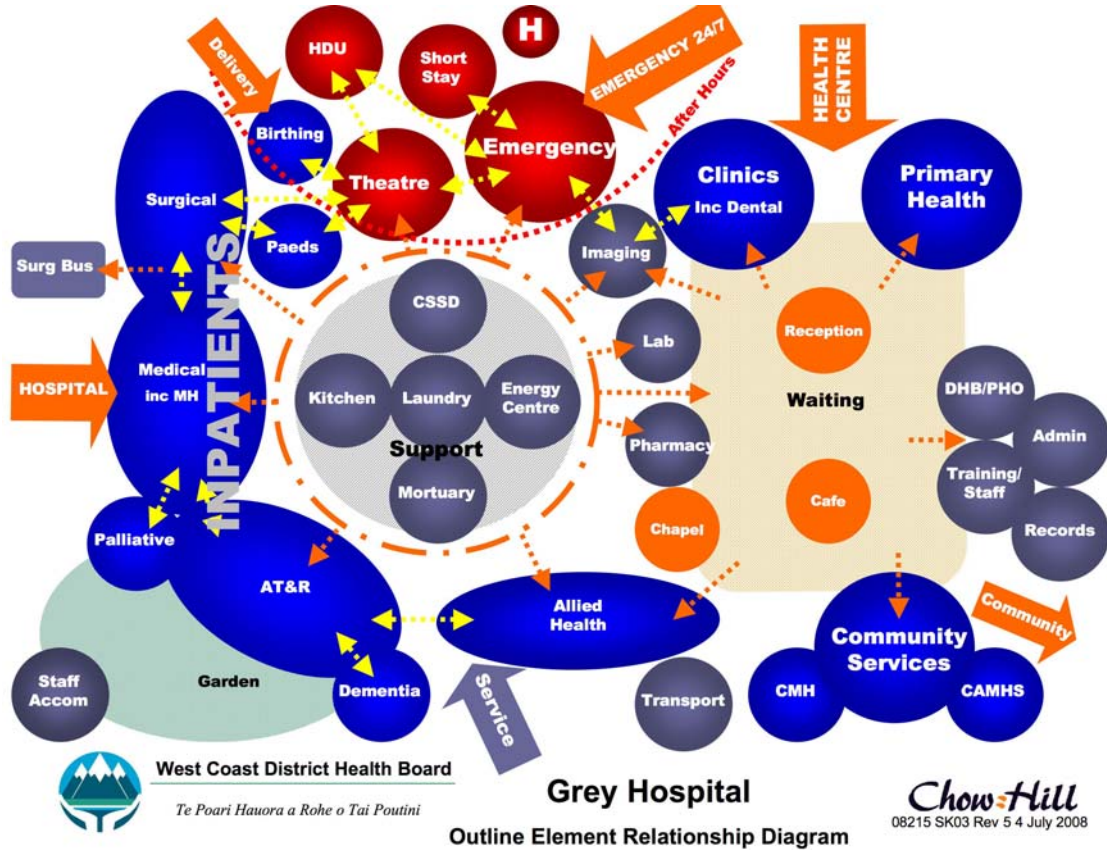
As a result, of this detailed seismic assessment work, all of the Brownfield options for the Grey Base Hospital facility necessarily involve significant sections of new construction.

The following master planning objectives have been used when conducting the master planning for this facility.

Master Planning Objectives

- Co-locate critical medical services (those where there is a likelihood of patient resuscitation in order to allow specialist resuscitation trained nurses to be co-located in order to support one-another in the case of an emergency)
- All wards are to be co-located and integrated in a way that allows bed numbers to flex between services based on patient demand
- All after hours services are to be co-located so that they share the same entrance for ease of access and security at night
- Allow for the collocation and integration of primary health services into the Grey Base Hospital site, key integration points for primary health include proximity to Outpatients (for shared clinic space), the emergency department (for redirection of inappropriate ED attendances), diagnostic services and a cafeteria
- Where possible, those buildings which meet current seismic requirements should be retained and integrated into the new facility
- Those services which serve a specific post-disaster function will need to be co-located in a purpose built post-disaster centre, in line with current seismic requirements
- Any related buildings will need to be bought up to at least 33% of the building act requirement for a non-post disaster facility
- The primary health portion of the facility needs to be able to expand if other practices choose to join it or as West Coast DHB's model of care becomes more weighted towards early healthy intervention and primary health
- Any other services which have uncertainty about future technological development or future demand need to be able to expand or contract in order to meet future models of care and changing future demand

The diagram below represents the service relationships and co-locations that we are trying to achieve during the master planning process.



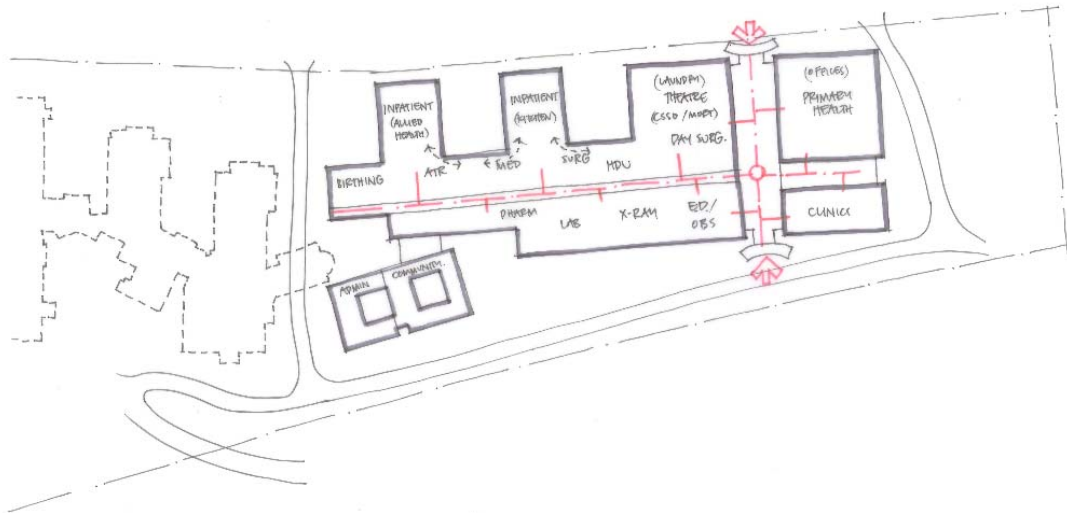
Option A - Greenfield Option

This option involves construction of a new purpose built Greenfield facility to the north of the existing Greymouth Hospital facility.

Advantages – a new, purpose built facility, designed to meet the DHB's clinical needs. Significantly reduced footprint when compared with the current Grey Base Hospital facility.

Disadvantages – the narrowing site compromises access to the facility. Parking space would be available to the north and to the south of the facility, however access to individual wards and departments is compromised. The dementia Unit would be left isolated at the south end of the site. Parts of the essential services block are in an area which may be subject to flood or tsunami risk, however the Greenfield option could be re-configured in order to mitigate this issue.

Options for improvement – Clinical staff reviewing this plan have suggested flipping it end for end, so that primary health and outpatient services can be accessed from the railway overbridge into the site.



Master Site Plan - Greenfield Option
08215 SK21 Rev1 12 August 2008 Not to Scale



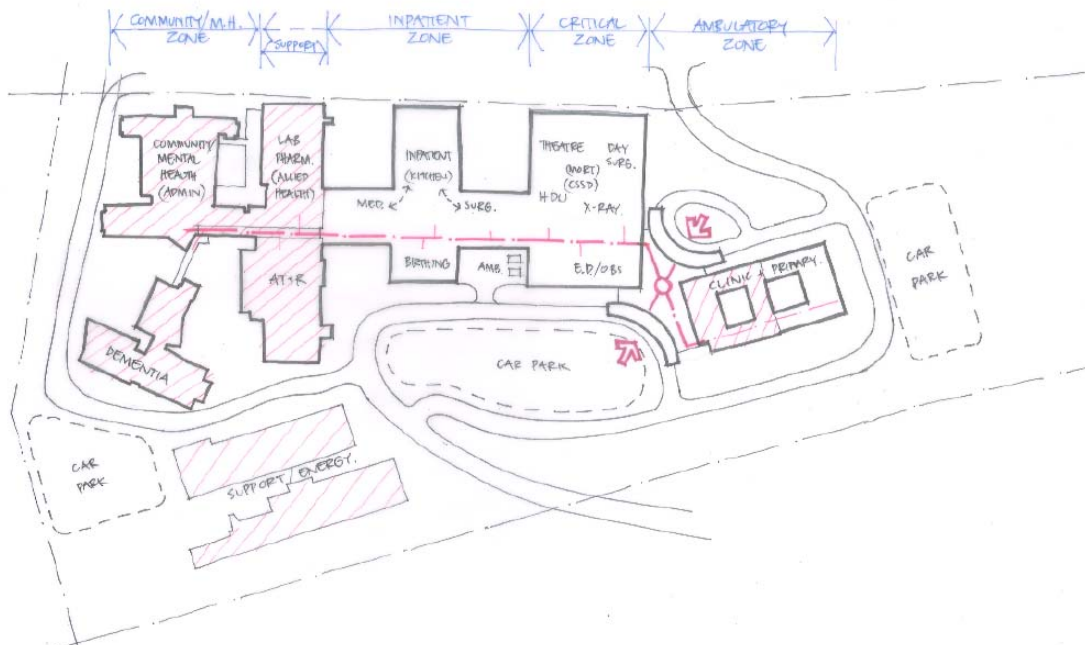
Indicative capital cost \$110 Million.

Option B – Brownfield 1 Option

This option involves construction of a new purpose built essential services block (theatre, emergency department, high dependency unit and limited bed capacity) and an interconnected ward block in the location of the existing Grey Base Hospital facility.

Advantages – a number of existing buildings are retained. There is a logical connection between existing and new buildings. Some services (lab, pharmacy, mental health) do not need to relocate at all.

Disadvantages – some service disruption during construction and during the strengthening process for the portions of the existing facility that are retained. Considerable strengthening work is required for those facilities that are retained. Parts of the essential services block are in an area which may be subject to flood or tsunami risk.



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

Master Site Plan - Brownfield 1 Option

08215 SK22 8 August 2008 Not to Scale



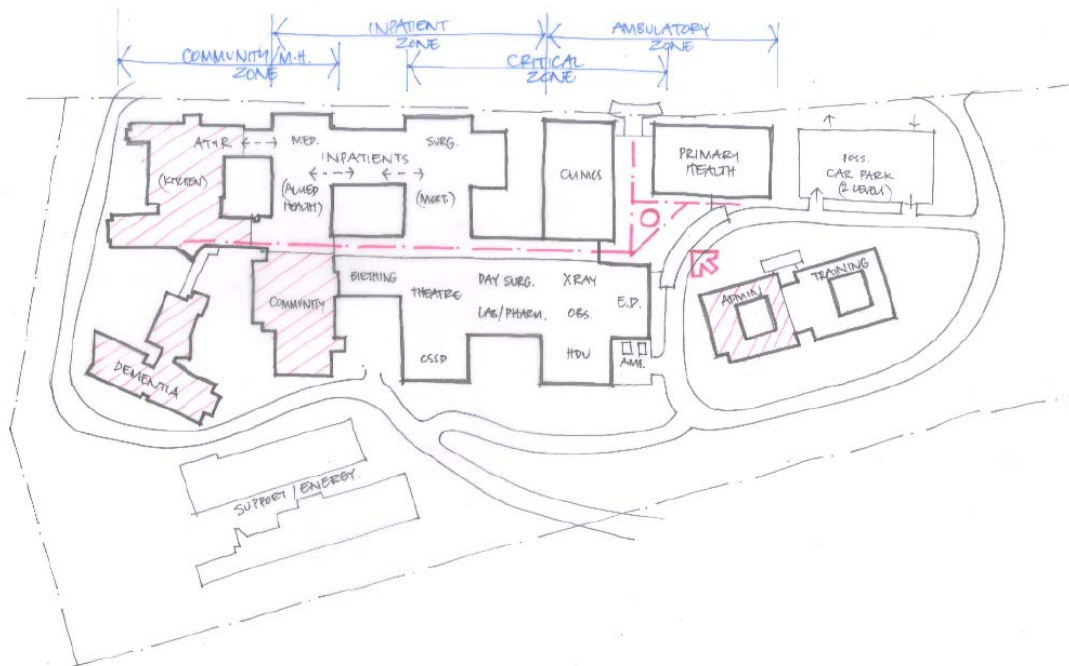
Indicative capital cost \$99 Million.

Option C – Brownfield 2 Option

This option involves construction of a new purpose built essential services block (theatre, emergency department, high dependency unit and limited bed capacity) and an interconnected ward block in the location of the existing Grey Base Hospital facility.

Advantages – a number of existing buildings are retained. There is a logical connection between existing and new buildings. Some services (lab, pharmacy, mental health) do not need to relocate at all.

Disadvantages – some service disruption during construction and during the strengthening process for the portions of the existing facility that are retained. Considerable strengthening work is required for those facilities that are retained.



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

Master Site Plan - Brownfield 2 Option

08215 SK23 8 August 2008 Not to Scale



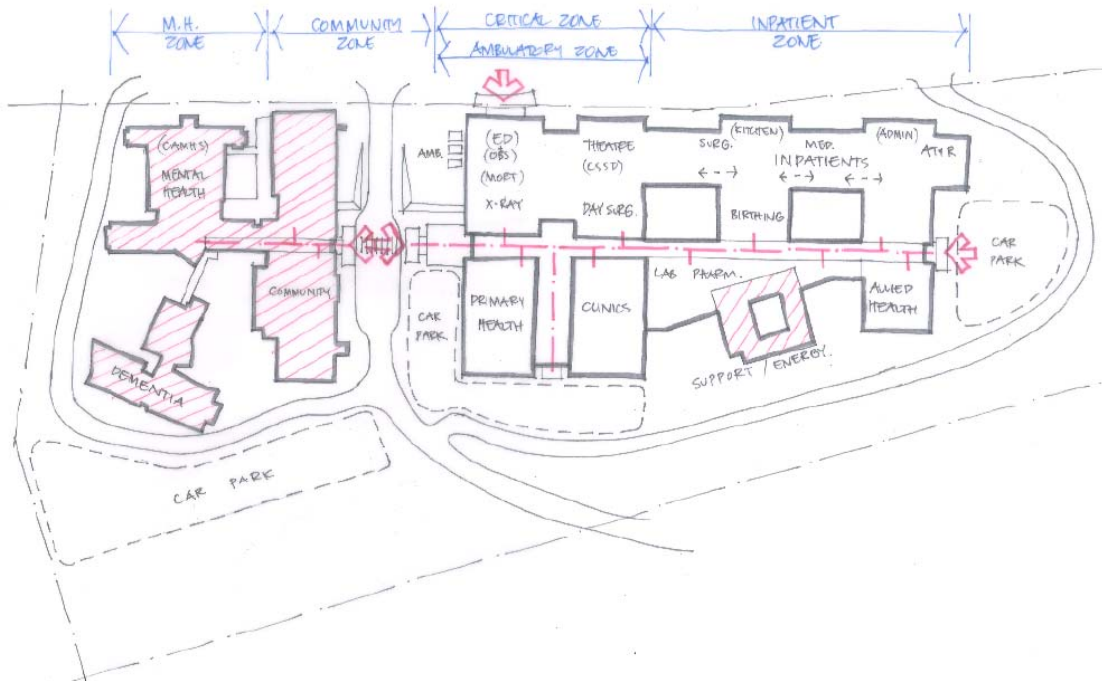
Indicative capital cost \$99 Million.

Option D – Brownfield 3 Option

This option involves construction of a new purpose built essential services block (theatre, emergency department, high dependency unit and limited bed capacity) in the location of the existing Grey Base Hospital facility with an interconnected ward block extending to the north of the existing facility.

Advantages – a number of existing buildings are retained. Some services do not need to be relocated at all. Additional connections between wards increase the flexibility..

Disadvantages – Good access but limited car parking. Limited space for primary health services to expand (doing so comes at the cost of the car park). Parts of the essential services block are in an area which may be subject to flood or tsunami risk.



West Coast District Health Board
Te Pouri Hauora o Rohe o Tai Poutini

Master Site Plan - Brownfield 3 Option

08215 SK24 8 August 2008 Not to Scale



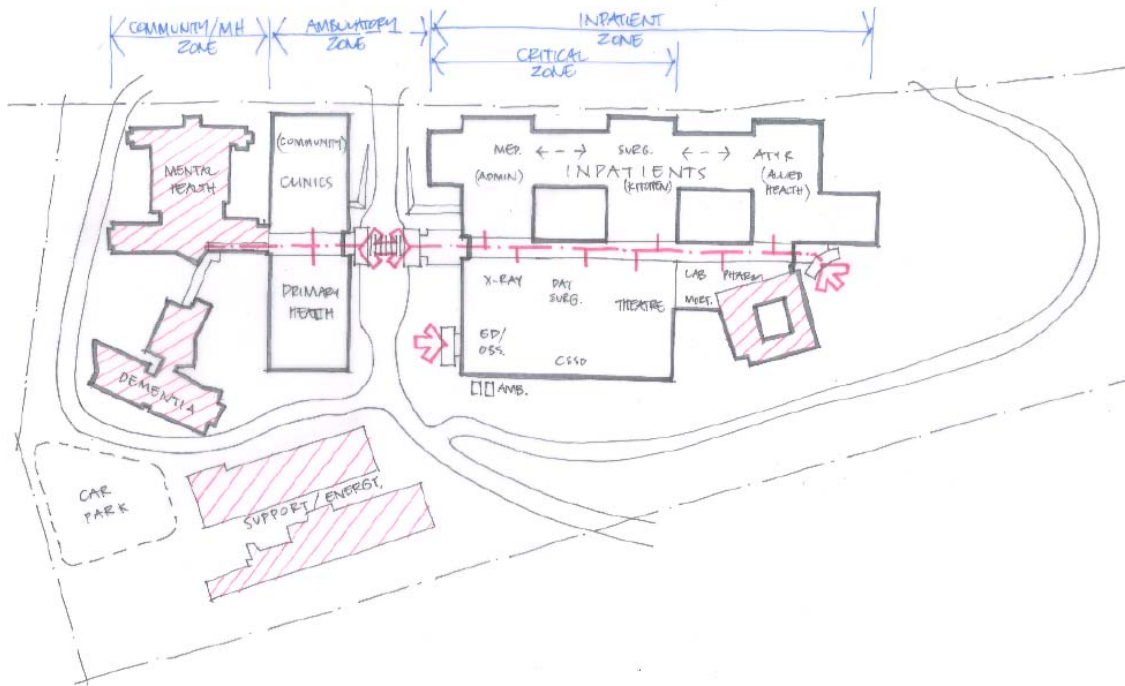
Indicative capital cost \$99 Million.

Option E – Brownfield 4 Option

This option involves construction of a new purpose built essential services block (theatre, emergency department, high dependency unit and limited bed capacity) in the location of the existing Grey Base Hospital facility with an interconnected ward block extending to the north west of the existing facility.

Advantages – some existing buildings are retained. The medical and surgical portion of the hospital is a new, purpose built facility, designed to meet the DHB’s clinical needs. This is a significantly reduced footprint when compared with the current Grey Base Hospital facility. Additional connections between wards increase the flexibility. The essential services block is on the higher part for the site (reducing the flood or tsunami risk).

Disadvantages – Good access but limited car parking. Limited space for primary health services to expand (doing so comes at the cost of the car park).



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

Master Site Plan - Brownfield 4 Option

08215 SK25 8 August 2008 Not to Scale



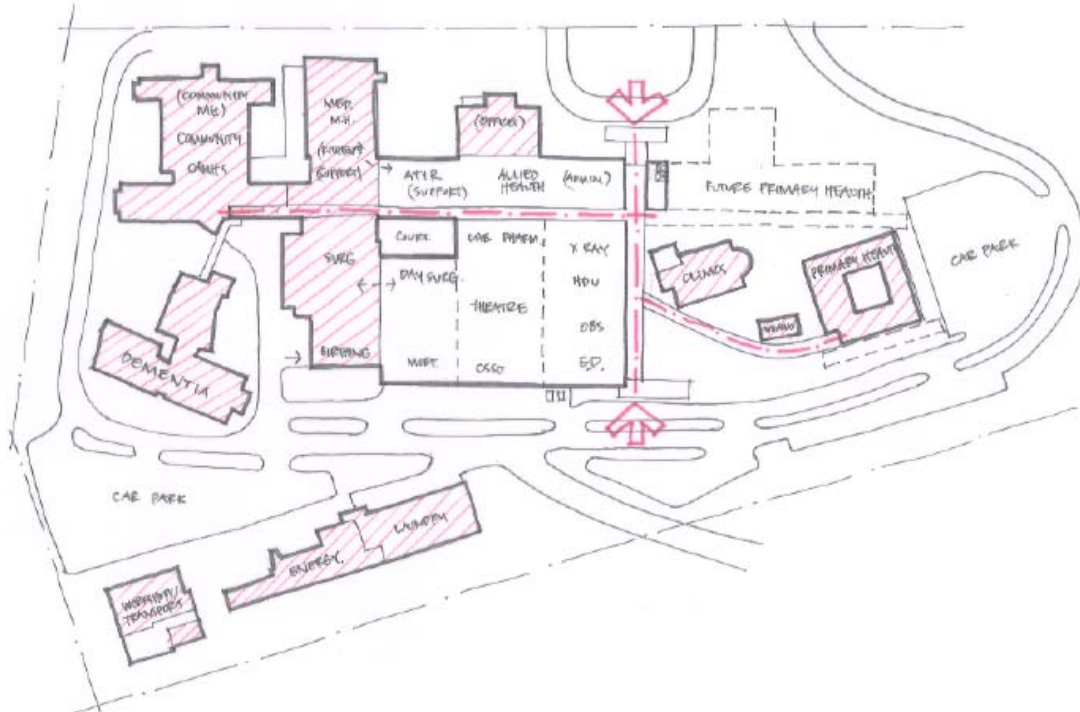
Indicative capital cost \$99 Million.

Option F – Brownfield 5 Option (This is the Preferred Option)

This option was designed as a response to the capital cost of the previous 5 options and involves deliberately retaining as much of the existing building stock as possible, in order to minimise capital cost. There is still the need to construct a new purpose built essential services block (theatre, emergency department, high dependency unit and limited bed capacity) in the location of the existing Grey Base Hospital facility with an interconnected ward block extending to the north west of the existing facility.

Advantages – a number of existing buildings are retained. This is a compact design, with most of the new build being single storey. The essential services block is on the higher part for the site (reducing the flood or tsunami risk). Good access. Plenty of space for car parking. Plenty of space for primary health services to expand (doing so comes at the cost of the car park).

Disadvantages – Construction will need to occur in close proximity to where health services are being provided. The decanting and relocation process will be quite complex.



West Coast District Health Board
Te Pouri Hauora o Rūhe o Tai Poutini

Master Site Plan - Brownfield 5 Option

08215 SK28 Rev 2 18 August 2008 Not to Scale



Indicative capital cost \$87 Million.

Economic Appraisal

West Coast DHB have identified a number of facilities options for the Grey Base Hospital.

The initial options that we investigated have indicative construction costs that are simply too expensive (\$99M for a Brownfield construction and \$110M for a Greenfield construction).

As a result, West Coast DHB has developed an additional option, which involves retaining and upgrading as much of the existing building stock as possible, in order to minimise the amount of new construction and therefore minimise capital cost. The capital cost for this option is \$87M.

We estimate that the fabric of the new portion of the building will have a useful life of 50 years, however plumbing, cabling and other services (approximately 25% of the building cost) will have a useful life of just 20 years. We also estimate that refurbished buildings will have a useful life of 20 years. Based on this apportionment, the depreciation costs for the \$87M option will amount to \$3.3M per annum. (The depreciation cost for current Greymouth Hospital facility equates to \$2.2M per annum).

Financing costs for the \$87M option are estimated to cost \$6.3M per annum. (based on \$35M equity at 8% per annum and \$52M of debt at 6.7% per annum).

We have identified operational savings of approximately \$1.25M per annum from this project. These savings are insufficient to offset the increased Capital, Interest and Depreciation Costs that would result from undertaking the project.

The Preferred Option

The preferred option is the Brownfield option 5, due to its lower capital cost and due to the retention of some of the character of the old Grey Base Hospital facility. The retained buildings are those which already meet fire requirements or which have been identified as being able to be upgraded to meet current seismic requirements during the detailed seismic assessment process.

Comparison to the Cost Signalled in the Strategic Stage Business Case

At \$87 million, this project is significantly dearer than the \$60 million figure originally signalled in West Coast DHB's Strategic Stage Business Case.

The \$60M figure signalled in the strategic stage was developed in late 2006, for submission to NCC in 2007. The estimate specifically excluded any allowance for inflation, where as the \$87M estimate includes an allowance for escalation through to the project completion date in 2011. With construction cost inflation of around 4% per annum, the \$60M in 2006 is \$73M in 2011.

We have now conducted a detailed site master planning exercise and developed a more detailed schedule of accommodation, which identifies the need for 2000m² more floor area than the 15,000m² estimate that the \$60M figure was based on. (bringing the adjusted \$60M figure of \$73M up to \$81M).

We have also conducted a detailed analysis of the seismic issues identified for the Greymouth hospital site and have included accurate costs for strengthening those buildings which will be retained, increasing the cost by \$6M (and so bringing the revised \$81M figure up to \$87M).

Identification of Efficiencies

West Coast DHB is still working through our detailed financial modelling process in order to determine all of the potential cost savings and efficiencies from undertaking this project. We have, however, identified \$1.25M of operational savings for the Greenfield and Brownfield facilities options, when compared against status quo.

Proposed Savings

Staffing Efficiencies – integrated wards	\$640K
Staffing Efficiencies – co-location of primary health	\$275K
Reduced rental expenditure (primary health)	\$165K
Reduced Locum Costs	\$1,200 K
Shared staffing and increased collaboration	(\$ 900 K)
Increased IDF Costs	(\$ 200 K)
Reduced Maintenance Costs	\$150 K
Net Efficiency Gain	\$1258K

The staffing efficiencies effectively equate to the DHB not having to fill the redundancies that it is currently struggling with and so it anticipates that they will be realised through attrition rather than by way of redundancies.

There is also the potential of further savings (up to \$2.0M per annum) in recruitment and locum staffing costs due to the improved ability to attract and retain clinical staff with a fresh new facility.

These indicative savings are insufficient to offset the increased Capital Charge and Interest Costs that would result from undertaking the project (\$6.3M per annum) and the increased Depreciation Cost (\$1.1M per annum increase over the current cost).

Consequential impacts on other departments/facilities/infrastructure/IT Systems

West Coast DHB's IT infrastructure for all of its services throughout the West Coast is hosted from Greymouth. The cost of relocating this equipment and maintaining service provision during the redevelopment project is included in the capital cost for the project.

The cost of upgrading water, heating, and electrical infrastructure is also included in the capital costs indicated in this business case.

Financial impacts on other DHBs

A significant portion of the higher level acute and all tertiary West Coast population's health needs are already met through collaborative arrangements with Canterbury and Nelson Marlborough District Health Boards. This includes the provision of outpatient clinics on the West Coast by clinicians employed by other DHB's and referral of a number of medical and

surgical patients for treatment by Canterbury and Nelson Marlborough District Health Boards.

In 2007-08, 1270 patients received services from Canterbury DHB and 125 patients received services from Nelson Marlborough DHB. These increased to 2184 and 215 respectively in the 2007/08 year. The majority of the Canterbury DHB volumes were for tertiary services, however some of the 2007/08 Inter District Flows (IDF's) (particularly obstetric) were a direct result of workforce shortages at West Coast DHB.

Under the proposed model of care the following broad changes will occur;

- For the most part, direct patient referrals (and resulting IDF's) from West Coast District Health Board would remain unaltered, but planned for in a partnership model with back up arrangements.
- There will be reduced surgical capacity available on the West Coast during weekends and so WCDHB as part of the sub regional DHB collective arrangements will be reliant on other District Health Board's to provide cover (either at WCDHB or from their DHB).
 - In 2007, there were 120 (100 acute admissions and 20 arranged or elective) operations undertaken on weekends. This suggests that 2 operations per weekend would be required off the Coast for WCDHB patients.
 - If WCDHB's surgical cover was provided by another DHB three weekends out of four, then approximately 6 patients a month would be transferred off the coast for their surgery.
 - If all after hours surgical cover was provided through a subregional arrangement where patients receive surgery off the Coast this would affect 213 patients (120 of whom receive surgery on weekends).
 - As there may be times when transfers off the Coast cannot be undertaken, a back-up arrangement would have to be in place to ensure patient safety if sub-regional arrangements of this nature was put in place.
- Day surgery volumes could potentially be increased (perhaps with volumes from other DHB's) without increasing the bed capacity requirement in Greymouth.

It is predicted that West Coast DHB's ability to provide secondary care services will continue to deteriorate if this project does not proceed as planned. This could result in up to 7,000 patients per annum requiring services from other hospitals under a stabilise and transfer model, necessitating investment in new transport, accommodation infrastructure as well as a significant investment in health service infrastructure both on the West Coast (the stabilisation facility will need to be post-disaster compliant) and for receiving DHBs.

Detailed capital cost estimate

A high level costing estimate has been conducted for the Greenfield option (identified as Option A in this document, \$110M) and two of the initial Brownfield options (identified as Options C and E in this document, each \$99M).

The \$87M Brownfield option (Option F), which is now our preferred option was developed by evaluating the costs from options A, C and E and identifying ways of managing them, whilst still meeting the DHB's clinical requirements.

Our Quantity Surveyor is now conducting a detailed analysis of option F in order to confirm the accuracy of our calculations (see appendix 12).

Preferred and alternative staging options and prioritisation

Staging options have been developed for each of the Brownfield facilities options presented in this paper. These generally involve the construction of new wards and the relocation of patients into them for the time that it takes to then construct the post disaster centre (emergency department, theatres, etc) in an area vacated by the ward relocation.

The staging options for our preferred option (Option F – Brownfield Option 5) are quite complex and involve three different construction stages. The \$12M saving in capital cost (compared to the other options that we've identified) is sufficient to make this additional disruption and related management effort worthwhile.

FINANCIAL ANALYSIS

DHB's overall ability to afford the project

West Coast DHB is New Zealand's most sparsely populated District Health Board, with 1/10th of New Zealand's average population density. The West Coast population is relatively evenly spread over the District and access to alternative services is problematic due to distance and geography.

There is now widespread agreement, from Ministerial level down, that the pure population based funding alone will never meet the needs of a DHB that is so far from the average population density or average distance to an alternative service. As a result, the West Coast DHB is currently engaged in a joint sustainability project with the Ministry of Health, in order to determine how the DHB will be funded into the future.

The sustainability project is due to make recommendations about the future funding process for the West Coast DHB in November 2008. The question of affordability (and indeed modelling of the DHB's future financial position and financial performance) is unable to be accurately completed until the funding decisions that the WCDHB sustainability project is seeking to inform have been made.

Impact on DHB balance sheet and statement of financial performance

Although the future funding path is yet to be finalised, the impact on the DHB of progressing this proposal has been quantified.

Staffing Efficiencies – integrated wards	\$640K
Staffing Efficiencies – co-location of primary health	\$275K
Reduced rental expenditure (primary health)	\$165K
Reduced Locum Costs	\$1,200 K
Shared staffing and increased collaboration	(\$ 900 K)
Increased IDF Costs	(\$ 200 K)
Reduced Maintenance Costs	\$150 K
Net Efficiency Gain	\$1258K

There is also the potential of a further savings in recruitment and locum staffing costs due to the improved ability to attract and retain clinical staff with an efficient new facility. These will be modelled into projected financial statements later in the Sustainability project.

These indicative savings from this project are insufficient to offset the increased Capital and Interest costs that would result from undertaking the project (estimated at \$6.3M based on a \$87M brown field build).

WCDHB's ability to afford the project under the various future funding scenarios that are being investigated within the joint Ministry of Health / West Coast DHB Sustainability Project

Project financing

The capital cost for the Buller Greymouth Hospital project is currently estimated to be \$87 million. This will be funded by a mixture of Debt and Equity.

West Coast DHB (Asset Sales)	\$ 1 M
CHFA Debt	\$ 51 M
Crown Equity	\$ 35 M

DHB Financial Contribution

West Coast DHB has incurred three consecutive years of deficit financial performance, all of which it has funded internally, without the need for deficit support, effectively eroding the DHB's cash reserves in order to maintain the provision of health services.

As a result, the DHB only has a limited ability to contribute to the capital cost of this project. West Coast DHB is planning to sell some surplus land adjacent to the Greymouth site (the Mobil service station site across the railway line from the current and proposed future hospital site) and will apply the proceeds from this (estimated to be \$1M) to the Grey Base Hospital project.

Financing Mix Actually Sought

CHFA Debt	\$ 51 M
Crown Equity	\$ 35 M

Debt and Equity requirements

West Coast DHB intends to repay the debt, by way of an amortised loan, spread over 40 years, however the ability to do so is dependant on the funding for this being provided within the future funding model for the West Coast DHB, which will be decided in the next phase of the Sustainability Project.

Consequential financial impacts

All consequential impacts from the project will be modelled into the DHB's future operating costs and included in its future funding requirements for the joint Ministry of Health / West Coast DHB sustainability project.

Efficiency gains

As mentioned above, West Coast DHB is still working through our detailed financial modelling process in order to determine its ongoing funding requirements for the sustainability project.

We have identified \$1.25M of operational savings for the Greenfield and Brownfield facilities options, when compared against status quo. There is also the potential of a further \$2M of savings in recruitment and locum staffing costs due to the improved ability to attract and retain clinical staff with a flash new facility.

Demonstrate that breakeven requirement is met

West Coast DHB will not break even as a result of undertaking this project unless the DHB's funding increases as a result of the Sustainability Project.

The savings identified are insufficient to cover the capital costs of the project, however, the project is essential to ensure the ongoing clinical and physical sustainability of health services of the West Coast.

The DHB's ability to afford the financial implications of this project are dependant on the outcome of the review of West Coast DHB's funding that is to occur at the end of the Joint Ministry of Health / West Coast DHB Sustainability Project.

West Coast DHB anticipates that the costs of alternative options (involving construction of a post disaster stabilisation centre on the West Coast and expanding or developing the facilities of a neighbouring DHB in order to cope with patient volumes from the West Coast, along with increased transport and accommodation costs) would be higher than the cost of this proposal.

Project in the context of the DHB's overall capital plans

West Coast DHB is in a process of systematically upgrading all of its health facilities, many of which has been more neglected for years, due to the DHB's ongoing funding difficulties, which date back to changes made in the 1993 health reforms. This project is the largest of many facilities reconfiguration projects planned by the DHB and is one of three remaining projects (after the 2007 Dementia Unit project) requiring NCC funding and approval.

Fit with the Asset Management Plan

The Grey Base Hospital project is one of a number of capital projects signalled in the DHB's 2005 Asset Management Plan. West Coast DHB plans to update its Asset Management Plan in 2008, however this has been timed to occur after the completion of the Joint Ministry of Health / West coast DHB Sustainability Project.

Forecast Financial Statements

Forecast Financial statements have not been included in this business case submission as the DHB's ability to afford this project is subject to the review of its funding, which is still being completed as part of the joint Ministry of Health / West Coast DHB Sustainability Project.

IMPLEMENTATION AND POST PROJECT REVIEW

Overview of Project Plan

Project Name; Greymouth Hospital – Facilities Renewal

Project Objectives;

To construct and implement new or upgraded facilities for Greymouth Hospital.

- Design and construction of a purpose built hospital for Greymouth.
- Upgrade of any retained facilities to meet current facilities and service provision standards.
- Demolition of those unsafe or derelict facilities that cannot be upgraded or retained.

Anticipated Cost; **To be Finalised.**

Project Manager; *To be appointed*
Project Sponsor; *General Manager – Corporate Services*
Project Owner; *Chief Executive Officer*

Start Date; TBC when approved **Finish Date;** TBC when approved

Project Approach;

It is anticipated that there will be a number of simultaneous work streams involved in the project and that specialist members of the project team will be selected to manage each work stream as separate but interrelated sub-projects, each reporting to the overall project manager.

Design and Construction work stream – All building design, construction, seismic compliance, fire compliance and any demolition work. This workstream will be split into sub-work streams for the detailed design of each major clinical area.

Continuity of Service work stream – RFP, tender process and selection of providers and clinical hand over for services being exited by the DHB. Planning and implementation of any temporary service arrangements in order to allow for construction activities.

Clinical Integration work stream – Enhancement of the integrated service model for the provision of health services in Greymouth. (The clinical side of managing change and implementing new work practices).

HR Management of Change work stream – Human resources planning and management of issues relating to the relocation and retention of selected staff and the redeployment or redundancy of others. (The business side of managing changes in staffing requirements).

Project Scope – What’s In;

- Finalising design, construction of the new Hospital Facility.
- Upgrade of any retained facilities including seismic compliance and fire compliance and asbestos removal.
- HR management of change.
- Clinical management including managing the exit of some services.
- Transition and exit planning.

Project Scope – What’s Out;

- Construction of a Residential Mental Health Facility for 5 of the 7 planned mental health beds. (We are seeking an independent NGO provider for these).
- Management of services post hand over.

Resources / Departmental Involvement;

Project Manager (full time)

- Management of all project staff.
- Reporting project progress.
- Responsibility for meeting project objectives and deadlines.
- Documentation of all project activities including post project debriefing and documentation of project learning.

Clinical Coordinator

- Development and implementation of integrated care model.
- Lead clinical expert group for clinical signoff of design and modifications.

Secondary Care Service

- Final owner of the Greymouth Hospital Facility.
- Involvement in HR and Clinical aspects of the project.

Mental Health Service

- Final owner of Mental Health portion of the Facility.
- Involvement in HR and Clinical aspects of the project.

Primary Health Service

- Final owner of the Primary Health portion of the Facility.
- Involvement in HR and Clinical aspects of the project.

Planning and Funding

- Selection of external providers for services being exited.
- Funding arrangements with external providers of services that are being exited.

Facilities Management

- Provision of trades staff and associated support, review of construction plans and processes.

West Coast DHB Grey Base Hospital Business Case
August 2008

Milestone Schedule

Clinical and HR aspects of the project will be timed around the construction work stream, such that clinical and HR plans and processes are finalised and in place for each stage of the construction work that requires them.

Dates for milestone completion will be added when the project approval is confirmed (allowing a start date to then be fixed).

Milestone Responsibility Chart

		Version 1											
		Date 4/8/08											
Milestone Responsibility Matrix Greymouth Hospital Project		CEO	Project Sponsor	Project Manager	Clinical Co-ord	Architects	Construct Contractor	Mental Health	Medical / Surgical	Primary H Mgmt	Planning & Funding	Human Resources	Finance
1.X	Project Mgmt Workstream												
	1.0 Appoint Project Manager	C, A	D, X										
	1.0 Appoint Project Team		D	d, X									
	1.1 Project reporting system developed	C	D	d, X								a	a
	1.2 Project communication systems	C	D	d, X				I	I	I	I	C	
	1.3 Opening Ceremony	D	d, X	C	I	I	I	I	X	I	I	I	I
	1.4 Final Debriefing & Documentation	I	D, X	d, X	C	a	a	C	C	C			a
2.X	Construction Workstream												
	2.1 Tender for / Appoint Architects	I	D	X				C	C	C			
	2.2 Preliminary Design Signoff		D	D	C			C	C	C			
	2.3 Detailed Design Signoff		D	D	C			C	C	C			
	2.4 Resource Consent Process		X	X		X		a	a	a	a		
	2.5 Tender for / Appoint Construction	I	D	D		C		I	I	I			
	2.6 Construction Activities		C	C	C	D	X	I	I	I			
	2.7 Compliance Signoff	I	D	D	C	d		C	C	C			
	2.8 Construction Debriefing	I		I		D, X	C						
3.X	HR / Mgmt of Change Workstream												
	3.1 HR Plan Developed	I	I	I	C			d	d	d		d, X	
	3.2 Staff consultation initiated	I						X	X	X		D, X	
	3.3 First round of redundancies	I						D		D		X	
4.X	Clinical Workstream												
	4.1 Expert Group formed	I			D					d			
	4.2 Integrated Service Model		I	I	D, X					C			
	4.3 Clinical Review of Construction		I	I	D	C	a						
	4.4 Patient Placement Plan	I	I	I	D			d	d	d	C		
	4.5 Admission Cut-off Aged Care	I	I	I	D	C	a	d	d	d	I		
	4.6 Patient Placement for construction	I	I	I	D	C	a	d	d	d	I		
	4.7 Patient relocation to new Unit	I	I	I	D	a	a	X	X	X	I		
	4.8 Clinical Debriefing		I	I	D, X								
5.X	Aged Care WorkStream												
	5.1 RFP - Provision of Services	I			C			C	C	C	D, X		
	5.2 Tenders - Provision of Services	I			C			C	C	C	D, X		
	5.3 Provider Selection	I			C			C	C	C	D, X		
	5.4 Legal Documentation										D, X		
	5.5 Provider Design / Construction	I						I	I	I	C		
	5.6 Patients relocated	I						D, X	D, X	D, X			

X=executes the work; P=manages Progress; C=must be Consulted; p=manages function progress
D=overall Decision maker, d=joint decision maker, I=must be informed; a=available to Advise; T=arrange training.

Key Stakeholders**Staff** (Secondary Care, Mental health, Allied Health, Primary Health, Food / Cleaning, Orderlies and Grounds Contractors)**Patients** including Families, Patient Advocates**Ministry of Health****Support Services** to Buller Health (Ambulance Provider, Food / Cleaning, clinical services)**The West Coast communities** (District Councils)**Board of Directors**

Group	Benefits	Risks	Influence (1-5)	Interest (1-5)	Importance (1-5)	Management Strategy	Responsibility
Staff	Certainty Potential Redeployment.	Redundancy Industrial Strife	5	5	5	Industrial Relations Management of change process. Newsletter Updates	Human Resources Project Manager
Patients	Certainty Modern, purpose built facilities.	Changes in provider, staffing and location.	5	5	5	Families / Advocates; Written communication Patients; Counselling and assistance	CEO GM responsible for services concerned
Ministry of Health	Certainty of service provision	Funding overruns, Political Risks	5	3	4	Monthly updates	CEO GM Mental Health GM Finance
Support Services	Certainty	Loss of Income	3	3	3	Management of change process.	CEO GM Operations
Community	Certainty	Loss of Jobs Continuity of Health Service	3	3	3	Updates to Mayors Press Releases	CEO Project Manager
Board	Financial and Clinical	Project failure	5	5	5	Monthly Updates (Weekly updates to Mgmt team)	CEO Project Manager

High Level Risks

- Vacation of some existing facilities in order to carry out seismic and fire upgrade work
- Identification and attraction of providers for services that are to be exited
- Need to ensure clinical signoff and buy in to building design and specifications and to changes to clinical practices resulting from the co-location of services
- Management of the public expectation during the detailed design and construction process
- Consent approval process / timeframe

Procurement options

West Coast DHB will contract specialist project managers for the construction of Greymouth Hospital. This may result in the project being managed by the Canterbury DHB site management team or by independent contractors. Project management costs are included in the financial estimates in this report.

The project managers will then conduct a tender for architects and consultants for the detailed design, consents and construction phases of the project and then for construction contractors and the construction of the Hospital.

This is a very large construction projects by West Coast standards so there is likely to be interest from contractors from Auckland, Wellington and Christchurch as well as contractors that are based on the West Coast.

Implementation management

The construction process will be led by the project managers, with guidance from WCDHB's and Canterbury DHB's site development team. This will allow joint project management, skill transfer from Canterbury DHB to West Coast DHB as well as realising benefits from the shared procurement of building fabric and furniture, fit out and equipment.

Maintaining business as usual

High level transition plans have been developed for each of the facilities options that we have investigated. Each option is structured in a manner that allows a stepped approach whereby a new facility is prepared for each element of service delivery so that each service can be relocated before construction commences in the vicinity of the facility where a service was previously housed.